Schlumberger

Company: **BP EXPLORATION (ALASKA), INC.**

Well: **MT. ELBERT–01** **FINAL**
Field: **MILNE POINT UNIT**
Borough: **NORTH SLOPE** State: **ALASKA**

Borough: NORTH SLOPE
Field: MILNE POINT UNIT
Location: 1242' FNL & 4183' FEL
Well: MT. ELBERT–01
Company: BP EXPLORATION (ALASKA), INC.

PLATFORM EXPRESS
COMPENSATED NEUTRON / LITHODENSITY LOG
14–FEB–2007

LOCATION

1242' FNL & 4183' FEL
AT SURFACE

Elev.: K.B. 54.8 ft
G.L. 21.4 ft
D.F. 54.8 ft

Permanent Datum: MEAN SEA LEVEL Elev.: 0 ft
Log Measured From: KELLY BUSHING 54.8 ft above Perm. Datum
Drilling Measured From: KELLY BUSHING

API Serial No.	Section	Township	Range
50–029–23302–00	30	13N	11E

Logging Date	14–Feb–2007		
Run Number	ONE		
Depth Driller	3000 ft		
Schlumberger Depth	2996 ft		
Bottom Log Interval	2974 ft		
Top Log Interval	1952 ft		
Casing Driller Size @ Depth	9.625 in @ 1954 ft	@	
Casing Schlumberger	1952 ft		
Bit Size	8.750 in		
Type Fluid In Hole	OIL BASED MUD		
MUD Density / Viscosity	9.4 lbm/gal / 79 s		
MUD Fluid Loss / PH			
MUD Source Of Sample	NA		
RM @ Measured Temperature	@	@	
RMF @ Measured Temperature	@	@	
RMC @ Measured Temperature	@	@	
Source RMF / RMC	NA / NA		
RM @ MRT / RMF @ MRT	@ 38 / @ 38	@ / @	
Maximum Recorded Temperatures	38 degF		
Circulation Stopped / Time	13–Feb–2007 / 15:30		
Logger On Bottom / Time	14–Feb–2007 / 11:30		
Unit Number / Location	2266 / PRUDHOE BAY		
Recorded By	B.PHILPOTT		
Witnessed By	TIM COLLET		

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
MUD Density / Viscosity
MUD Fluid Loss / PH
MUD 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	Run 2	Run 3	Run 4

DEPTH SUMMARY LISTING

Date Created: 15–FEB–2007 17:17:07

Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW–JA	Type:	CMTD–B/A	Type:	7–46P–XS
Serial Number:	2656	Serial Number:	2699	Serial Number:	3001
Calibration Date:	13–JAN–2007	Calibration Date:	12–JAN–2007	Length:	14200.00 FT
Calibrator Serial Number:	18	Calibrator Serial Number:	265	Conveyance Method:	Wireline
Calibration Cable Type:	7–46P–XS	Calibration Gain:	0.92	Rig Type:	LAND
Wheel Correction 1:	–6	Calibration Offset:	539.00		
Wheel Correction 2:	–2				

Depth Control Parameters

Log Sequence: First Log In the Well

Rig Up Length At Surface:
Rig Up Length At Bottom:
Rig Up Length Correction:
Stretch Correction:
Tool Zero Check At Surface:

Depth Control Remarks

1. PRIMARY DEPTH CONTROL USED
2.
3.
4.
5.
6.

DISCLAIMER
THE USE OF AND RELIANCE UPON THIS RECORDED–DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED–DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED–DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED–DATA.

OTHER SERVICES1		OTHER SERVICES2
OS1:	RT SCANNER, EPT	OS1:
OS2:	DSI, PPC, OBMI	OS2:
OS3:	CMR, HNGS, ECS	OS3:
OS4:	MDT	OS4:
OS5:		OS5:

REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
RT SANNER RAN IN COMPUTE OBM STANDOFF, WITH TWO 1.5" STANDOFFS.	
RT SCANNER LOGGED IN 3_BholeCorr_BasicLogs_RadialProcessing Mode.	
TRIPLE LITHODENSITY TOOL LOGGED IN VERY HIGH RESOLUTION.	
COMPENSATED NEUTRON TOOL, ELECTROMAGNETIC PROPAGTION TOOL, ELEMENTAL CAPTURE SPECTROSCOPY SONDE, AND COMBINABLE MAGNETIC RESONANCE TOOL RAN WITH 180 DEG BOWSPRINGS FOR ECCENTRALIZATION.	
DIPOLE SONIC TOOL LOGGED IN ANISOTROPY, P & S , UPPER DIPOLE AND LOWER DIPOLE MODES. RAN WITH 2 POWERED POSITIONING CALIPERS FOR CENTRALIZATION	
COMBINABLE MAGNETIC RESONANCE TOOL LOGGING MODE: OIL BASED MUD DEPTH LOG– B MODE ECHO SPACING: 200 US, NUMBER OF ECHOES: 600, T2 CUTOFF: 33 MSEC	
MODULAR DYNAMIC TESTER RAN WITH TWO PACKERS, SIX 450 CC'S SAMPLE CHAMBERS, ONE GL SAMPLE CHAMBER AND ONE 1 GL CHAMBER WITH TANNER GAS TO PREVENT FLOW LINE FREEZING.	
MDT SAMPLES WERE TAKEN AT 2012', 2025', 2036', 2047', 2151' AND 2061'. UNABLE TO RETRIEVE SAMPLES AT 2032', AND 2039' DUE TO LOST SEALS.	
MDT TOTAL PUMPED OUT TIME: 865 MINS.	
AFE# GS 2420H33	
RIG: DOYON 14	
CREW: J.CAPEN, D.COLE, D.WEATHERS, T.RAUBINGER	

RUN 1		RUN 2	
SERVICE ORDER #:	11638614	SERVICE ORDER #:	
PROGRAM VERSION:	14C0–302	PROGRAM VERSION:	
FLUID LEVEL:		FLUID LEVEL:	

LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

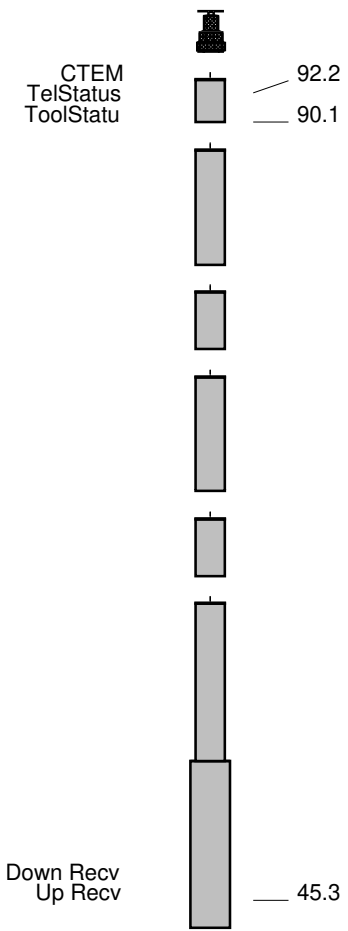
RUN 1 | RUN 2

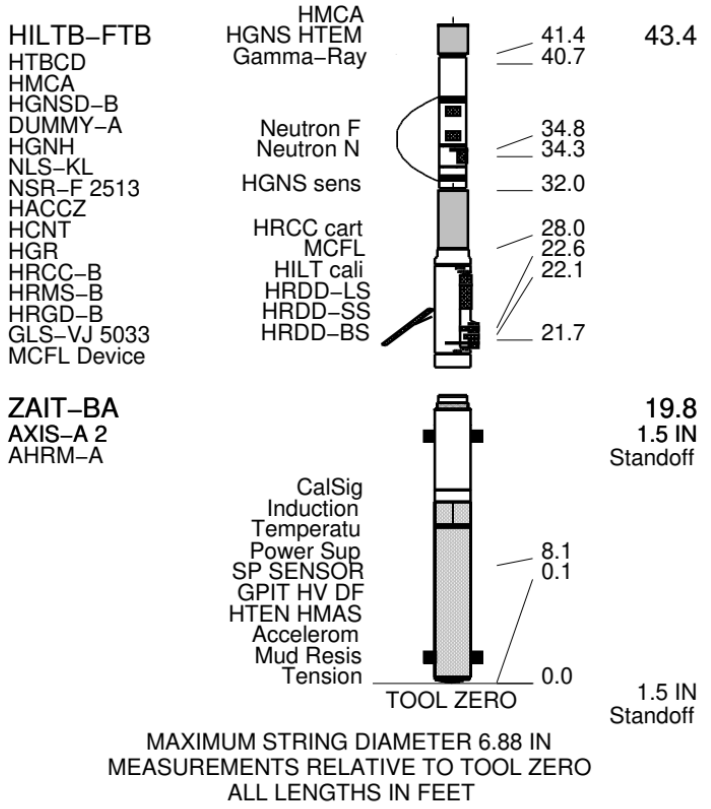
SURFACE EQUIPMENT

GSR–U/Y
NCT–B
CNB–AB
NCS–VB

WITM (DTS)–A

DOWNHOLE EQUIPMENT





	(in) OD	(in) ID	(ft) MD	MT ELBERT			(ft) MD	(in) OD	(in) ID	
							0.0	9.625		Casing String

1954.0	9.625	Casing Shoe
1954.0	8.750	Borehole Segment

Schlumberger

BULK DENSITY – MAIN PASS

MAXIS Field Log

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_022LUP	FN:27	PRODUCER	14–Feb–2007 10:04	2994.0 FT	1859.0 FT

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_030PUP	FN:43	PRODUCER	14–Feb–2007 13:08	2994.0 FT	1872.5 FT
MTE	AIT_TLD_MCFL_CNL_030PUP	FN:44	PRODUCER	14–Feb–2007 13:08	2994.0 FT	1872.5 FT

OP System Version: 14C0–302

MCM

ZAIT–BA	SPC–3254–ZAIT–B	HILTB–FTB	SPC–3254–ZAIT–B
EPT–G	SRPC–3243–Q4_2006	DTA–A	SKK–3248–EDTCB
GPIT–C	SRPC–3243–Q4_2006	DTC–H	SRPC–3243–Q4_2006

PIP SUMMARY

Time Mark Every 60 S

Tension (TENS)
10000 (LBF) 0

HILT Caliper (HCAL)
6 (IN) 16

Tool/Tot. Drag From D3T to STIA

Gamma Ray (GR)
0 (GAPI) 150

Cable Drag From STIA to STIT

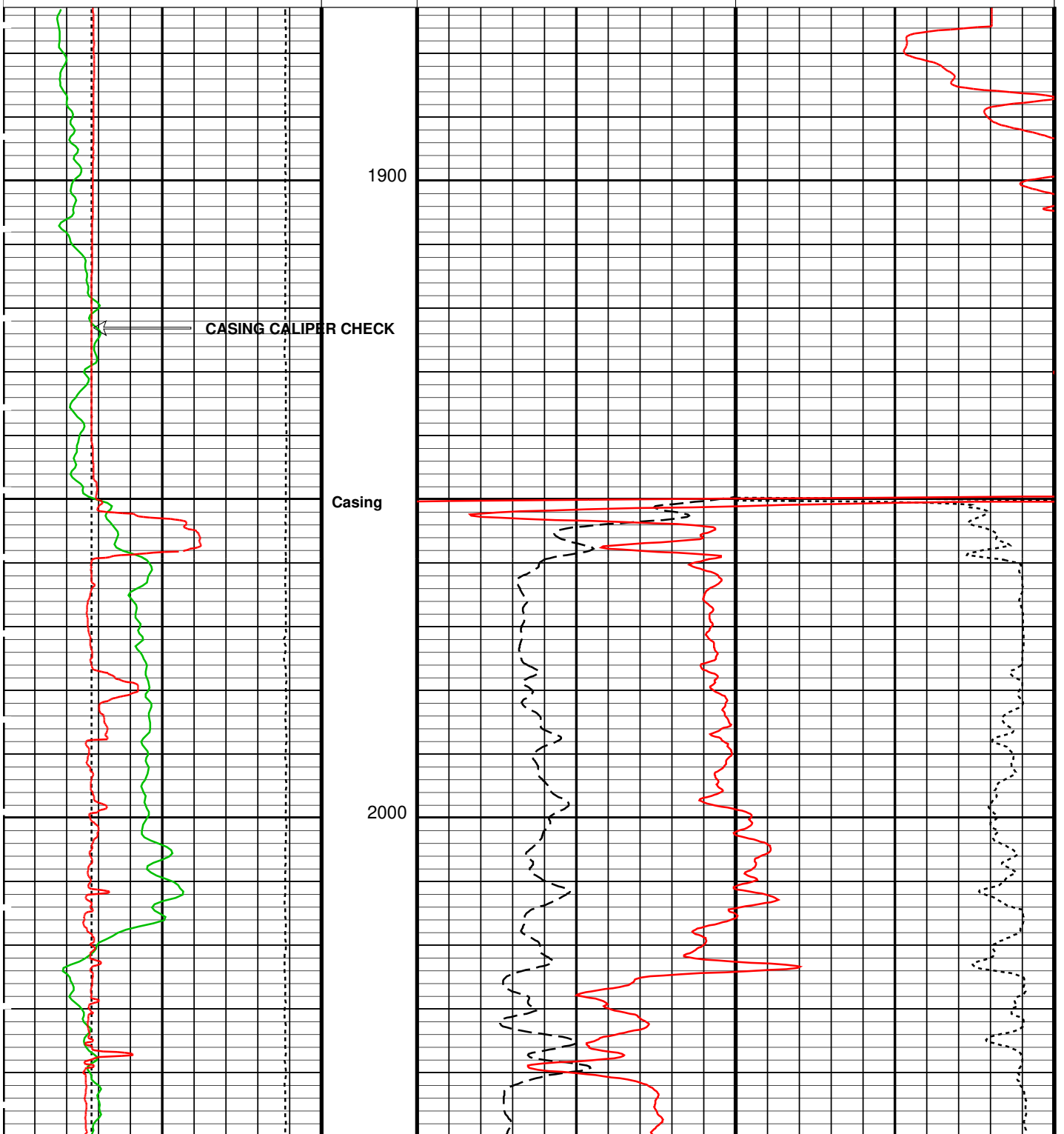
Std. Res. Formation Density (RHOZ)
1.65 (G/C3) 2.65

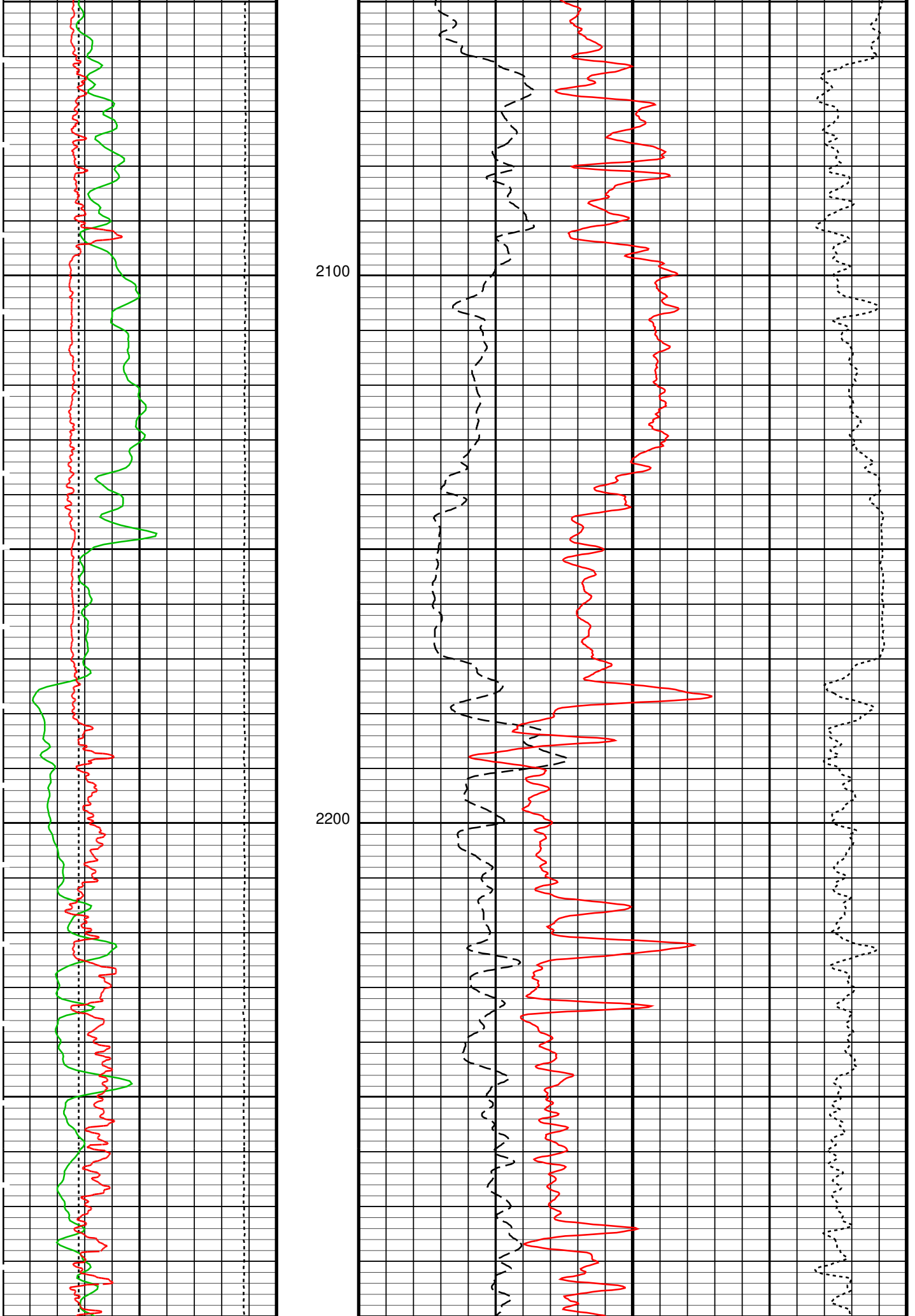
Bit Size (BS)
6 (IN) 16

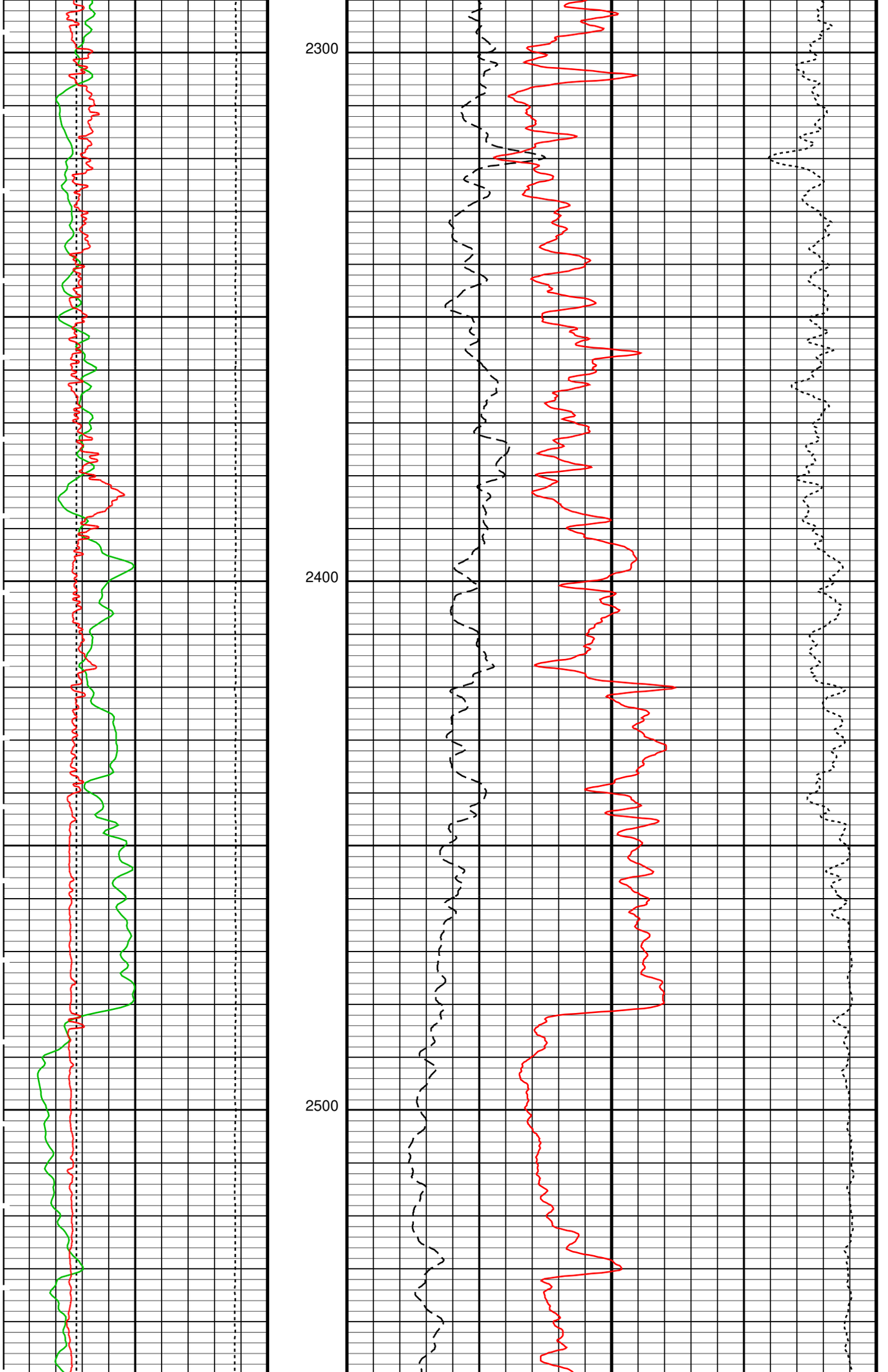
Stuck Stretch (STIT)
0 (F) 50

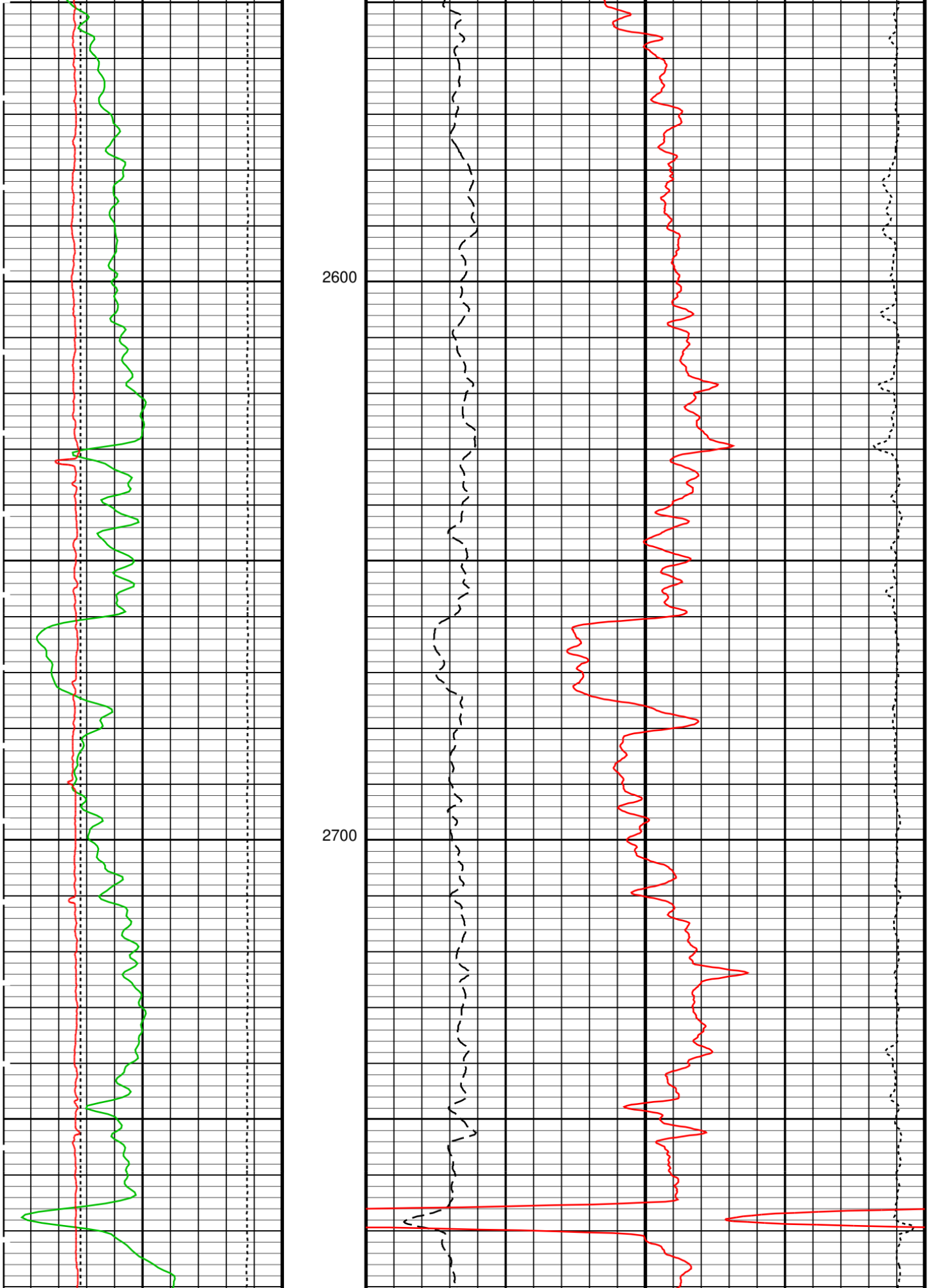
Std. Res. Formation Pe (PEFZ)
0 (----) 10

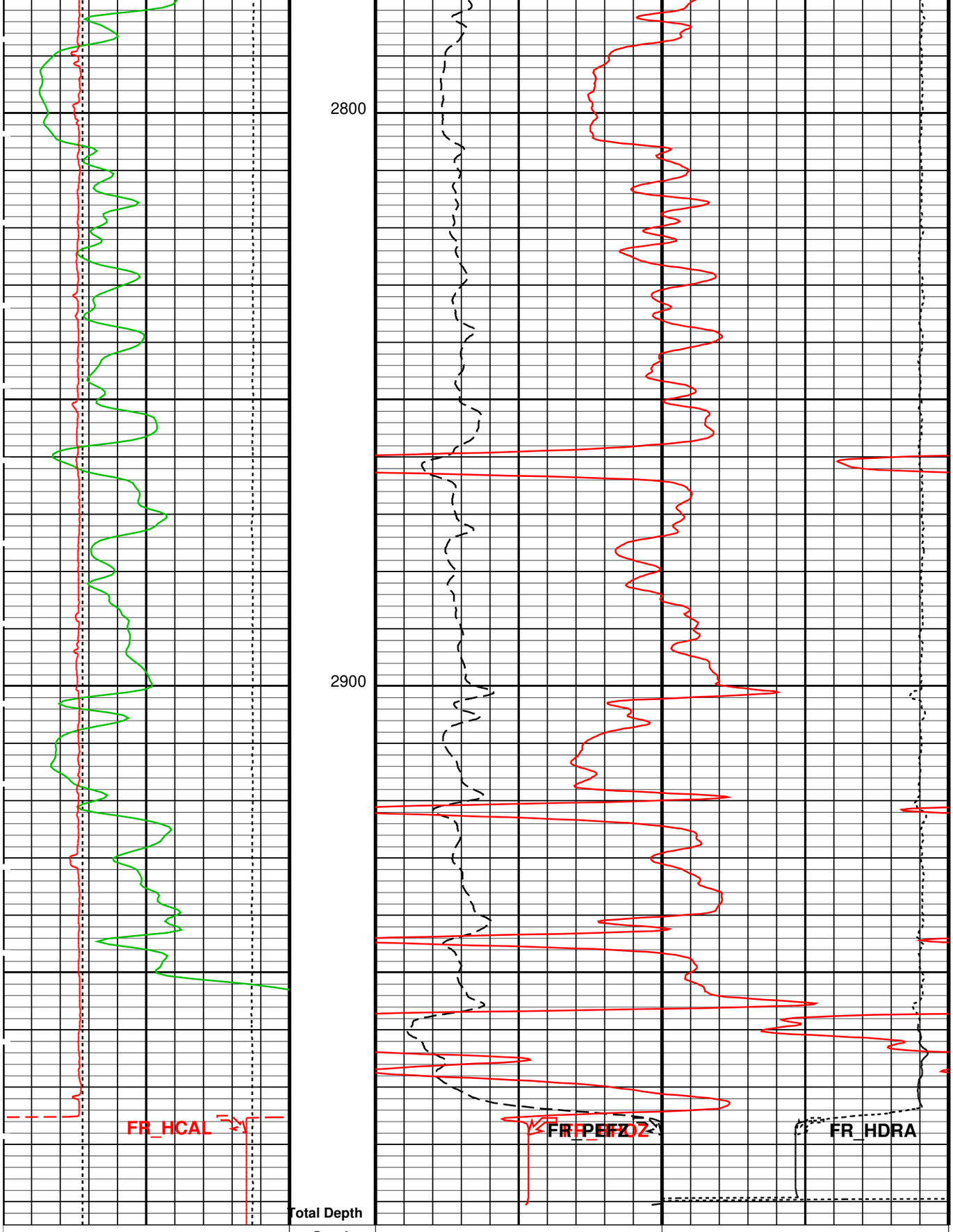
Density Correction (HDRA)
0.45 (G/C3) -0.05




2100
2200


2300
2400
2500


2600
2700



Bit Size (BS) 6 (IN) 16	Stuck Stretch (STIT) 0 (F) 50	Std. Res. Formation Pe (PEFZ) 0 (----) 10
Gamma Ray (GR) 0 (GAPI) 150	Cable Drag From STIA to STIT	Std. Res. Formation Density (RHOZ) 1.65 (G/C3) 2.65
HILT Caliper (HCAL) 6 (IN) 16	Tool/Tot. Drag From D3T to STIA	
Tension (TENS) 10000 (LBF) 0		

Density Correction (HDRA) 0.45 (G/C3) -0.05

PIP SUMMARY

Time Mark Every 60 S

Format: PORO_S2 Vertical Scale: 5" per 100' Graphics File Created: 14–Feb–2007 13:09

OP System Version: 14C0–302

MCM

ZAIT–BA	SPC–3254–ZAIT–B	HILTB–FTB	SPC–3254–ZAIT–B
EPT–G	SRPC–3243–Q4_2006	DTA–A	SKK–3248–EDTCB
GPIT–C	SRPC–3243–Q4_2006	DTC–H	SRPC–3243–Q4_2006

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_022LUP	FN:27	PRODUCER	14–Feb–2007 10:04	2994.0 FT	1859.0 FT

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_030PUP	FN:43	PRODUCER	14–Feb–2007 13:08
MTE	AIT_TLD_MCFL_CNL_030PUP	FN:44	PRODUCER	14–Feb–2007 13:08

Schlumberger

POROSITY – MAIN PASS

MAXIS Field Log

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_022LUP	FN:27	PRODUCER	14–Feb–2007 10:04	2994.0 FT	1859.0 FT

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_030PUP	FN:43	PRODUCER	14–Feb–2007 13:08	2994.0 FT	1872.5 FT
MTE	AIT_TLD_MCFL_CNL_030PUP	FN:44	PRODUCER	14–Feb–2007 13:08	2994.0 FT	1872.5 FT

OP System Version: 14C0–302

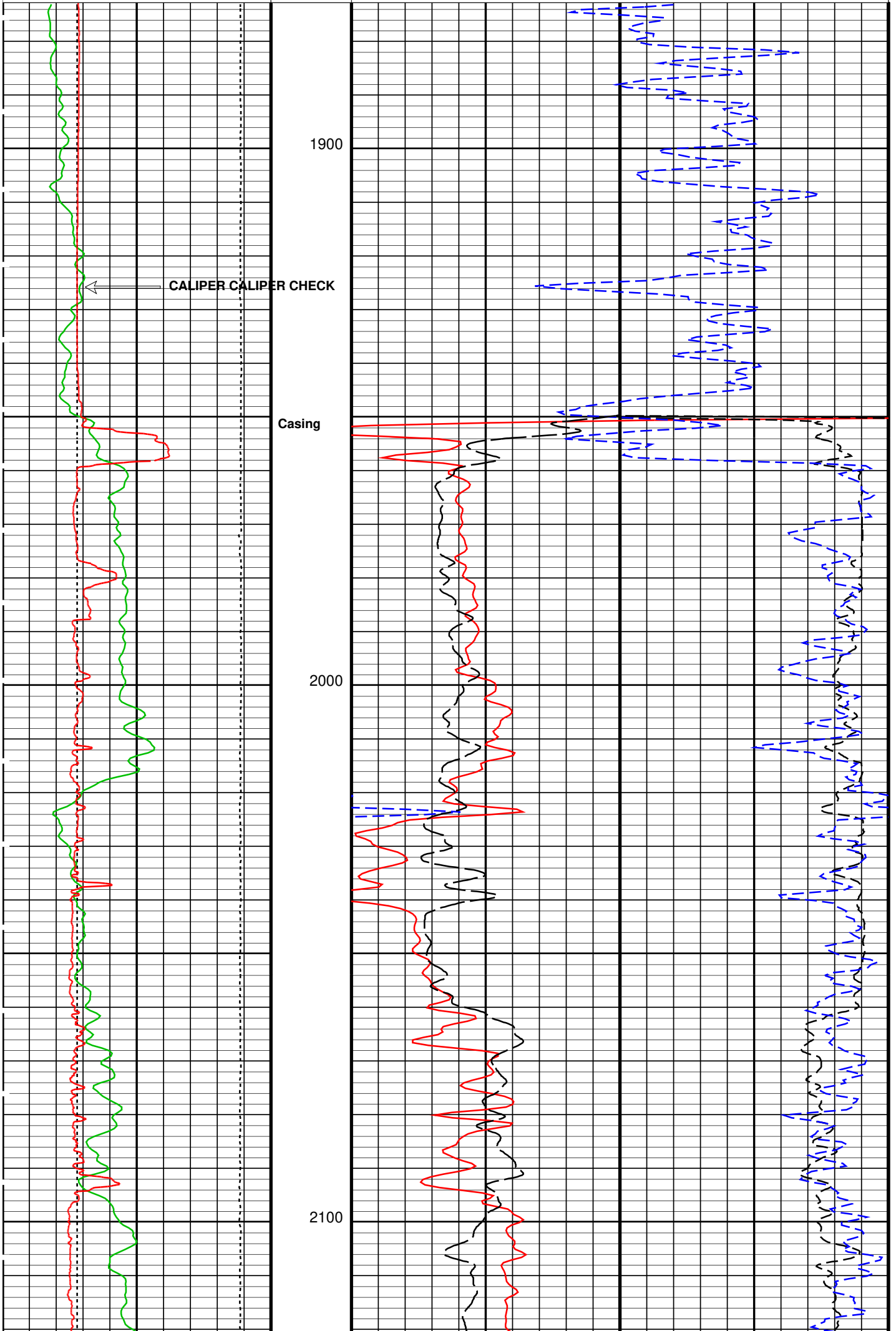
MCM

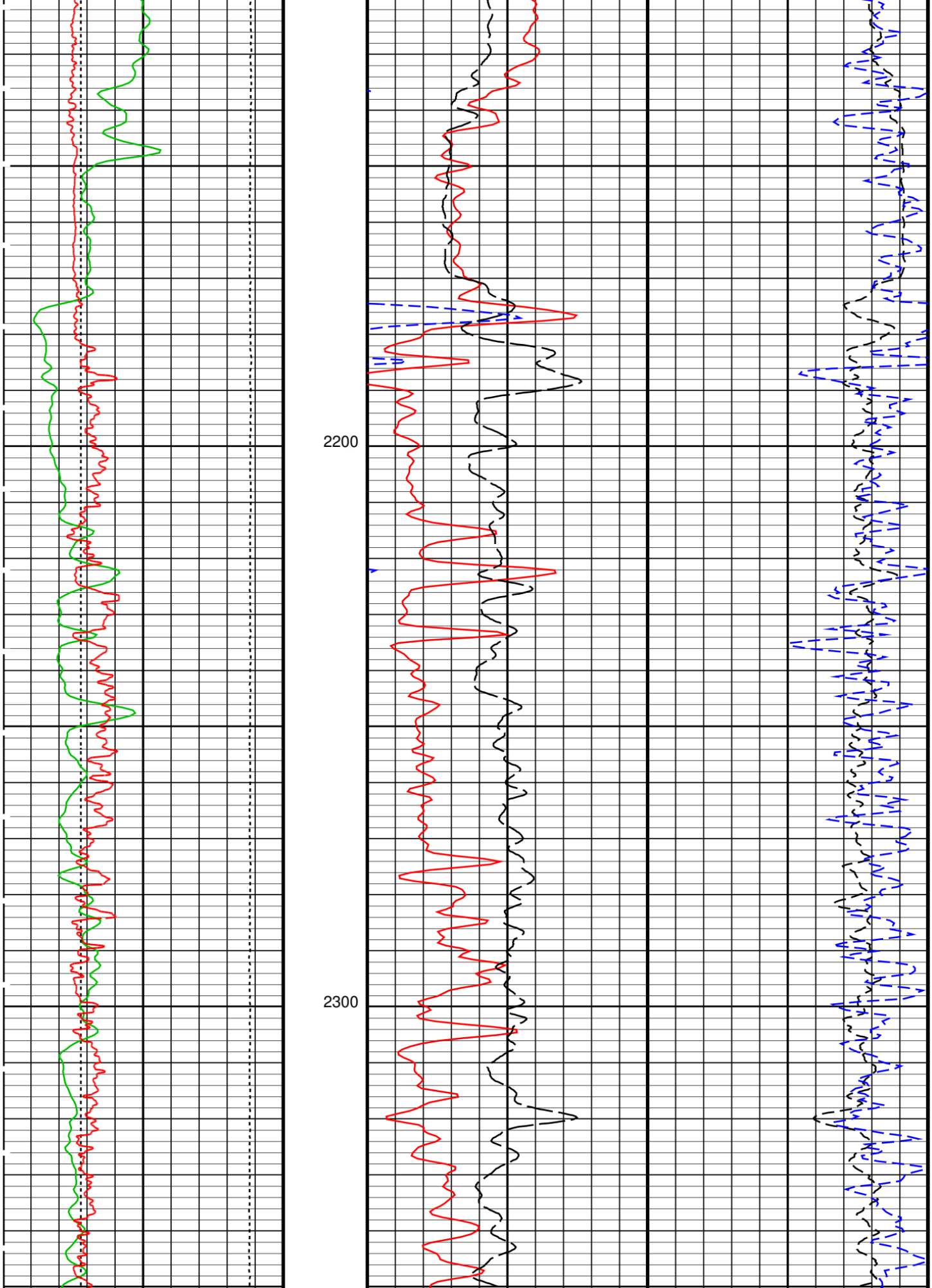
ZAIT–BA	SPC–3254–ZAIT–B	HILTB–FTB	SPC–3254–ZAIT–B
EPT–G	SRPC–3243–Q4_2006	DTA–A	SKK–3248–EDTCB
GPIT–C	SRPC–3243–Q4_2006	DTC–H	SRPC–3243–Q4_2006

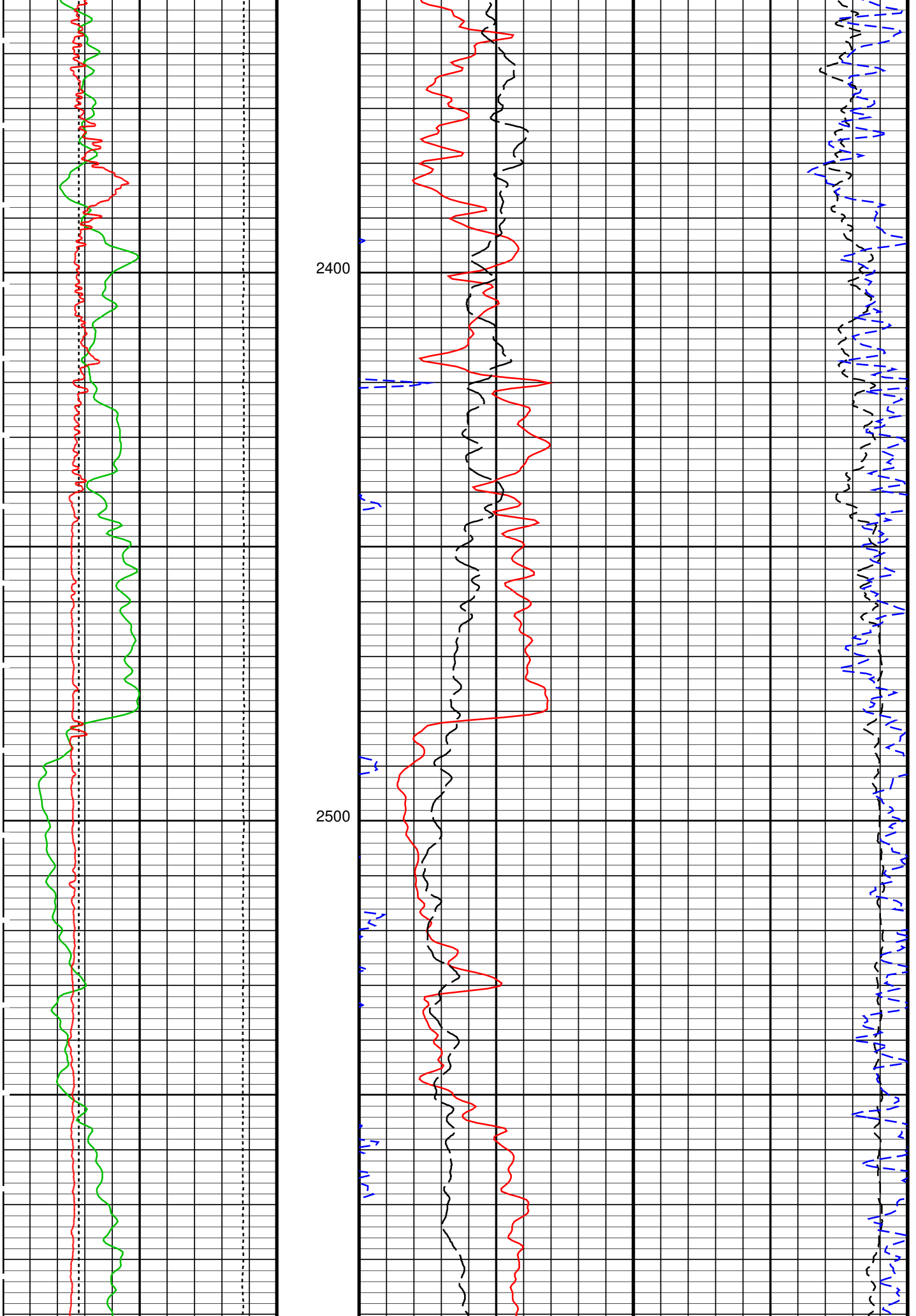
PIP SUMMARY

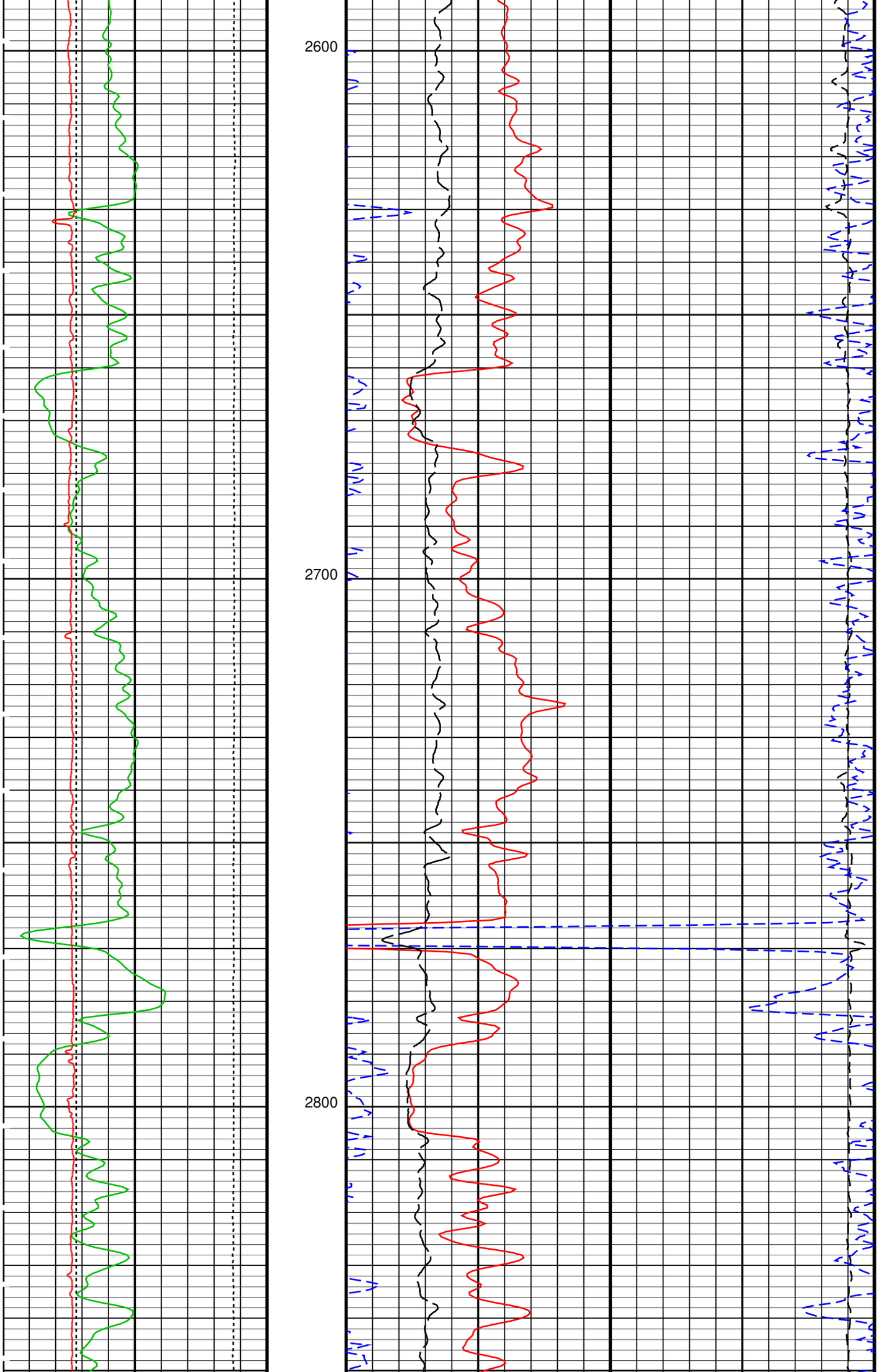
Time Mark Every 60 S

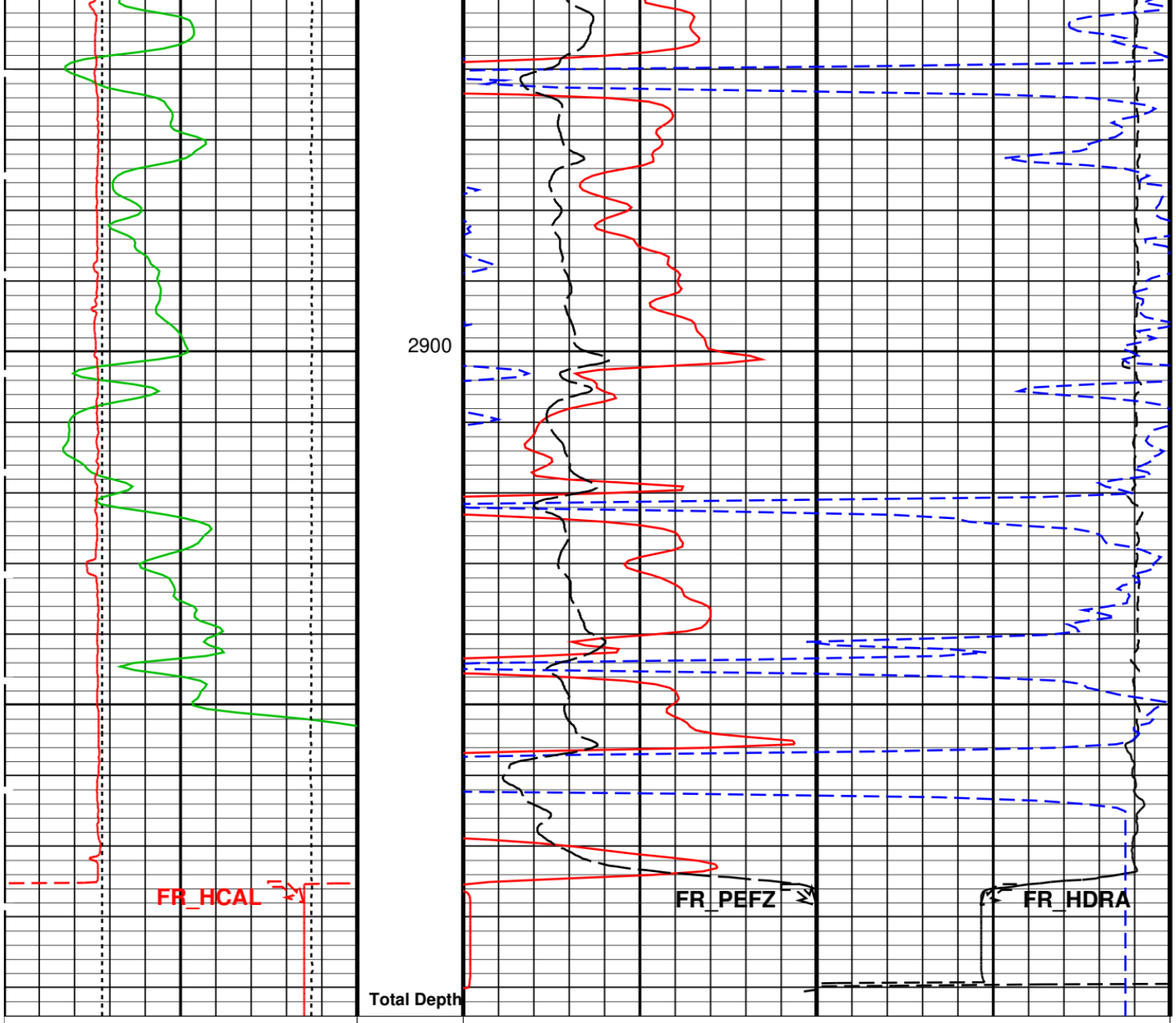
Tension (TENS) 10000 (LBF) 0			
HILT Caliper (HCAL) 6 (IN) 16	Tool/Tot. Drag From D3T to STIA	Std. Res. Formation Pe (PEFZ) 0 (----) 10	Density Correction (HDRA) 0.45 (G/C3) –0.05
Gamma Ray (GR) 0 (GAPI) 150	Cable Drag From STIA to STIT	NPOR for SAND (NPOR_SAN) 0.45 (V/V) –0.15	
Bit Size (BS) 6 (IN) 16	Stuck Stretch (STIT) 0 (F) 50	DPHI for SAND (DPHI_SAN) 0.45 (V/V) –0.15	


1900
CALIPER CALIPER CHECK
Casing
2000
2100


2200
2300


2400
2500


2600
2700
2800



Bit Size (BS) 6 (IN) 16	Stuck Stretch (STIT) 0 (F) 50	DPHI for SAND (DPHI_SAN) 0.45 (V/V) −0.15
Gamma Ray (GR) 0 (GAPI) 150	Cable Drag From STIA to STIT	NPOR for SAND (NPOR_SAN) 0.45 (V/V) −0.15
HILT Caliper (HCAL) 6 (IN) 16	Tool/Tot. Drag From D3T to STIA	Std. Res. Formation Pe (PEFZ) 0 (----) 10 / Density Correction (HDRA) 0.45 (G/C3) −0.05
Tension (TENS) 10000 (LBF) 0		

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value

	ZAIT–BA: 3–D Array Induction Tool – ZAIT–B		
BHS	Borehole Status	OPEN	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
TRIRT	3D Rotation Selector	NorTH	
	HILTB–FTB: High resolution Integrated Logging Tool–DTS		
BHFL	Borehole Fluid Type	OIL	
BHFL_TLD	HILT Nuclear Mud Base	OIL	
BHS	Borehole Status	OPEN	
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
FD	Fluid Density	1	G/C3
FSAL	Formation Salinity	–50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCLF	Germany Coal–like Formation Option	NO	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
HSCO	Hole Size Correction Option	YES	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	VeryHiRes	
NSAR	HRDD Depth Sampling Rate	0.5	IN
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
	EPT–G: Electromagnetic Propagation – G		
BHS	Borehole Status	OPEN	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
	STI: Stuck Tool Indicator		
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	2.5	FT
TDD	Total Depth – Driller	3000.00	FT
TDL	Total Depth – Logger	3000.00	FT
	DIR: Directional Survey Computation		
SPVD	TVD of Starting Point	0	FT
TIMD	Along–hole depth of Tie–in Point	0	FT
TIVD	TVD of Tie–in Point	0	FT
	System and Miscellaneous		
BS	Bit Size	8.750	IN
BSAL	Borehole Salinity	–50000.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	40.00	LB/F
DFD	Drilling Fluid Density	9.40	LB/G
DO	Depth Offset for Playback	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
MST	Mud Sample Temperature	–50000.00	DEGF
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	–50000.0000	OHMM

Format: PORO_S5 Vertical Scale: 5" per 100' Graphics File Created: 14–Feb–2007 13:09

OP System Version: 14C0–302

MCM

ZAIT–BA	SPC–3254–ZAIT–B	HILTB–FTB	SPC–3254–ZAIT–B
EPT–G	SRPC–3243–Q4_2006	DTA–A	SKK–3248–EDTCB
GPIT–C	SRPC–3243–Q4_2006	DTC–H	SRPC–3243–Q4_2006

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_022LUP	FN:27	PRODUCER	14–Feb–2007 10:04	2994.0 FT	1859.0 FT

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_030PUP	FN:43	PRODUCER	14–Feb–2007 13:08
MTE	AIT_TLD_MCFL_CNL_030PUP	FN:44	PRODUCER	14–Feb–2007 13:08

Schlumberger

REPEAT ANALYSIS

MAXIS Field Log

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_029PUP	FN:41	PRODUCER	14-Feb-2007 13:06	2662.0 FT	1878.5 FT
DEFAULT	AIT_TLD_MCFL_CNL_022LUP	FN:27	PRODUCER	14-Feb-2007 10:04	2994.0 FT	1859.0 FT

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_030PUP	FN:43	PRODUCER	14-Feb-2007 13:08	2994.0 FT	1873.0 FT
MTE	AIT_TLD_MCFL_CNL_030PUP	FN:44	PRODUCER	14-Feb-2007 13:08	2994.0 FT	1873.0 FT

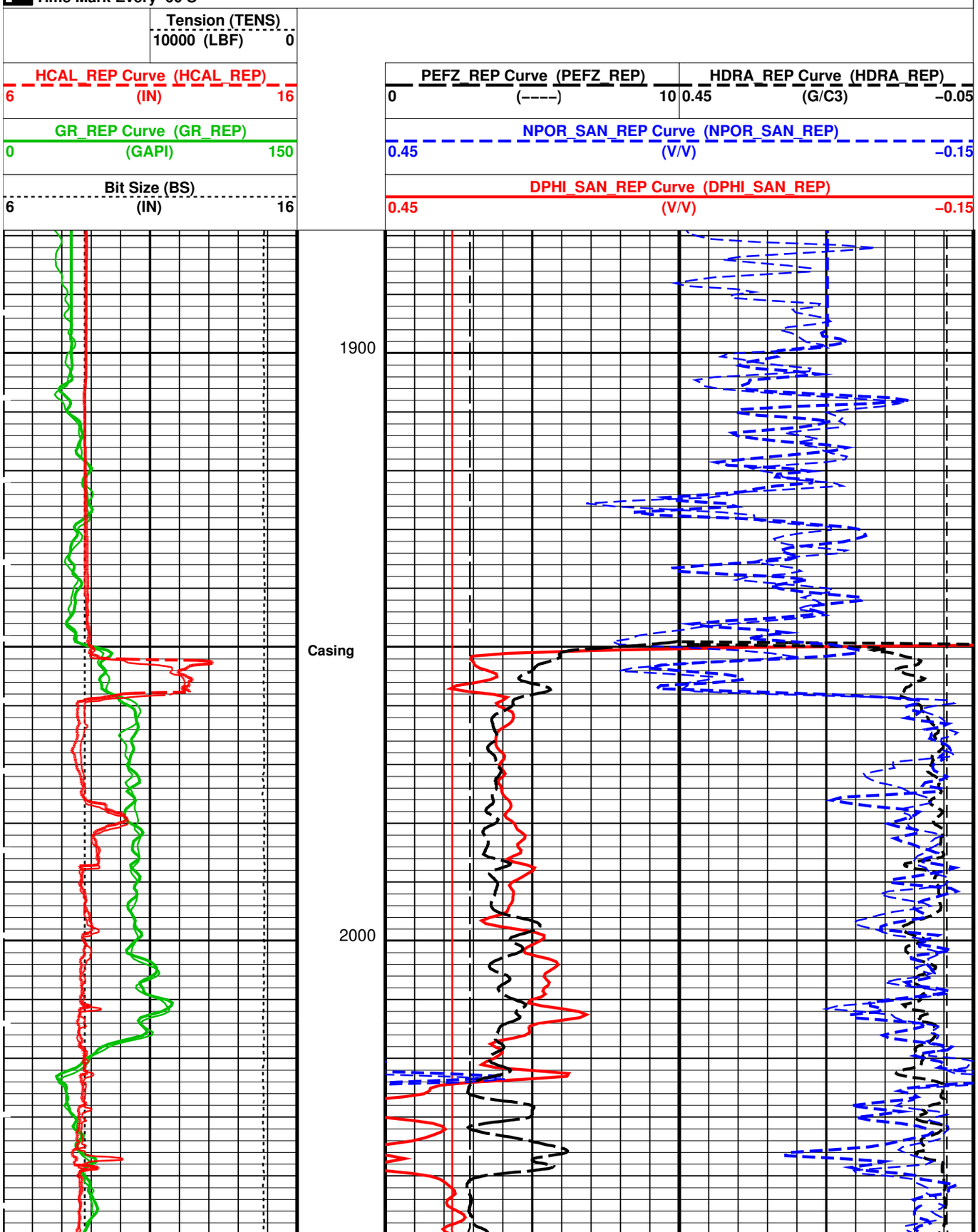
OP System Version: 14C0-302

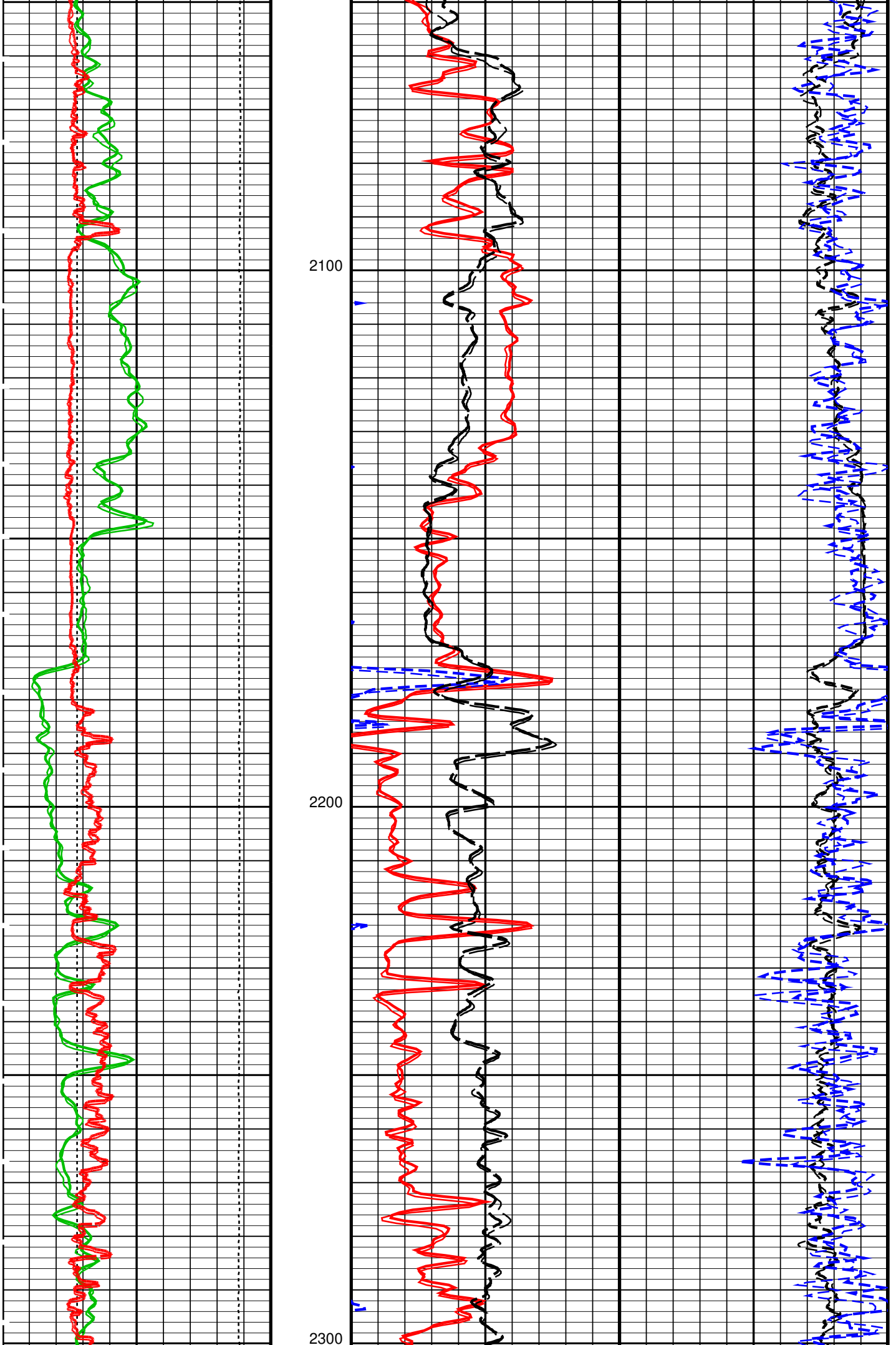
MCM

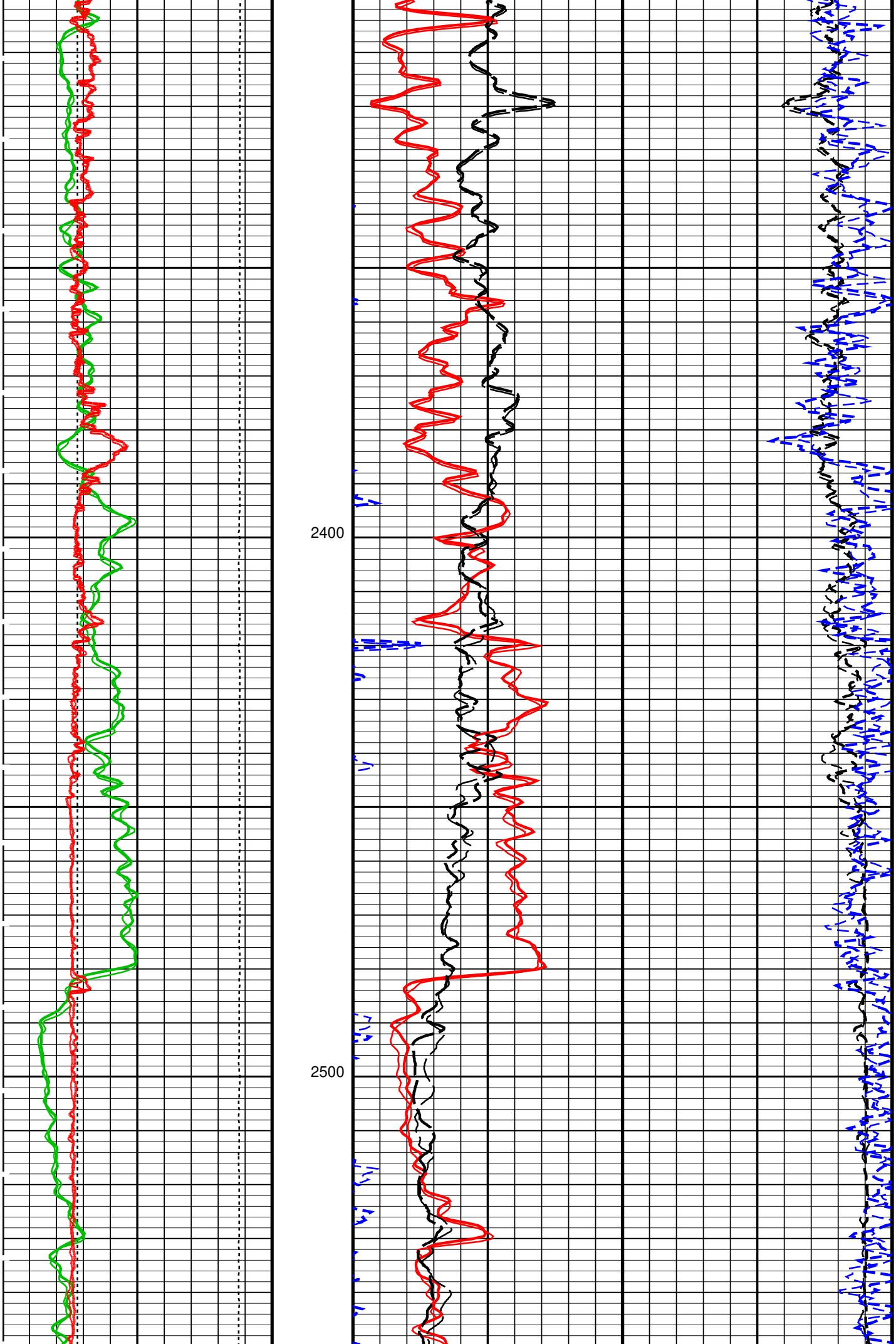
ZAIT-BA	SPC-3254-ZAIT-B	HILTB-FTB	SPC-3254-ZAIT-B
EPT-G	SRPC-3243-Q4_2006	DTA-A	SKK-3248-EDTCB
GPIT-C	SRPC-3243-Q4_2006	DTC-H	SRPC-3243-Q4_2006

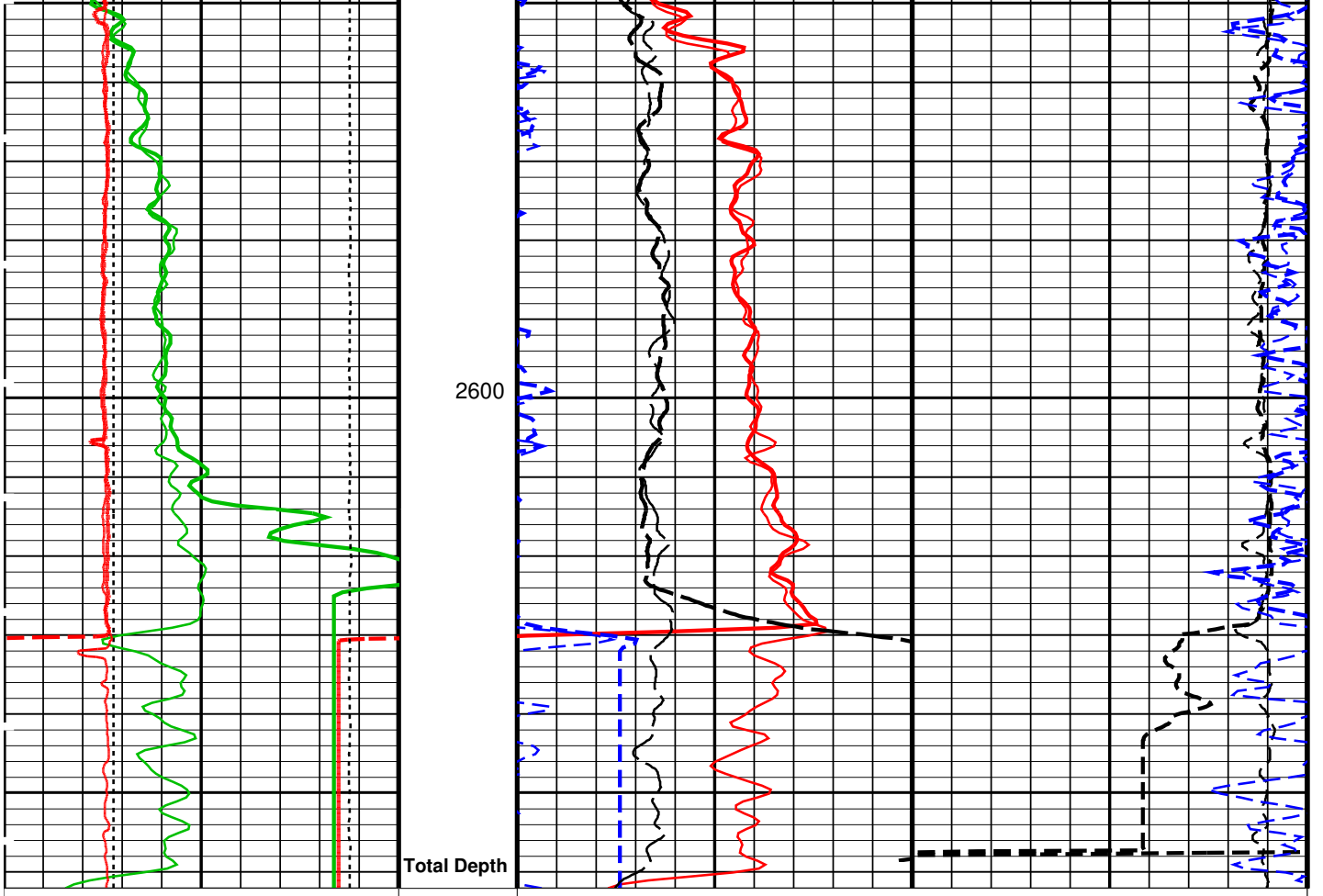
PIP SUMMARY

Time Mark Every 60 S




2100
2200
2300


2400
2500



Bit Size (BS)
6 (IN) 16

GR_REP Curve (GR_REP)
0 (GAPI) 150

HCAL_REP Curve (HCAL_REP)
6 (IN) 16

Tension (TENS)
10000 (LBF) 0

DPHI_SAN_REP Curve (DPHI_SAN_REP)
0.45 (V/V) −0.15

NPOR_SAN_REP Curve (NPOR_SAN_REP)
0.45 (V/V) −0.15

PEFZ_REP Curve (PEFZ_REP)
0 (----) 10

HDRA_REP Curve (HDRA_REP)
0.45 (G/C3) −0.05

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
ZAIT−BA: 3−D Array Induction Tool − ZAIT−B			
BHS	Borehole Status	OPEN	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
TRIRT	3D Rotation Selector	NorTH	
HILTB−FTB: High resolution Integrated Logging Tool−DTS			
BHFL	Borehole Fluid Type	OIL	
BHFL_TLD	HILT Nuclear Mud Base	OIL	
BHS	Borehole Status	OPEN	
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
FD	Fluid Density	1	G/C3
FSAL	Formation Salinity	−50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCLF	Germany Coal−like Formation Option	NO	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
HSCO	Hole Size Correction Option	YES	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	VeryHiRes	
NSAR	HRDD Depth Sampling Rate	0.5	IN
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	

	EPT–G: Electromagnetic Propagation – G		
BHS	Borehole Status	OPEN	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
	STI: Stuck Tool Indicator		
TDL	Total Depth – Logger	3000.00	FT
	DIR: Directional Survey Computation		
SPVD	TVD of Starting Point	0	FT
TIMD	Along–hole depth of Tie–in Point	0	FT
TIVD	TVD of Tie–in Point	0	FT
	System and Miscellaneous		
BS	Bit Size	8.750	IN
BSAL	Borehole Salinity	–50000.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	40.00	LB/F
DFD	Drilling Fluid Density	9.40	LB/G
DO	Depth Offset for Playback	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
MST	Mud Sample Temperature	–50000.00	DEGF
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	–50000.0000	OHMM

Format: PORO_S5_REP Vertical Scale: 5" per 100' Graphics File Created: 14–Feb–2007 13:09

OP System Version: 14C0–302

MCM

ZAIT–BA	SPC–3254–ZAIT–B	HILTB–FTB	SPC–3254–ZAIT–B
EPT–G	SRPC–3243–Q4_2006	DTA–A	SKK–3248–EDTCB
GPIT–C	SRPC–3243–Q4_2006	DTC–H	SRPC–3243–Q4_2006

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_029PUP	FN:41	PRODUCER	14–Feb–2007 13:06	2662.0 FT	1878.5 FT
DEFAULT	AIT_TLD_MCFL_CNL_022LUP	FN:27	PRODUCER	14–Feb–2007 10:04	2994.0 FT	1859.0 FT

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_030PUP	FN:43	PRODUCER	14–Feb–2007 13:08
MTE	AIT_TLD_MCFL_CNL_030PUP	FN:44	PRODUCER	14–Feb–2007 13:08

Schlumberger

BULK DENSITY
VERY HIGH RESOLUTION

MAXIS Field Log

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_030PUP	FN:43	PRODUCER	14–Feb–2007 13:08	2994.0 FT	1872.5 FT

OP System Version: 14C0–302

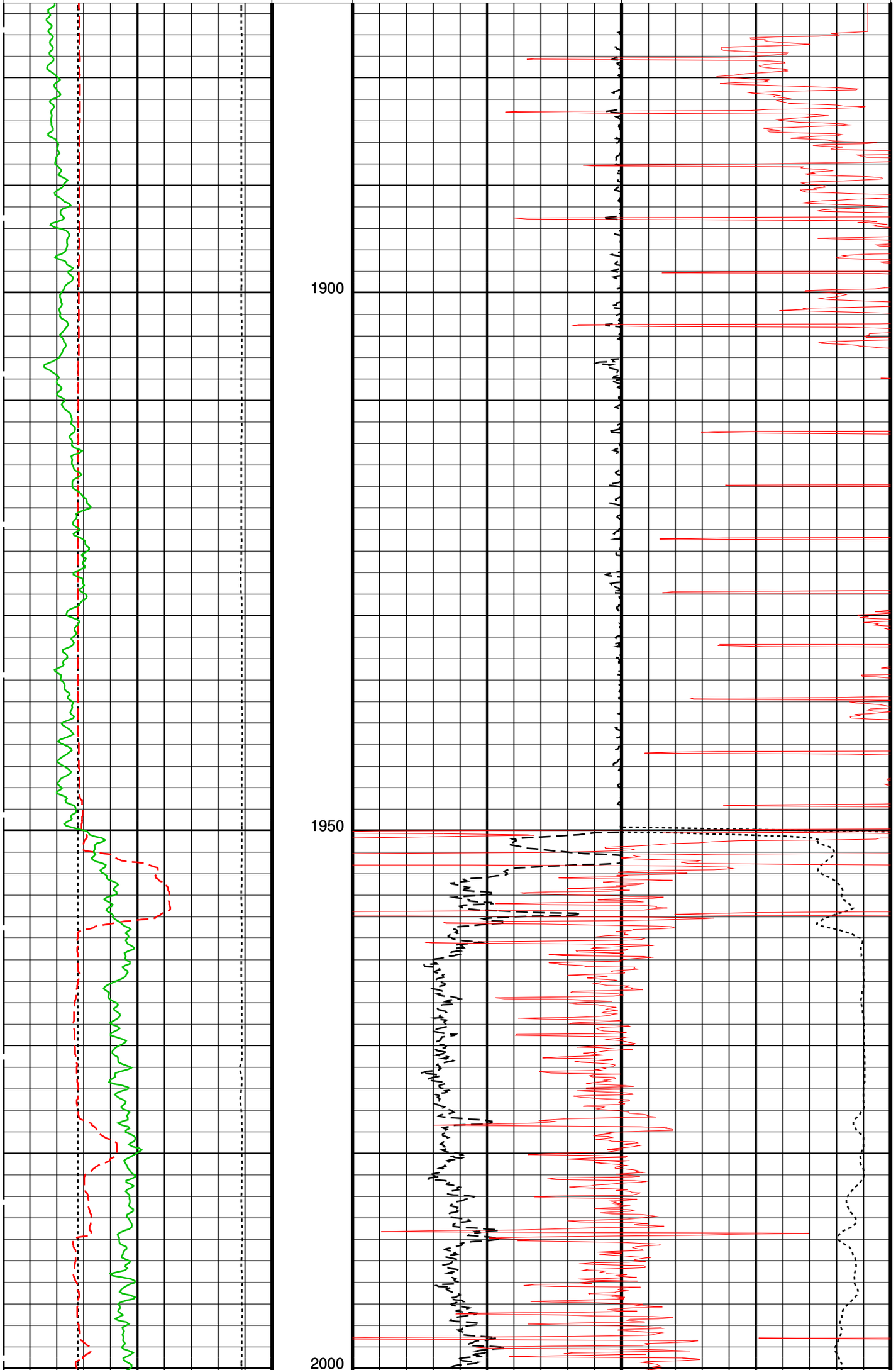
MCM

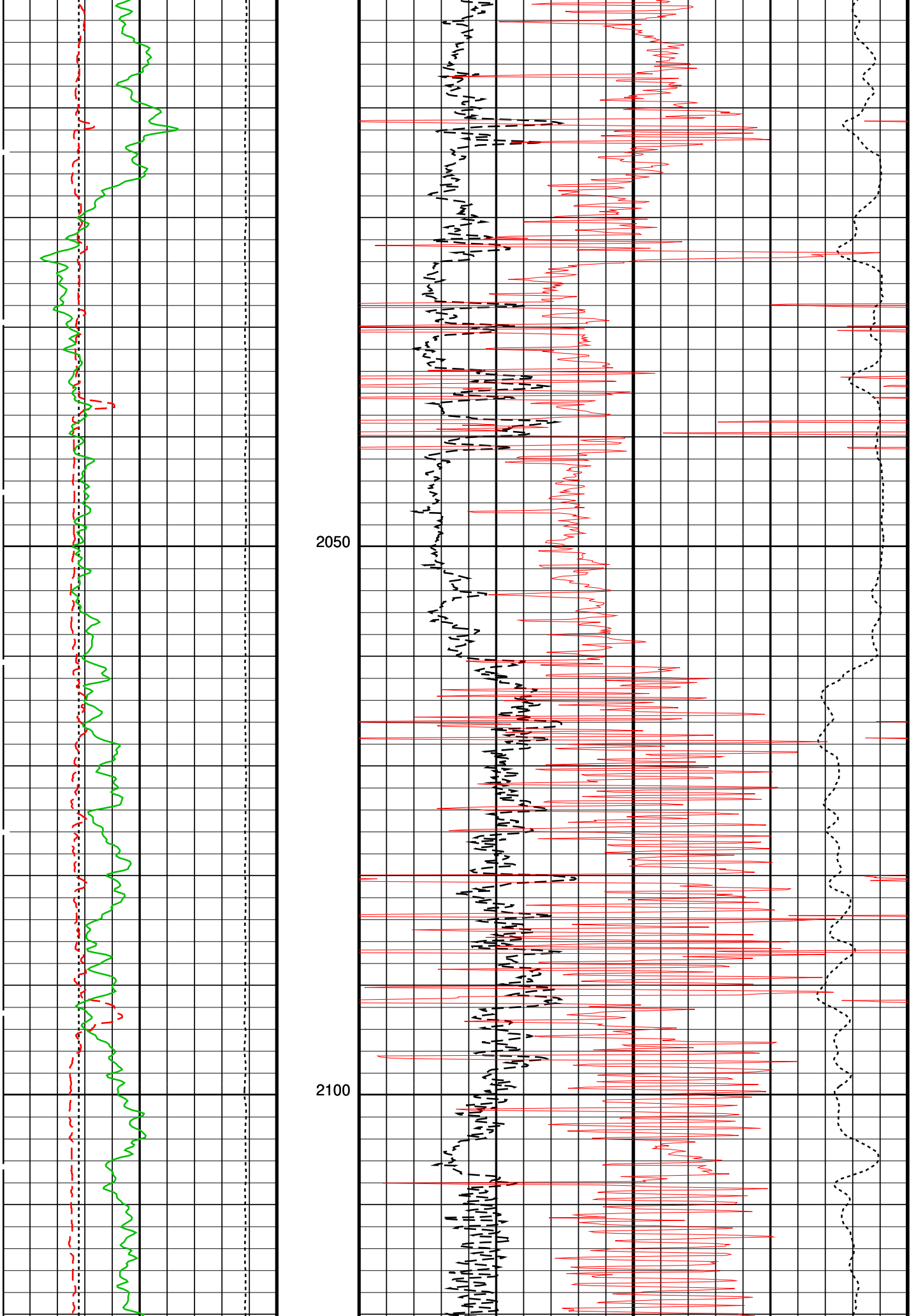
ZAIT	SPC–3254–ZAIT–B	HILTD	SPC–3254–ZAIT–B
EPTG	SRPC–3243–Q4_2006	DTAA	SKK–3248–EDTCB
GPIT–C	SRPC–3243–Q4_2006	DTCH	SRPC–3243–Q4_2006

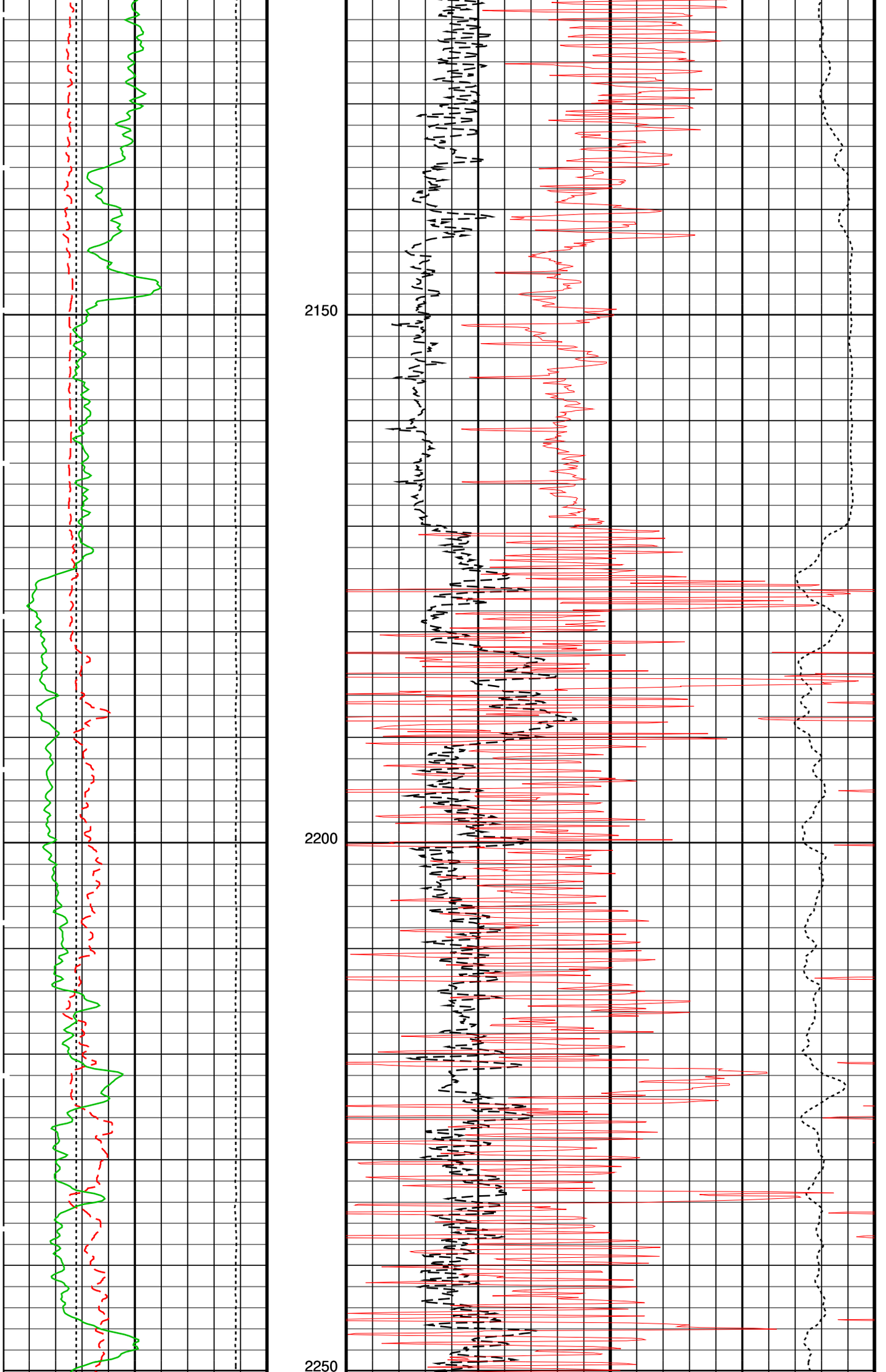
PIP SUMMARY

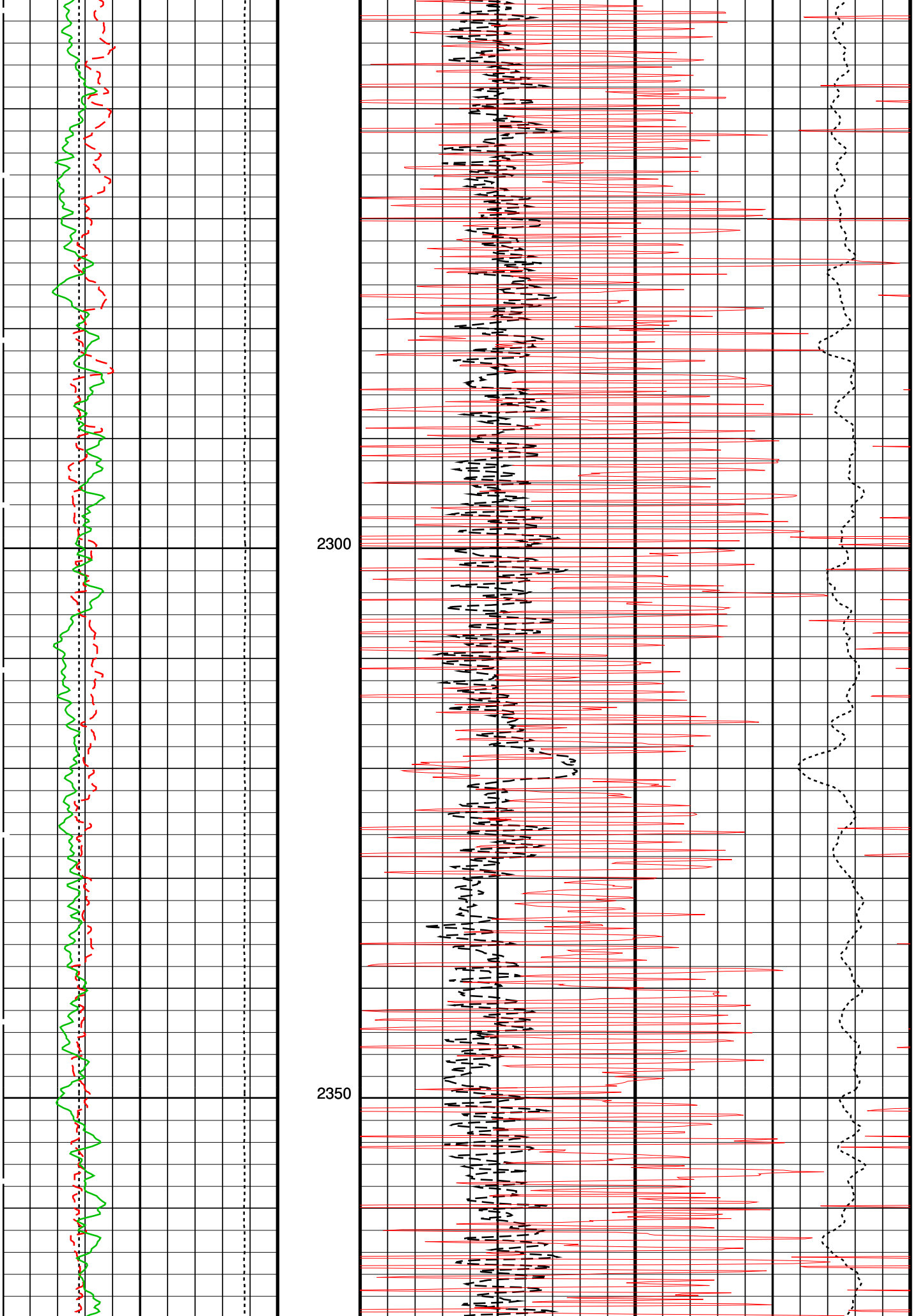
Time Mark Every 60 S

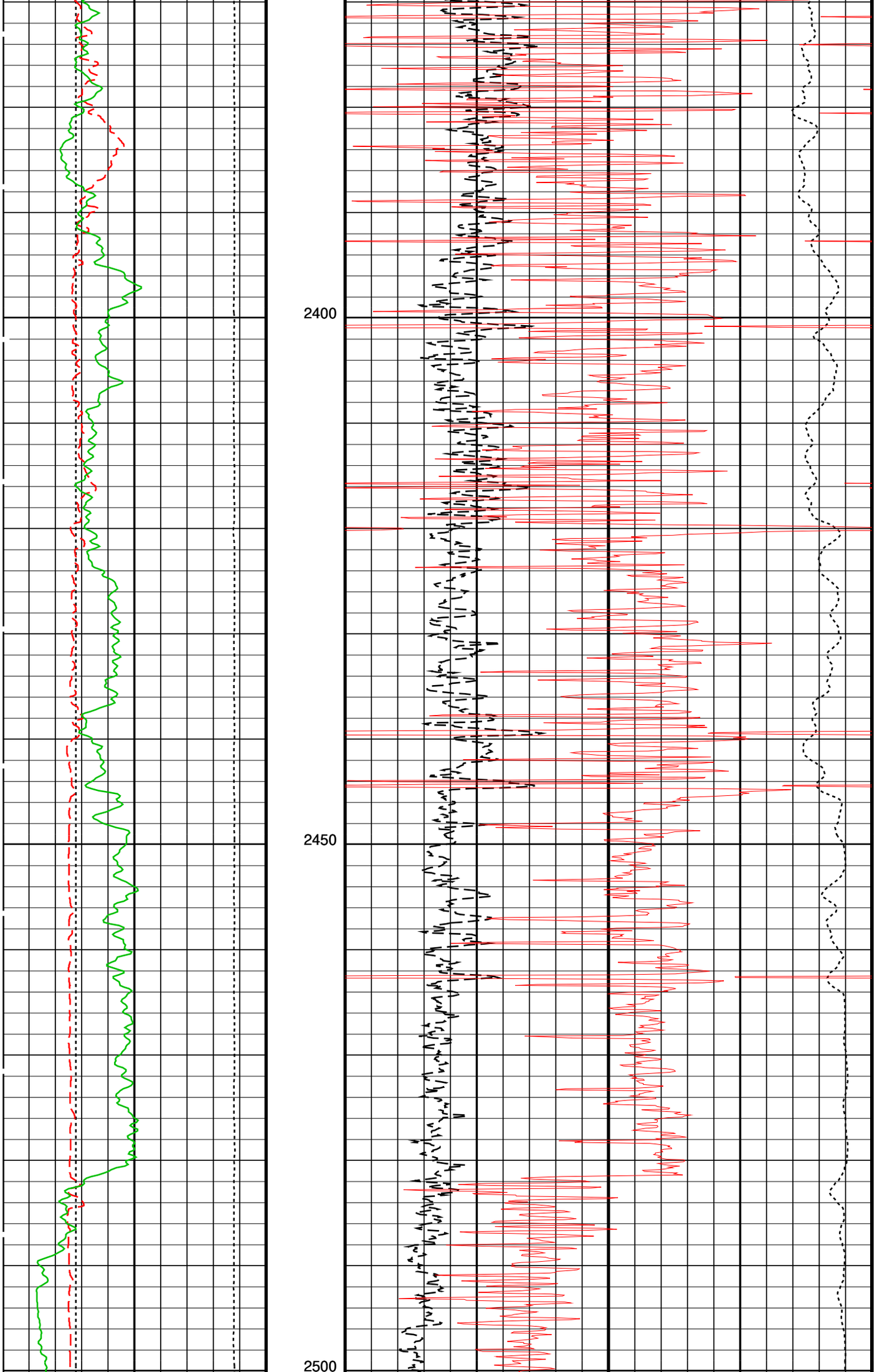
Tension (TENS) 10000 (LBF) 0				
Gamma Ray (EHGR) 0 (GAPI) 150	Tool/Tot. Drag From D3T to STIA			
HILT Caliper (HCAL) 6 (IN) 16	Cable Drag From STIA to STIT	VH. Res. Formation Density (RHOI) 1.65 (G/C3) 2.65		
Bit Size (BS) 6 (IN) 16	Stuck Stretch (STIT) 0 (F) 50	VH. Res. Formation Pe (PEFI) 0 (----) 10	Density Correction (HDRA) 0.45 (G/C3) –0.05	

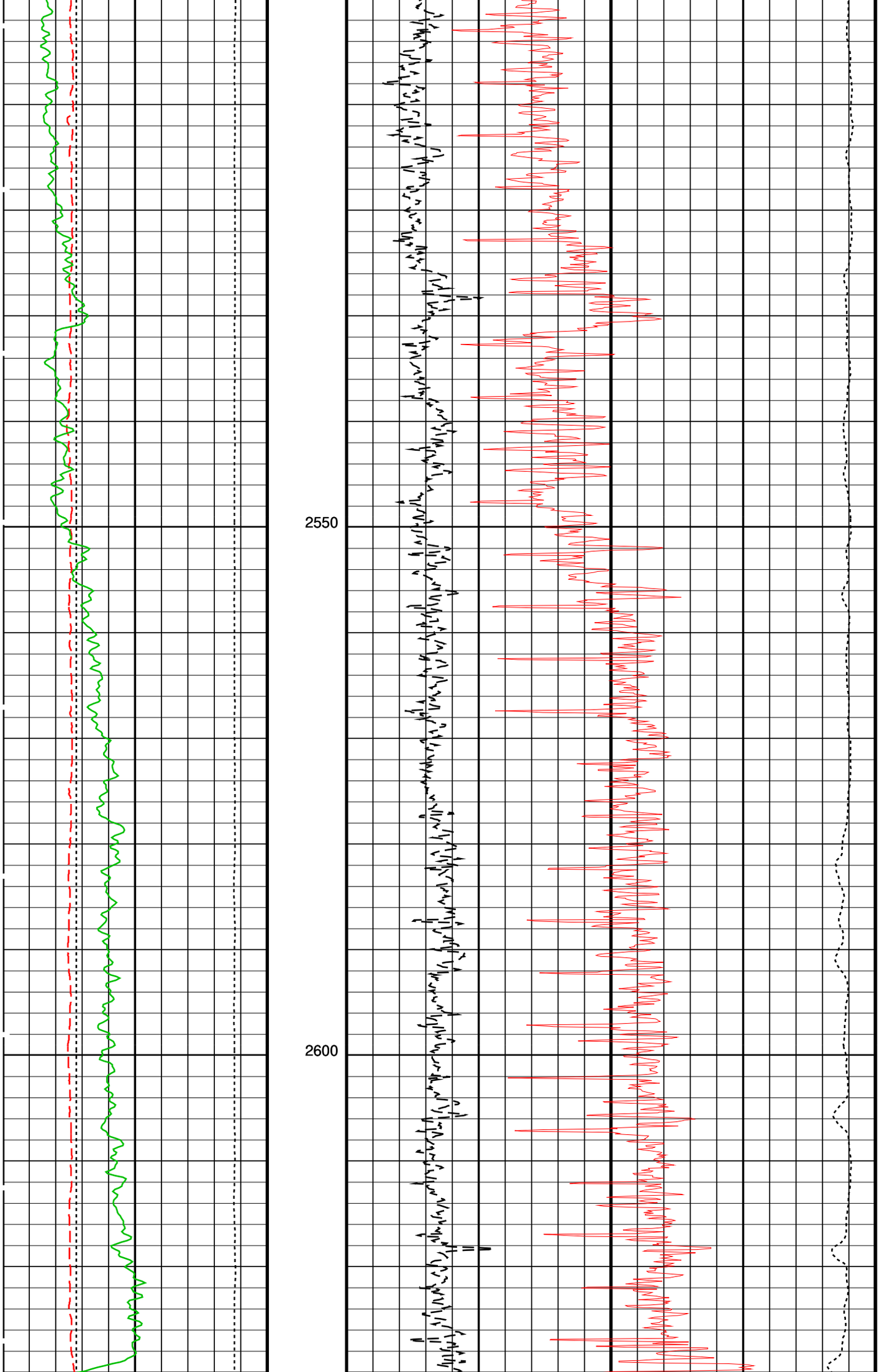

1900
1950
2000

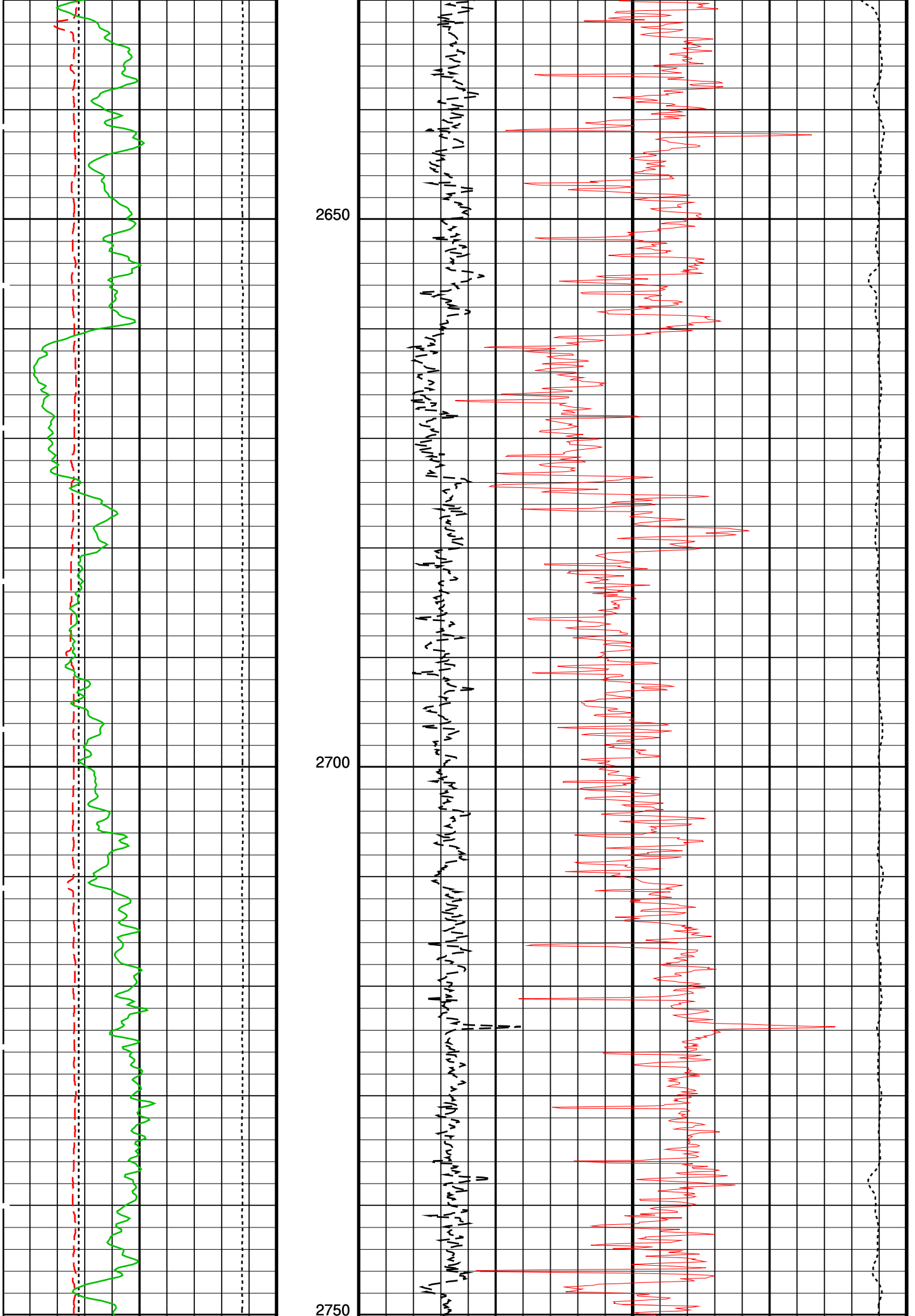

2050
2100

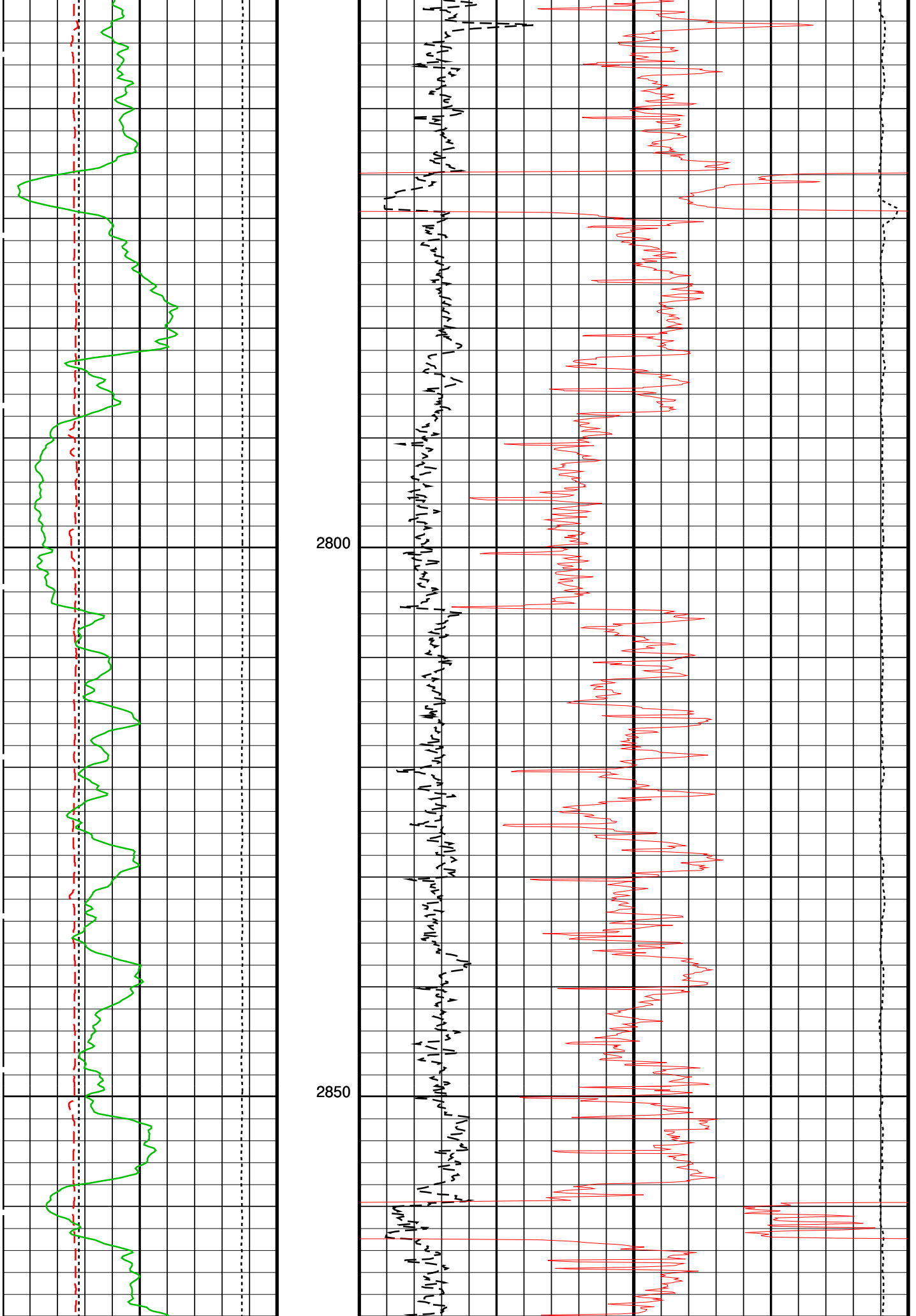

2150
2200
2250

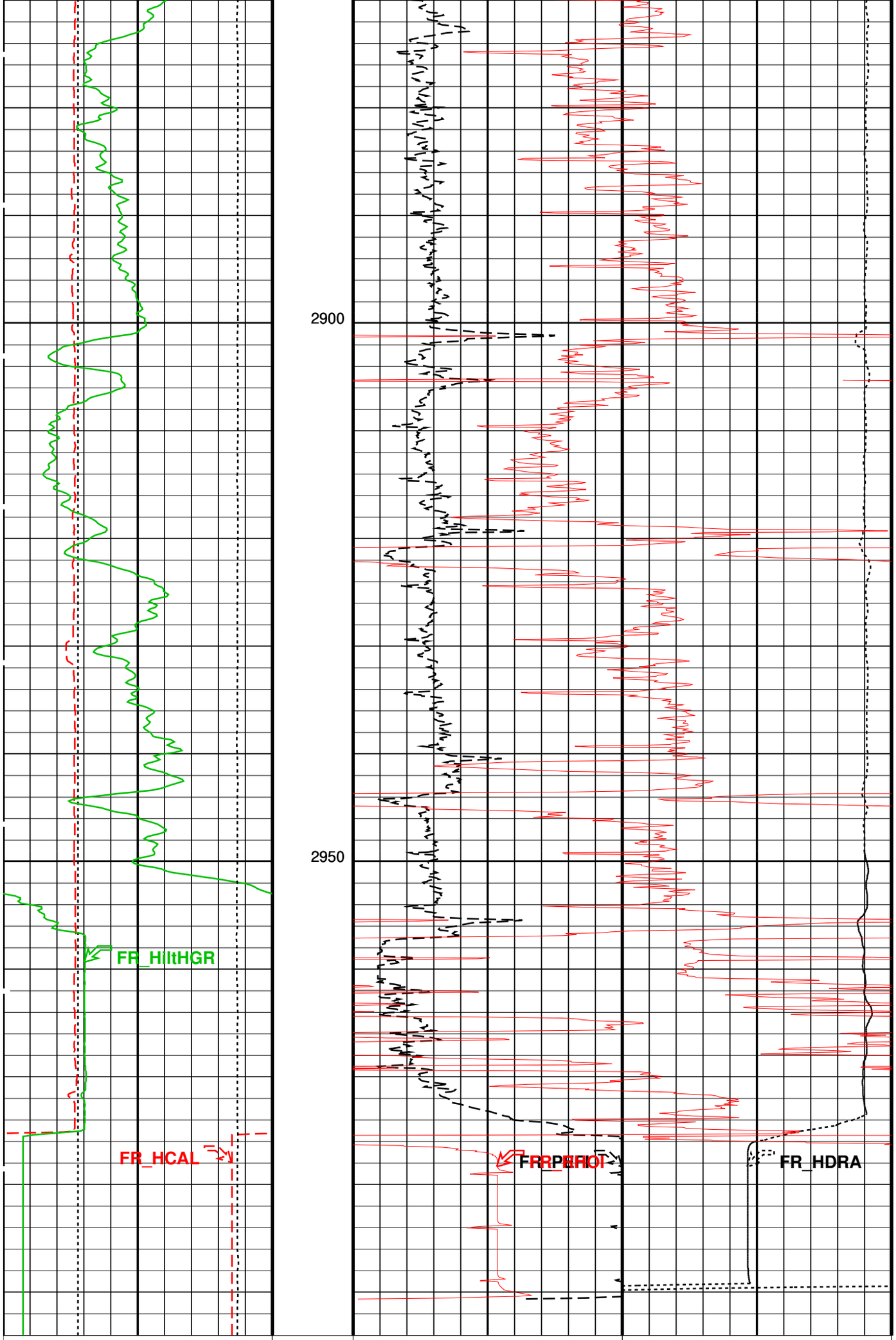

2300
2350


2400
2450
2500


2550
2600


2650
2700
2750


2800
2850


2900
2950
FR_HiltHGR
FR_HCAL
FR_PEFI
FR_HDRA
Bit Size (BS)
6
(IN)
16
Stuck
Stretch
(STIT)
0
(F)
50
VH. Res. Formation Pe (PEFI)
0
(----)
10
Density Correction (HDRA)
0.45
(G/C3)
-0.05

HILT Caliper (HCAL) (IN) 6 – 16	Cable Drag From STIA to STIT	VH. Res. Formation Density (RHOI) (G/C3) 1.65 – 2.65
Gamma Ray (EHGR) (GAPI) 0 – 150	Tool/Tot. Drag From D3T to STIA	
Tension (TENS) 10000 (LBF) – 0		

PIP SUMMARY

Time Mark Every 60 S

Format: VERY_HRESDENS Vertical Scale: 10" per 100' Graphics File Created: 14–Feb–2007 14:16

OP System Version: 14C0–302

MCM

ZAIT	SPC–3254–ZAIT–B	HILTD	SPC–3254–ZAIT–B
EPTG	SRPC–3243–Q4_2006	DTAA	SKK–3248–EDTCB
GPIT–C	SRPC–3243–Q4_2006	DTCH	SRPC–3243–Q4_2006

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_030PUP	FN:43	PRODUCER	14–Feb–2007 13:08	2994.0 FT	1872.5 FT

Schlumberger

LOG QUALITY CONTROL

MAXIS Field Log

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_022LUP	FN:27	PRODUCER	14–Feb–2007 10:04	2994.0 FT	1859.0 FT

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_030PUP	FN:43	PRODUCER	14–Feb–2007 13:08	2994.0 FT	1872.5 FT
MTE	AIT_TLD_MCFL_CNL_030PUP	FN:44	PRODUCER	14–Feb–2007 13:08	2994.0 FT	1872.5 FT

HRDD Processing Flags Statistical Analysis:

Percentages computed on interval 2954.6 to 1964.1 ft (900.6 to 598.7 m)

Pef Flags Up	38.7 %
Density Flags Up	0.0 %

	Window 1	Window 2	Window 3	Window 4
BS Average Reconstruction Error	3.16 %	1.17 %	1.94 %	
SS Average Reconstruction Error	–0.47 %	–0.27 %	–0.14 %	0.84 %
LS Average Reconstruction Error	1.72 %	0.53 %	0.33 %	0.67 %

OP System Version: 14C0–302

MCM

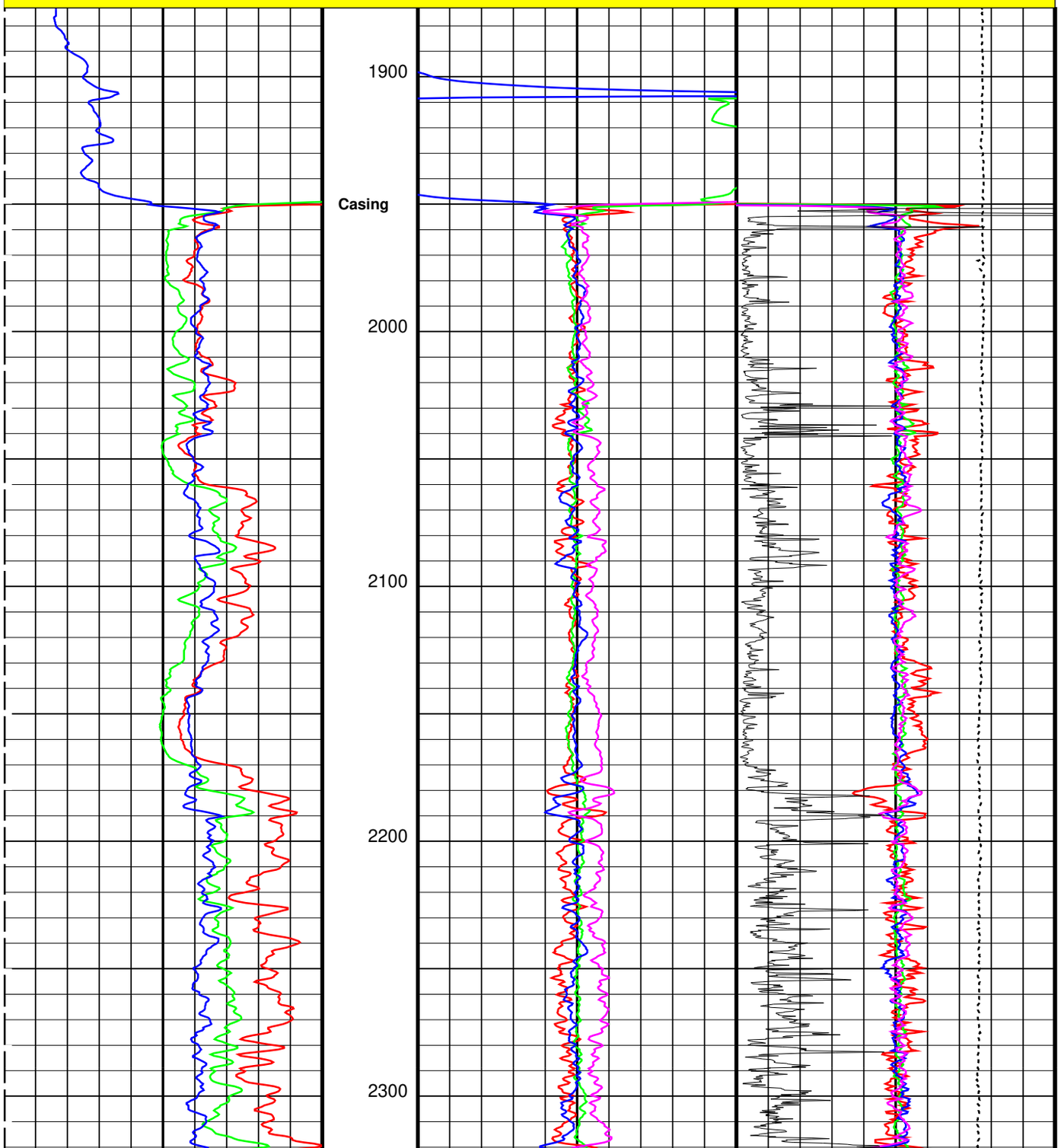
ZAIT–BA	SPC–3254–ZAIT–B	HILTB–FTB	SPC–3254–ZAIT–B
EPT–G	SRPC–3243–Q4_2006	DTA–A	SKK–3248–EDTCB
GPIT–C	SRPC–3243–Q4_2006	DTC–H	SRPC–3243–Q4_2006

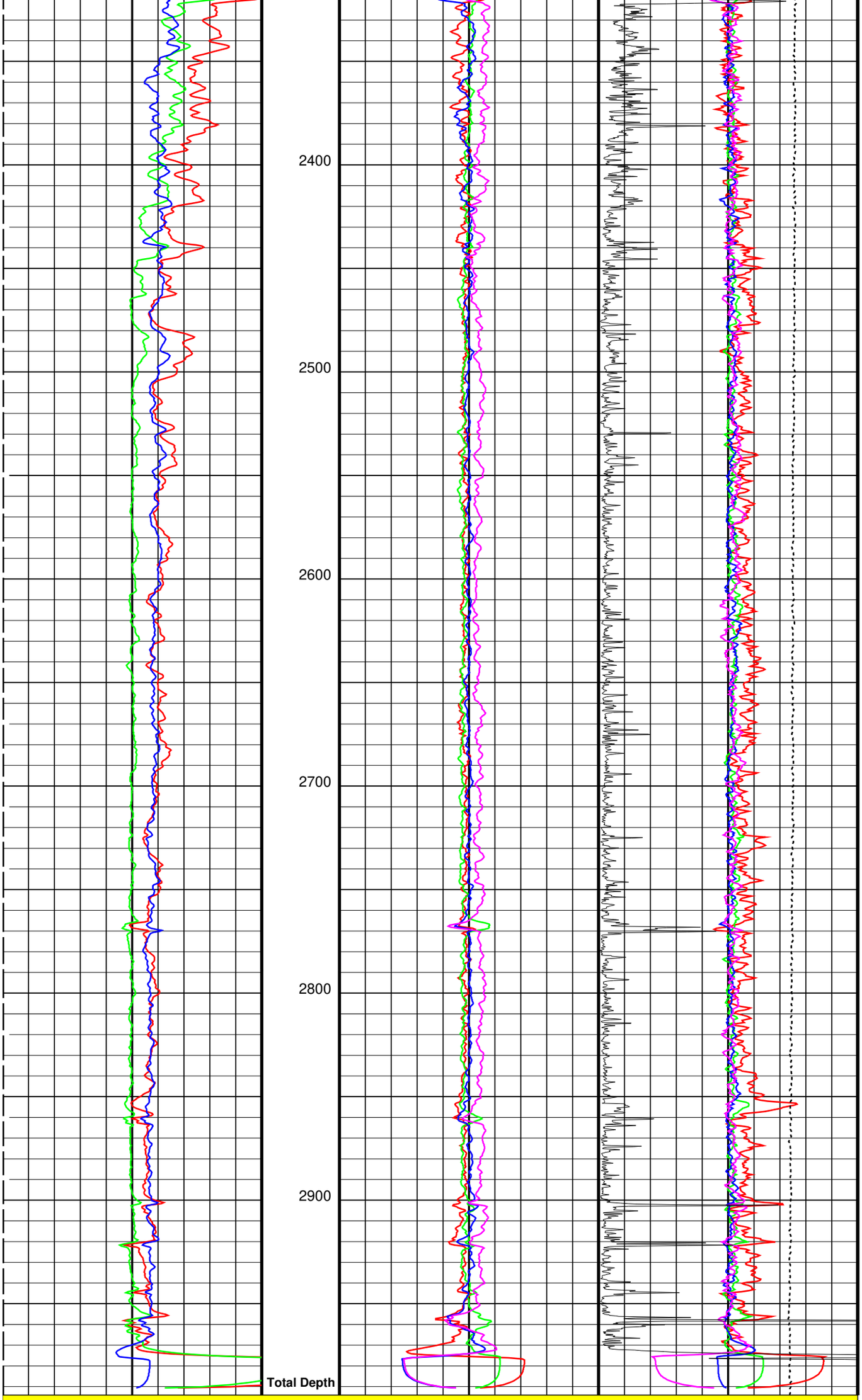
PIP SUMMARY

Time Mark Every 60 S

			Tension (TENS) 10000 (LBF) 0
			HRDD Cost Function (GREZ) 0 (----) 200
		SS Reconstruction Error 4 (ESSZ[3]) −10 (%) 10	LS Reconstruction Error 4 (ELSZ[3]) −20 (%) 20
BS Reconstruction Error 3 (EBSZ[2]) −10 (%) 10	Tool/Tot. Drag From D3T to STIA	SS Reconstruction Error 3 (ESSZ[2]) −10 (%) 10	LS Reconstruction Error 3 (ELSZ[2]) −20 (%) 20
BS Reconstruction Error 2 (EBSZ[1]) −10 (%) 10	Cable Drag From STIA to STIT	SS Reconstruction Error 2 (ESSZ[1]) −10 (%) 10	LS Reconstruction Error 2 (ELSZ[1]) −20 (%) 20
BS Reconstruction Error 1 (EBSZ[0]) −10 (%) 10	Stuck Stretch (STIT) 0 (F) 50	SS Reconstruction Error 1 (ESSZ[0]) −10 (%) 10	LS Reconstruction Error 1 (ELSZ[0]) −20 (%) 20

LOG QUALITY IMAGE





LOG QUALITY IMAGE

BS Reconstruction Error 1 (EBSZ[0]) −10 (%) 10	Stuck Stretch (STIT) 0 (F) 50	SS Reconstruction Error 1 (ESSZ[0]) −10 (%) 10	LS Reconstruction Error 1 (ELSZ[0]) −20 (%) 20
BS Reconstruction Error 2 (EBSZ[1]) −10 (%) 10	Cable Drag From STIA to STIT	SS Reconstruction Error 2 (ESSZ[1]) −10 (%) 10	LS Reconstruction Error 2 (ELSZ[1]) −20 (%) 20
BS Reconstruction Error 3 (EBSZ[2]) −10 (%) 10	Tool/Tot. Drag From D3T to STIA	SS Reconstruction Error 3 (ESSZ[2]) −10 (%) 10	LS Reconstruction Error 3 (ELSZ[2]) −20 (%) 20
		SS Reconstruction Error 4 (ESSZ[3]) −10 (%) 10	LS Reconstruction Error 4 (ELSZ[3]) −20 (%) 20
			HRDD Cost Function (GREZ) 0 (----) 200
			Tension (TENS) 10000 (LBF) 0

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	ZAIT−BA: 3−D Array Induction Tool − ZAIT−B		
TRIRT	3D Rotation Selector	NorTH	
	HILTB−FTB: High resolution Integrated Logging Tool−DTS		
BHFL_TLD	HILT Nuclear Mud Base	OIL	
DHC	Density Hole Correction	BS	
GCLF	Germany Coal−like Formation Option	NO	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	VeryHiRes	
NSAR	HRDD Depth Sampling Rate	0.5	IN
	STI: Stuck Tool Indicator		
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	2.5	FT
TDD	Total Depth − Driller	3000.00	FT
TDL	Total Depth − Logger	3000.00	FT
	DIR: Directional Survey Computation		
SPVD	TVD of Starting Point	0	FT
TIMD	Along−hole depth of Tie−in Point	0	FT
TIVD	TVD of Tie−in Point	0	FT
	System and Miscellaneous		
BS	Bit Size	8.750	IN
DFD	Drilling Fluid Density	9.40	LB/G
DO	Depth Offset for Playback	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
PP	Playback Processing	NORMAL	

Format: HrddPLQC Vertical Scale: 2" per 100' Graphics File Created: 14−Feb−2007 13:09

OP System Version: 14C0−302

MCM

ZAIT−BA	SPC−3254−ZAIT−B	HILTB−FTB	SPC−3254−ZAIT−B
EPT−G	SRPC−3243−Q4_2006	DTA−A	SKK−3248−EDTCB
GPIT−C	SRPC−3243−Q4_2006	DTC−H	SRPC−3243−Q4_2006

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_022LUP	FN:27	PRODUCER	14−Feb−2007 10:04	2994.0 FT	1859.0 FT

Output DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_030PUP	FN:43	PRODUCER	14−Feb−2007 13:08
MTE	AIT_TLD_MCFL_CNL_030PUP	FN:44	PRODUCER	14−Feb−2007 13:08

Schlumberger

CALIBRATIONS

MAXIS Field Log

Calibration and Check Summary

3−D Array Induction Tool − ZAIT−B Wellsite Calibration − Electronics Calibration Check − Thru Cal Mag. & Phase
Master: 29−Jan−2007 15:32 Before: 14−Feb−2007 7:52

Measurement	Nominal	Master	Before	After	Change	Limit	Units
Thru Cal Magnitude − 0	0	1.345	1.353	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 1	0	1.336	1.360	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 2	0	1.387	1.441	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 3	0	3.071	3.094	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 4	0	3.051	3.109	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 5	0	3.167	3.295	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 6	0	2.477	2.496	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 7	**0**	**2.461**	**2.508**	**N/A**	**N/A**	**N/A**	**MM/M**
Thru Cal Magnitude − 8	0	2.559	2.663	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 9	0	1.623	1.651	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 10	0	1.634	1.684	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 11	0	1.796	1.880	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 12	0	3.239	3.260	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 13	0	3.221	3.279	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 14	0	3.346	3.477	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 15	0	2.606	2.652	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 16	0	2.624	2.704	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 17	0	2.884	3.019	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 18	0	0.8449	0.8511	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 19	0	0.8402	0.8561	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 20	0	0.8631	0.8988	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 21	0	3.452	3.513	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 22	0	3.476	3.582	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 23	0	3.821	4.000	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 24	0	1.224	1.234	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 25	0	1.217	1.241	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 26	0	1.250	1.303	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 27	0	3.452	3.513	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 28	0	3.476	3.582	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 29	0	3.821	3.999	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 30	0	1.223	1.233	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 31	0	1.216	1.241	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 32	0	1.250	1.302	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 33	0	0.9808	0.9991	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 34	0	0.9876	1.018	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 35	0	1.071	1.123	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 36	0	1.447	1.459	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 37	0	1.439	1.468	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 38	0	1.474	1.538	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 39	0	1.178	1.200	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 40	0	1.186	1.223	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 41	0	1.286	1.348	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 42	0	2.090	2.109	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 43	0	2.079	2.121	N/A	N/A	N/A	MM/M
Thru Cal Magnitude − 44	**0**	**2.129**	**2.221**	**N/A**	**N/A**	**N/A**	**MM/M**
Thru Cal Phase − 0	0	−174.6	−167.5	N/A	N/A	N/A	DEG
Thru Cal Phase − 1	0	−170.2	−162.6	N/A	N/A	N/A	DEG
Thru Cal Phase − 2	0	−177.4	−160.7	N/A	N/A	N/A	DEG
Thru Cal Phase − 3	0	−176.6	−169.7	N/A	N/A	N/A	DEG
Thru Cal Phase − 4	0	−172.3	−164.8	N/A	N/A	N/A	DEG
Thru Cal Phase − 5	0	−179.4	−163.0	N/A	N/A	N/A	DEG
Thru Cal Phase − 6	0	177.8	−175.0	N/A	N/A	N/A	DEG
Thru Cal Phase − 7	0	−177.9	−170.2	N/A	N/A	N/A	DEG
Thru Cal Phase − 8	0	175.0	−168.3	N/A	N/A	N/A	DEG
Thru Cal Phase − 9	0	−72.00	−67.24	N/A	N/A	N/A	DEG
Thru Cal Phase − 10	0	−60.73	−55.93	N/A	N/A	N/A	DEG
Thru Cal Phase − 11	0	−72.15	−60.62	N/A	N/A	N/A	DEG
Thru Cal Phase − 12	0	−174.8	−167.6	N/A	N/A	N/A	DEG
Thru Cal Phase − 13	0	−170.5	−162.9	N/A	N/A	N/A	DEG
Thru Cal Phase − 14	0	−177.6	−161.0	N/A	N/A	N/A	DEG
Thru Cal Phase − 15	0	−72.38	−67.60	N/A	N/A	N/A	DEG
Thru Cal Phase − 16	0	−61.11	−56.30	N/A	N/A	N/A	DEG
Thru Cal Phase − 17	0	−72.56	−61.03	N/A	N/A	N/A	DEG
Thru Cal Phase − 18	0	−174.3	−167.1	N/A	N/A	N/A	DEG
Thru Cal Phase − 19	0	−170.0	−162.4	N/A	N/A	N/A	DEG
Thru Cal Phase − 20	0	−177.4	−160.7	N/A	N/A	N/A	DEG
Thru Cal Phase − 21	0	−72.91	−68.14	N/A	N/A	N/A	DEG
Thru Cal Phase − 22	0	−61.64	−56.85	N/A	N/A	N/A	DEG
Thru Cal Phase − 23	0	−73.08	−61.54	N/A	N/A	N/A	DEG
Thru Cal Phase − 24	0	−177.2	−170.2	N/A	N/A	N/A	DEG
Thru Cal Phase − 25	0	−172.9	−165.4	N/A	N/A	N/A	DEG
Thru Cal Phase − 26	0	179.7	−163.7	N/A	N/A	N/A	DEG
Thru Cal Phase − 27	0	−72.91	−68.13	N/A	N/A	N/A	DEG
Thru Cal Phase − 28	0	−61.64	−56.84	N/A	N/A	N/A	DEG
Thru Cal Phase − 29	0	−73.11	−61.57	N/A	N/A	N/A	DEG
Thru Cal Phase − 30	0	−177.2	−170.2	N/A	N/A	N/A	DEG
Thru Cal Phase − 31	0	−172.9	−165.4	N/A	N/A	N/A	DEG
Thru Cal Phase − 32	0	179.7	−163.7	N/A	N/A	N/A	DEG
Thru Cal Phase − 33	0	−76.79	−71.95	N/A	N/A	N/A	DEG
Thru Cal Phase − 34	0	−65.38	−60.53	N/A	N/A	N/A	DEG
Thru Cal Phase − 35	0	−77.45	−65.80	N/A	N/A	N/A	DEG
Thru Cal Phase − 36	**0**	**176.7**	**−176.1**	**N/A**	**N/A**	**N/A**	**DEG**
Thru Cal Phase − 37	0	−179.0	−171.3	N/A	N/A	N/A	DEG
Thru Cal Phase − 38	0	173.6	−169.7	N/A	N/A	N/A	DEG
Thru Cal Phase − 39	0	−76.61	−71.77	N/A	N/A	N/A	DEG
Thru Cal Phase − 40	0	−65.22	−60.37	N/A	N/A	N/A	DEG
Thru Cal Phase − 41	0	−77.31	−65.65	N/A	N/A	N/A	DEG
Thru Cal Phase − 42	0	177.4	−175.4	N/A	N/A	N/A	DEG
Thru Cal Phase − 43	0	−178.3	−170.6	N/A	N/A	N/A	DEG
Thru Cal Phase − 44	0	174.2	−169.0	N/A	N/A	N/A	DEG

3−D Array Induction Tool − ZAIT−B Wellsite Calibration − Electronics Calibration Check − Auxilliary
Master: 29−Jan−2007 15:32 Before: 14−Feb−2007 7:52

Array Induction SPA Plus	0.8360	0.8436	0.8438	N/A	N/A	N/A	V
Array Induction SPA Zero	0	−0.0007702	−0.0008165	N/A	N/A	N/A	V
Array Induction Temperature Pl	0.9798	0.9906	0.9911	N/A	N/A	N/A	V
Array Induction Temperature Ze	0	−0.001124	−0.001144	N/A	N/A	N/A	V
Array Induction CalSig Plus	5.000	5.015	5.016	N/A	N/A	N/A	V
Array Induction CalSig Zero	0	−0.01105	−0.01124	N/A	N/A	N/A	V
Array Induction Volt Plus	5.000	5.014	5.016	N/A	N/A	N/A	V
Array Induction Volt Zero	0	−0.01105	−0.01124	N/A	N/A	N/A	V

3−D Array Induction Tool − ZAIT−B Wellsite Calibration − Sonde Error Correction
Master: 29−Jan−2007 15:32

R Sonde Error Correction − 0	0	20.92	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 1	0	754.2	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 2	0	−1325	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 3	0	33.96	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 4	0	154.4	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 5	0	85.67	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 6	0	63.31	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 7	0	148.3	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 8	0	90.72	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 9	0	−492.9	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 10	0	18.30	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 11	0	−119.2	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 12	0	−6.887	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 13	0	−394.3	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 14	0	65.79	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 15	0	52.97	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 16	0	87.06	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 17	0	−85.69	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 18	0	−264.4	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 19	0	2.997	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 20	0	−67.21	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 21	0	−2.146	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 22	0	−171.0	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 23	0	2.315	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 24	0	43.68	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 25	0	57.55	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 26	0	−78.64	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 27	0	−324.3	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 28	0	6.777	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 29	0	−20.82	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 30	0	11.65	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 31	0	−333.3	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 32	0	48.80	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 33	0	5.421	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 34	0	−1.054	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 35	0	124.1	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 36	0	−319.1	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 37	0	6.994	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 38	0	0.5654	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 39	0	1.085	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 40	0	−323.3	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 41	0	15.87	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 42	0	−0.8276	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 43	0	0.7432	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 44	0	47.85	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 45	0	−15.48	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 46	0	−9.021	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 47	0	−31.66	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 48	0	11.94	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 49	0	−17.19	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 50	0	18.09	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 51	0	5.572	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 52	0	8.875	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 53	0	59.44	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 54	0	−2.308	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 55	0	−1.336	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 56	0	−1.396	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 57	0	0.9340	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 58	0	1.078	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 59	0	6.561	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 60	0	4.802	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 61	0	5.034	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 62	0	26.23	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 63	0	−2.579	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 64	0	29.50	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 65	0	−15.76	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 66	0	−19.63	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 67	0	−0.2565	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 68	0	3.726	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 69	0	−6.196	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 70	0	−0.5899	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction − 71	0	22.25	N/A	N/A	N/A	N/A	MM/M

R Sonde Error Correction – 72	0	0.3745	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 73	0	1.286	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 74	0	–1.035	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 75	0	–1.570	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 76	0	2.299	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 77	0	1.771	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 78	0	0.7233	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 79	0	0.7604	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 80	0	10.68	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 81	0	–15.45	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 82	0	–8.384	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 83	0	–11.00	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 84	0	13.94	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 85	0	–15.01	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 86	0	4.540	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 87	0	–0.8786	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 88	0	2.126	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 89	0	3.597	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 90	0	–12.18	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 91	0	–2.645	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 92	0	–1.279	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 93	0	2.192	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 94	0	–10.83	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 95	0	1.041	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 96	0	0.9281	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 97	0	0.2935	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 98	0	3.097	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 99	0	–41.39	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 100	0	15.87	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 101	0	–6.421	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 102	0	–11.33	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 103	0	–45.67	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 104	0	–0.1936	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 105	0	1.150	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 106	0	–1.690	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 107	0	–2.731	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 108	0	–40.59	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 109	0	3.576	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 110	0	–0.6722	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 111	0	–3.843	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 112	0	–42.31	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 113	0	–0.1958	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 114	0	1.999	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 115	0	–0.4481	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 116	0	2.266	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 0	0	5052	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 1	0	8939	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 2	0	–103.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 3	0	2129	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 4	0	830.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 5	0	–295.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 6	0	700.2	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 7	0	567.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 8	0	–25.51	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 9	0	–220.7	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 10	0	–581.3	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 11	0	994.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 12	0	1033	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 13	0	–632.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 14	0	101.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 15	0	–554.7	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 16	0	–705.2	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 17	0	221.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 18	0	–380.3	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 19	0	–278.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 20	0	485.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 21	0	513.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 22	0	–557.7	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 23	0	48.64	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 24	0	–300.7	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 25	0	–369.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 26	0	74.67	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 27	0	722.8	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 28	0	–93.67	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 29	0	251.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 30	0	–837.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 31	0	829.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 32	0	442.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 33	0	–174.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 34	0	–100.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 35	0	–78.95	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 36	0	421.2	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 37	0	–48.20	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 38	0	122.2	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 39	0	–417.3	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 40	0	470.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 41	0	227.7	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 42	0	–78.56	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 43	0	–45.15	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 44	0	–9.689	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 45	0	2082	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 46	0	368.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 47	0	780.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 48	0	–416.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 49	0	1985	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 50	0	139.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 51	0	784.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 52	0	–98.90	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 53	0	–19.65	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 54	0	1017	N/A	N/A	N/A	N/A	MM/M

X Sonde Error Correction – 55	0	188.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 56	0	388.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 57	0	–209.3	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 58	0	968.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 59	0	72.00	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 60	0	391.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 61	0	–48.64	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 62	0	2.136	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 63	0	635.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 64	0	–951.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 65	0	180.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 66	0	918.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 67	0	611.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 68	0	30.84	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 69	0	286.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 70	0	–46.72	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 71	0	18.34	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 72	0	262.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 73	0	–472.1	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 74	0	86.88	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 75	0	457.0	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 76	0	250.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 77	0	17.22	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 78	0	139.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 79	0	–23.30	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 80	0	16.27	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 81	0	315.8	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 82	0	586.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 83	0	112.2	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 84	0	–578.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 85	0	295.3	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 86	0	–83.63	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 87	0	7.633	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 88	0	–185.6	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 89	0	20.93	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 90	0	84.33	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 91	0	298.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 92	0	55.94	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 93	0	–297.9	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 94	0	74.61	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 95	0	–40.80	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 96	0	3.809	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 97	0	–91.97	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 98	0	14.05	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 99	0	152.7	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 100	0	–416.8	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 101	0	–42.07	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 102	0	450.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 103	0	156.3	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 104	0	–17.73	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 105	0	–3.397	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 106	0	24.17	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 107	0	55.88	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 108	0	126.8	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 109	0	–220.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 110	0	–21.33	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 111	0	234.5	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 112	0	128.4	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 113	0	–4.797	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 114	0	–1.614	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 115	0	14.76	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 116	0	8.951	N/A	N/A	N/A	N/A	MM/M

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Stab Measurement Summary
Before: 10–Feb–2007 15:02

BS Window Ratio	0.7349	N/A	0.7374	N/A	N/A	N/A	
BS Window Sum	9792	N/A	9820	N/A	N/A	N/A	CPS
SS Window Ratio	0.4651	N/A	0.4690	N/A	N/A	N/A	
SS Window Sum	9029	N/A	9013	N/A	N/A	N/A	CPS
LS Window Ratio	0.2965	N/A	0.2934	N/A	N/A	N/A	
LS Window Sum	1124	N/A	1116	N/A	N/A	N/A	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Photo–multiplier High Voltages Calibrations
Before: 10–Feb–2007 15:02

BS PM High Voltage (Command)	1609	N/A	1640	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1801	N/A	1801	N/A	N/A	N/A	V
LS PM High Voltage (Command)	2044	N/A	2044	N/A	N/A	N/A	V

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Crystal Quality Resolutions Calibration
Before: 10–Feb–2007 15:02

BS Crystal Resolution	11.86	N/A	11.90	N/A	N/A	N/A	%
SS Crystal Resolution	11.06	N/A	11.10	N/A	N/A	N/A	%
LS Crystal Resolution	10.33	N/A	10.44	N/A	N/A	N/A	%

High resolution Integrated Logging Tool–DTS Wellsite Calibration – MCFL Calibration
Before: 10–Feb–2007 15:09

Raw B0 Resistivity	3875	N/A	3880	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3836	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3834	N/A	N/A	N/A	OHMM

High resolution Integrated Logging Tool–DTS Wellsite Calibration – HILT Caliper Calibration
Before: 10–Feb–2007 15:00

HILT Caliper Zero Measurement	8.000	N/A	7.114	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	11.30	N/A	N/A	N/A	IN

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Detector Calibration
Before: 10–Feb–2007 15:03

Gamma Ray Background	30.00	N/A	21.37	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	167.2	N/A	167.2	N/A	N/A	15.20	GAPI
Gamma Ray (Calibrated)	153.5	N/A	153.5	N/A	N/A	15.00	GAPI

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Zero Measurement
Master: 22–Jan–2007 16:01 Before: 10–Feb–2007 15:01

CNTC Background	29.72	29.72	30.01	N/A	N/A	4.458	CPS
CFTC Background	28.66	28.66	30.65	N/A	N/A	4.299	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Ratio Measurement
Master: 22–Jan–2007 16:01

Thermal Near Corr. (Tank)	5800	5739	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2396	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.396	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Accelerometer Calibration
Before: 14–Feb–2007 7:52

Z–Axis Acceleration	32.19	N/A	32.25	N/A	N/A	N/A	F/S2

High resolution Integrated Logging Tool–DTS Master Calibration – Inversion results
Master: 22–Jan–2007 21:16

Rho Aluminum	2.596	2.596	––	––	––	––	G/C3
Rho Magnesium	1.686	1.689	––	––	––	––	G/C3
Pe Aluminum	2.570	2.568	––	––	––	––	
Pe Magnesium	2.650	2.611	––	––	––	––	

High resolution Integrated Logging Tool–DTS Master Calibration – Deviation Summary
Master: 22–Jan–2007 21:16

BS Average Deviation	0	0.3577	––	––	––	––	%
BS Max Deviation	0	0.8287	––	––	––	––	%
SS Average Deviation	0	0.4003	––	––	––	––	%
SS Max Deviation	0	0.7964	––	––	––	––	%
LS Average Deviation	0	0.7110	––	––	––	––	%
LS Max Deviation	0	1.165	––	––	––	––	%

Electromagnetic Propagation – G Wellsite Calibration – Electronics Calibration
Before: 14–Feb–2007 7:55

EATT Electronics	500.0	N/A	503.5	N/A	N/A	N/A	DB/M
TPL Electronics	11.35	N/A	11.33	N/A	N/A	N/A	NS/M

General Purpose Inclinometer Wellsite Calibration – CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY
Before: 14–Feb–2007 7:56

TEMPERATURE REFERENCE :	N/A	N/A	68	N/A	N/A	N/A	DEGF
YEAR OF CALIBRATION :	N/A	N/A	4	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	5	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	877	N/A	N/A	N/A	

General Purpose Inclinometer Wellsite Calibration – CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY
Before: 14–Feb–2007 7:56

TEMPERATURE REFERENCE :	N/A	N/A	66	N/A	N/A	N/A	DEGF
YEAR OF CALIBRATION :	N/A	N/A	2	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	3	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	487	N/A	N/A	N/A	

The GLS–VJ source activity is acceptable.

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

NCT–B Water Temperature 73.0 DEGF.
Thermal Housing Size 3.375 IN.
NSR–F serial number 2513

3–D Array Induction Tool – ZAIT–B / Equipment Identification

Primary Equipment:

Rm/SP Bottom Nose	AHRM – A	
3–D Array Induction Sonde	AXIS – A	2

Auxiliary Equipment:

3–D Array Induction Tool – ZAIT–B Wellsite Calibration
Electronics Calibration Check – Thru Cal Mag. & Phase

Idx	Phase	Value	Thru Cal Magnitude MM/M	Nominal	Value	Thru Cal Phase DEG	Nominal
0	Master	1.345		1.456	–174.6		0
	Before	1.353			–167.5		
1	Master	1.336		1.456	–170.2		0
	Before	1.360			–162.6		

2	Master	1.387	1.456	−177.4		0
	Before	1.441		−160.7		
3	Master	3.071	3.352	−176.6		0
	Before	3.094		−169.7		
4	Master	3.051	3.352	−172.3		0
	Before	3.109		−164.8		
5	Master	3.167	3.352	−179.4		0
	Before	3.295		−163.0		
6	Master	2.477	2.680	177.8		0
	Before	2.496		−175.0		
7	Master	2.461	2.680	−177.9		0
	Before	2.508		−170.2		
8	Master	2.559	2.680	175.0		0
	Before	2.663		−168.3		
9	Master	1.623	1.956	−72.00		0
	Before	1.651		−67.24		
10	Master	1.634	1.956	−60.73		0
	Before	1.684		−55.93		
11	Master	1.796	1.956	−72.15		0
	Before	1.880		−60.62		
12	Master	3.239	3.537	−174.8		0
	Before	3.260		−167.6		
13	Master	3.221	3.537	−170.5		0
	Before	3.279		−162.9		
14	Master	3.346	3.537	−177.6		0
	Before	3.477		−161.0		
15	Master	2.606	3.100	−72.38		0
	Before	2.652		−67.60		
16	Master	2.624	3.100	−61.11		0
	Before	2.704		−56.30		
17	Master	2.884	3.100	−72.56		0
	Before	3.019		−61.03		
18	Master	0.8449	0.9359	−174.3		0
	Before	0.8511		−167.1		
19	Master	0.8402	0.9359	−170.0		0
	Before	0.8561		−162.4		
20	Master	0.8631	0.9359	−177.4		0
	Before	0.8988		−160.7		
21	Master	3.452	4.081	−72.91		0
	Before	3.513		−68.14		
22	Master	3.476	4.081	−61.64		0
	Before	3.582		−56.85		
23	Master	3.821	4.081	−73.08		0
	Before	4.000		−61.54		
24	Master	1.224	1.362	−177.2		0
	Before	1.234		−170.2		
25	Master	1.217	1.362	−172.9		0
	Before	1.241		−165.4		

26	Master	1.250	1.362	179.7	0
	Before	1.303		−163.7	
27	Master	3.452	4.081	−72.91	0
	Before	3.513		−68.13	
28	Master	3.476	4.081	−61.64	0
	Before	3.582		−56.84	
29	Master	3.821	4.081	−73.11	0
	Before	3.999		−61.57	
30	Master	1.223	1.362	−177.2	0
	Before	1.233		−170.2	
31	Master	1.216	1.362	−172.9	0
	Before	1.241		−165.4	
32	Master	1.250	1.362	179.7	0
	Before	1.302		−163.7	
33	Master	0.9808	1.220	−76.79	0
	Before	0.9991		−71.95	
34	Master	0.9876	1.220	−65.38	0
	Before	1.018		−60.53	
35	Master	1.071	1.220	−77.45	0
	Before	1.123		−65.80	
36	Master	1.447	1.635	176.7	0
	Before	1.459		−176.1	
37	Master	1.439	1.635	−179.0	0
	Before	1.468		−171.3	
38	Master	1.474	1.635	173.6	0
	Before	1.538		−169.7	
39	Master	1.178	1.464	−76.61	0
	Before	1.200		−71.77	
40	Master	1.186	1.464	−65.22	0
	Before	1.223		−60.37	
41	Master	1.286	1.464	−77.31	0
	Before	1.348		−65.65	
42	Master	2.090	2.353	177.4	0
	Before	2.109		−175.4	
43	Master	2.079	2.353	−178.3	0
	Before	2.121		−170.6	
44	Master	2.129	2.353	174.2	0
	Before	2.221		−169.0	
		60.00 % (Minimum) (Nominal) 140.0 % (Maximum)		Nom −180.0 (Minimum) (Nominal) Nom + 180.0 (Maximum)	

Master: 29−Jan−2007 15:32 Before: 14−Feb−2007 7:52

3−D Array Induction Tool − ZAIT−B Wellsite Calibration

Electronics Calibration Check − Auxilliary

Phase	Array Induction SPA Plus V	Value	Phase	Array Induction SPA Zero V	Value
Master		0.8436	Master		−0.0007702
Before		0.8438	Before		−0.0008165
	0.7570 (Minimum) 0.8360 (Nominal) 0.9150 (Maximum)			−0.05000 (Minimum) 0 (Nominal) 0.05000 (Maximum)	

Phase	Array Induction Temperature Plus V	Value
Master		0.9906
Before		0.9911
	0.8800 (Minimum) 0.9798 (Nominal) 1.076 (Maximum)	

Phase	Array Induction Temperature Zero V	Value
Master		−0.001124
Before		−0.001144
	−0.05000 (Minimum) 0 (Nominal) 0.05000 (Maximum)	

Phase	Array Induction CalSig Plus V	Value
Master		5.015
Before		5.016
	4.500 (Minimum) 5.000 (Nominal) 5.500 (Maximum)	

Phase	Array Induction CalSig Zero V	Value
Master		−0.01105
Before		−0.01124
	−0.05000 (Minimum) 0 (Nominal) 0.05000 (Maximum)	

Phase	Array Induction Volt Plus V	Value
Master		5.014
Before		5.016
	4.500 (Minimum) 5.000 (Nominal) 5.500 (Maximum)	

Phase	Array Induction Volt Zero V	Value
Master		−0.01105
Before		−0.01124
	−0.05000 (Minimum) 0 (Nominal) 0.05000 (Maximum)	

Master: 29−Jan−2007 15:32 Before: 14−Feb−2007 7:52

3−D Array Induction Tool − ZAIT−B Wellsite Calibration

Sonde Error Correction

Idx	Value	R Sonde Error Correction MM/M	Value	X Sonde Error Correction MM/M
0	20.92	−2105 (Minimum) 351.3 (Nominal) 2808 (Maximum)	5052	−33300 (Minimum) 0 (Nominal) 33300 (Maximum)
1	754.2	−5042 (Minimum) 500.9 (Nominal) 6044 (Maximum)	8939	−37570 (Minimum) 0 (Nominal) 37570 (Maximum)
2	−1325	−2575 (Minimum) −1399 (Nominal) −222.3 (Maximum)	−103.9	−2478 (Minimum) 0 (Nominal) 2478 (Maximum)
3	33.96	−2398 (Minimum) −112.1 (Nominal) 2174 (Maximum)	2129	−7332 (Minimum) 0 (Nominal) 7332 (Maximum)
4	154.4	−1421 (Minimum) 124.3 (Nominal) 1670 (Maximum)	830.1	−6457 (Minimum) 0 (Nominal) 6457 (Maximum)
5	85.67	−563.7 (Minimum) 64.70 (Nominal) 693.1 (Maximum)	−295.1	−619.1 (Minimum) 0 (Nominal) 619.1 (Maximum)
6	63.31	−2295 (Minimum) −206.4 (Nominal) 1882 (Maximum)	700.2	−5708 (Minimum) 0 (Nominal) 5708 (Maximum)
7	148.3	−1367 (Minimum) 138.2 (Nominal) 1644 (Maximum)	567.0	−2991 (Minimum) 0 (Nominal) 2991 (Maximum)
8	90.72	−811.7 (Minimum) 141.5 (Nominal) 1095 (Maximum)	−25.51	−372.1 (Minimum) 0 (Nominal) 372.1 (Maximum)
9	−492.9	−3068 (Minimum) −97.15 (Nominal) 2874 (Maximum)	−220.7	−4300 (Minimum) 0 (Nominal) 4300 (Maximum)
10	18.30	−798.0 (Minimum) 1.896 (Nominal) 801.8 (Maximum)	−581.3	−12390 (Minimum) 0 (Nominal) 12390 (Maximum)
11	−119.2	−770.9 (Minimum) 23.35 (Nominal) 817.6 (Maximum)	994.5	−4594 (Minimum) 0 (Nominal) 4594 (Maximum)
12	−6.887	−734.3 (Minimum) 14.37 (Nominal) 763.0 (Maximum)	1033	−11510 (Minimum) 0 (Nominal) 11510 (Maximum)
13	−394.3	−2770 (Minimum) −241.5 (Nominal) 2287 (Maximum)	−632.1	−2410 (Minimum) 0 (Nominal) 2410 (Maximum)
14	65.79	−570.4 (Minimum) 31.47 (Nominal) 633.4 (Maximum)	101.5	−4653 (Minimum) 0 (Nominal) 4653 (Maximum)
15	52.97	−2241 (Minimum) −108.3 (Nominal) 2024 (Maximum)	−554.7	−5251 (Minimum) 0 (Nominal) 5251 (Maximum)
16	87.06	−1029 (Minimum) 43.50 (Nominal) 1116 (Maximum)	−705.2	−6660 (Minimum) 0 (Nominal) 6660 (Maximum)
17	−85.69	−471.1 (Minimum) −41.64 (Nominal) 387.8 (Maximum)	221.6	−287.3 (Minimum) 0 (Nominal) 287.3 (Maximum)

	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
18	−264.4			−380.3			
	−3236	−34.30	3167	−1971	0	1971	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
19	2.997			−278.9			
	−508.2	−31.06	446.1	−8843	0	8843	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
20	−67.21			485.0			
	−990.0	78.40	1147	−2886	0	2886	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
21	−2.146			513.5			
	−332.1	27.84	387.8	−7605	0	7605	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
22	−171.0			−557.7			
	−1710	−171.8	1367	−1006	0	1006	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
23	2.315			48.64			
	−700.5	−7.184	686.2	−2778	0	2778	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
24	43.68			−300.7			
	−2238	−131.8	1975	−4019	0	4019	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
25	57.55			−369.9			
	−888.1	60.98	1010	−3802	0	3802	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
26	−78.64			74.67			
	−568.8	−98.79	371.2	−150.9	0	150.9	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
27	−324.3			722.8			
	−2660	−247.8	2164	−1619	0	1619	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
28	6.777			−93.67			
	−311.9	19.89	351.7	−4748	0	4748	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
29	−20.82			251.6			
	−238.9	−0.7571	237.4	−1927	0	1927	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
30	11.65			−837.1			
	−263.8	−8.173	247.5	−3768	0	3768	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
31	−333.3			829.5			
	−1851	−192.8	1465	−1400	0	1400	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
32	48.80			442.1			
	−186.8	22.62	232.0	−1526	0	1526	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
33	5.421			−174.6			
	−1101	55.12	1211	−3024	0	3024	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
34	−1.054			−100.0			
	−186.5	−4.793	176.9	−2838	0	2838	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
35	124.1			−78.95			
	−462.5	63.86	590.2	−107.3	0	107.3	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
36	−319.1			421.2			
	−1876	−385.5	1105	−902.5	0	902.5	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
37	6.994			−48.20			
	−239.6	19.09	277.8	−4148	0	4148	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
38	0.5654			122.2			
	−95.40	8.103	111.7	−1441	0	1441	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
39	1.085			−417.3			
	−232.3	−11.60	209.1	−3221	0	3221	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
40	−323.3			470.6			
	−840.1	−332.1	175.8	−790.7	0	790.7	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
41	15.87			227.7			
	−30.50	11.77	54.00	−881.0	0	881.0	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
42	−0.8276			−78.56			
	−1086	50.67	1188	−1840	0	1840	
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)	
43	0.7432			−45.15			
	−199.6	−7.273	185.1	−1624	0	1624	

	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
44	47.85			−9.689		
	−1.100	46.99	95.10	−91.40	0	91.40
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
45	−15.48			2082		
	−173.4	2.034	177.5	−2138	0	2138
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
46	−9.021			368.4		
	−374.2	−10.87	352.5	−2357	0	2357
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
47	−31.66			780.9		
	−183.8	−15.64	152.5	−986.0	0	986.0
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
48	11.94			−416.4		
	−261.9	2.156	266.2	−2252	0	2252
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
49	−17.19			1985		
	−178.2	−0.6614	176.9	−2148	0	2148
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
50	18.09			139.9		
	−65.70	8.816	83.30	−626.5	0	626.5
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
51	5.572			784.0		
	−166.5	2.130	170.8	−1981	0	1981
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
52	8.875			−98.90		
	−52.80	3.754	60.30	−1243	0	1243
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
53	59.44			−19.65		
	−235.6	32.53	300.6	−41.10	0	41.10
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
54	−2.308			1017		
	−95.30	−9.750	75.80	−1088	0	1088
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
55	−1.336			188.6		
	−134.6	−5.565	123.5	−1366	0	1366
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
56	−1.396			388.1		
	−27.40	−6.454	14.50	−540.6	0	540.6
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
57	0.9340			−209.3		
	−137.9	−0.5576	136.8	−1274	0	1274
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
58	1.078			968.0		
	−78.10	−9.827	58.50	−1071	0	1071
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
59	6.561			72.00		
	−18.10	5.923	29.90	−340.7	0	340.7
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
60	4.802			391.0		
	−65.40	0.3248	66.00	−1250	0	1250
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
61	5.034			−48.64		
	−32.10	3.359	38.80	−691.8	0	691.8
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
62	26.23			2.136		
	−9.800	27.57	64.90	−32.90	0	32.90
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
63	−2.579			635.4		
	−56.30	0.6343	57.60	−770.3	0	770.3
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
64	29.50			−951.4		
	−86.20	−0.04571	86.10	−1478	0	1478
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
65	−15.76			180.9		
	−51.90	−4.624	42.60	−621.1	0	621.1
	(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
66	−19.63			918.5		
	−171.8	−2.056	167.7	−1581	0	1581

		(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
67	−0.2565	−45.00	0.1900	45.40	611.6	−751.4	0	751.4
68	3.726	−42.10	3.956	50.00	30.84	−476.3	0	476.3
69	−6.196	−27.40	0.6414	28.70	286.1	−517.0	0	517.0
70	−0.5899	−42.00	3.171	48.30	−46.72	−935.7	0	935.7
71	22.25	−87.80	11.76	111.3	18.34	−62.10	0	62.10
72	0.3745	−24.60	−2.297	20.00	262.4	−375.5	0	375.5
73	1.286	−57.60	2.100	61.80	−472.1	−1185	0	1185
74	−1.035	−12.70	−1.704	9.300	86.88	−356.7	0	356.7
75	−1.570	−78.00	−3.031	71.90	457.0	−1247	0	1247
76	2.299	−16.10	−1.311	13.50	250.6	−374.3	0	374.3
77	1.771	−12.80	2.693	18.20	17.22	−321.8	0	321.8
78	0.7233	−11.50	1.215	13.90	139.4	−333.1	0	333.1
79	0.7604	−13.40	3.431	20.30	−23.30	−581.6	0	581.6
80	10.68	−16.30	11.00	38.30	16.27	−39.20	0	39.20
81	−15.45	−67.80	−6.064	55.70	315.8	−330.3	0	330.3
82	−8.384	−75.70	0.09571	75.90	586.9	−805.0	0	805.0
83	−11.00	−42.90	−3.401	36.10	112.2	−191.7	0	191.7
84	13.94	−56.30	0.3271	57.00	−578.9	−782.3	0	782.3
85	−15.01	−56.50	−5.537	45.40	295.3	−319.1	0	319.1
86	4.540	−16.30	0.7314	17.80	−83.63	−149.5	0	149.5
87	−0.8786	−7.600	−0.1829	7.200	7.633	−242.5	0	242.5
88	2.126	−10.50	0.3700	11.30	−185.6	−214.9	0	214.9
89	3.597	−26.20	2.383	30.90	20.93	−116.1	0	116.1
90	−12.18	−30.60	−9.587	11.50	84.33	−105.7	0	105.7
91	−2.645	−38.50	−1.329	35.80	298.5	−471.2	0	471.2
92	−1.279	−17.00	−2.254	12.50	55.94	−118.0	0	118.0
93	2.192	−27.10	1.459	30.00	−297.9	−441.4	0	441.4

	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
94	−10.83			74.61			
	−28.40	−9.228	10.00		−100.3	0	100.3
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
95	1.041			−40.80			
	−11.80	1.184	14.20		−100.9	0	100.9
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
96	0.9281			3.809			
	−4.600	0.5421	5.700		−141.1	0	141.1
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
97	0.2935			−91.97			
	−6.400	0.8419	8.100		−179.1	0	179.1
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
98	3.097			14.05			
	−29.10	3.875	36.80		−42.70	0	42.70
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
99	−41.39			152.7			
	−208.6	−22.42	163.7		−228.8	0	228.8
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
100	15.87			−416.8			
	−110.1	6.030	122.1		−941.8	0	941.8
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
101	−6.421			−42.07			
	−40.50	−1.784	36.90		−177.8	0	177.8
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
102	−11.33			450.4			
	−218.8	−8.666	201.5		−932.5	0	932.5
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
103	−45.67			156.3			
	−201.5	−21.74	158.0		−189.7	0	189.7
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
104	−0.1936			−17.73			
	−20.20	0.1186	20.50		−173.1	0	173.1
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
105	1.150			−3.397			
	−13.60	1.554	16.70		−123.5	0	123.5
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
106	−1.690			24.17			
	−6.300	0.1929	6.600		−93.30	0	93.30
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
107	−2.731			55.88			
	−19.70	−1.369	17.00		−145.3	0	145.3
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
108	−40.59			126.8			
	−61.80	−39.44	−17.10		−174.6	0	174.6
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
109	3.576			−220.5			
	−28.80	2.697	34.20		−490.4	0	490.4
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
110	−0.6722			−21.33			
	−11.70	−1.231	9.200		−104.4	0	104.4
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
111	−3.843			234.5			
	−57.50	−3.492	50.50		−491.5	0	491.5
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
112	−42.31			128.4			
	−67.40	−39.27	−11.10		−150.1	0	150.1
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
113	−0.1958			−4.797			
	−10.40	0.8598	12.10		−103.3	0	103.3
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
114	1.999			−1.614			
	−3.100	2.525	8.100		−66.30	0	66.30
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
115	−0.4481			14.76			
	−3.200	0.4010	4.000		−66.00	0	66.00
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)
116	2.266			8.951			
	−27.70	1.505	30.70		−57.80	0	57.80
	(Minimum)	(Nominal)	(Maximum)		(Minimum)	(Nominal)	(Maximum)

Master: 29−Jan−2007 15:32

3−D Array Induction Tool − ZAIT−B Master Calibration

Electronics Calibration Check − Thru Cal Mag. & Phase

Idx	Phase	Value	Thru Cal Magnitude MM/M	Nominal	Value	Thru Cal Phase DEG	Nominal
0	Master	1.345		1.456	−174.6		0
1	Master	1.336		1.456	−170.2		0
2	Master	1.387		1.456	−177.4		0
3	Master	3.071		3.352	−176.6		0
4	Master	3.051		3.352	−172.3		0
5	Master	3.167		3.352	−179.4		0
6	Master	2.477		2.680	177.8		0
7	Master	2.461		2.680	−177.9		0
8	Master	2.559		2.680	175.0		0
9	Master	1.623		1.956	−72.00		0
10	Master	1.634		1.956	−60.73		0
11	Master	1.796		1.956	−72.15		0
12	Master	3.239		3.537	−174.8		0
13	Master	3.221		3.537	−170.5		0
14	Master	3.346		3.537	−177.6		0
15	Master	2.606		3.100	−72.38		0
16	Master	2.624		3.100	−61.11		0
17	Master	2.884		3.100	−72.56		0
18	Master	0.8449		0.9359	−174.3		0
19	Master	0.8402		0.9359	−170.0		0
20	Master	0.8631		0.9359	−177.4		0
21	Master	3.452		4.081	−72.91		0
22	Master	3.476		4.081	−61.64		0
23	Master	3.821		4.081	−73.08		0
24	Master	1.224		1.362	−177.2		0
25	Master	1.217		1.362	−172.9		0
26	Master	1.250		1.362	179.7		0
27	Master	3.452		4.081	−72.91		0
28	Master	3.476		4.081	−61.64		0
29	Master	3.821		4.081	−73.11		0
30	Master	1.223		1.362	−177.2		0
31	Master	1.216		1.362	−172.9		0
32	Master	1.250		1.362	179.7		0
33	Master	0.9808		1.220	−76.79		0
34	Master	0.9876		1.220	−65.38		0
35	Master	1.071		1.220	−77.45		0
36	Master	1.447		1.635	176.7		0
37	Master	1.439		1.635	−179.0		0
38	Master	1.474		1.635	173.6		0
39	Master	1.178		1.464	−76.61		0
40	Master	1.186		1.464	−65.22		0
41	Master	1.286		1.464	−77.31		0
42	Master	2.090		2.353	177.4		0
43	Master	2.079		2.353	−178.3		0
44	Master	2.129		2.353	174.2		0
		60.00 % (Minimum)	(Nominal) 140.0 % (Maximum)		Nom −180.0 (Minimum)	(Nominal) Nom + 180.0 (Maximum)	

Master: 29−Jan−2007 15:32

3−D Array Induction Tool − ZAIT−B Master Calibration

Electronics Calibration Check − Auxilliary

Phase	Array Induction SPA Plus V	Value	Phase	Array Induction SPA Zero V	Value
Master		0.8436	Master		−0.0007702
	0.7570 (Minimum) / 0.8360 (Nominal) / 0.9150 (Maximum)			−0.05000 (Minimum) / 0 (Nominal) / 0.05000 (Maximum)	

Phase	Array Induction Temperature Plus V	Value	Phase	Array Induction Temperature Zero V	Value
Master		0.9906	Master		−0.001124
	0.8800 (Minimum) / 0.9798 (Nominal) / 1.076 (Maximum)			−0.05000 (Minimum) / 0 (Nominal) / 0.05000 (Maximum)	

Phase	Array Induction CalSig Plus V	Value	Phase	Array Induction CalSig Zero V	Value
Master		5.015	Master		−0.01105
	4.500 (Minimum) / 5.000 (Nominal) / 5.500 (Maximum)			−0.05000 (Minimum) / 0 (Nominal) / 0.05000 (Maximum)	

Phase	Array Induction Volt Plus V	Value	Phase	Array Induction Volt Zero V	Value
Master		5.014	Master		−0.01105
	4.500 (Minimum) / 5.000 (Nominal) / 5.500 (Maximum)			−0.05000 (Minimum) / 0 (Nominal) / 0.05000 (Maximum)	

Master: 29−Jan−2007 15:32

3−D Array Induction Tool − ZAIT−B Master Calibration

Sonde Error Correction

Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M		
0	20.92	−2105 (Minimum)	351.3 (Nominal)	2808 (Maximum)	5052	−33300 (Minimum)	0 (Nominal)	33300 (Maximum)
1	754.2	−5042 (Minimum)	500.9 (Nominal)	6044 (Maximum)	8939	−37570 (Minimum)	0 (Nominal)	37570 (Maximum)
2	−1325	−2575 (Minimum)	−1399 (Nominal)	−222.3 (Maximum)	−103.9	−2478 (Minimum)	0 (Nominal)	2478 (Maximum)
3	33.96	−2398 (Minimum)	−112.1 (Nominal)	2174 (Maximum)	2129	−7332 (Minimum)	0 (Nominal)	7332 (Maximum)
4	154.4	−1421 (Minimum)	124.3 (Nominal)	1670 (Maximum)	830.1	−6457 (Minimum)	0 (Nominal)	6457 (Maximum)
5	85.67	−563.7 (Minimum)	64.70 (Nominal)	693.1 (Maximum)	−295.1	−619.1 (Minimum)	0 (Nominal)	619.1 (Maximum)
6	63.31	−2295 (Minimum)	−206.4 (Nominal)	1882 (Maximum)	700.2	−5708 (Minimum)	0 (Nominal)	5708 (Maximum)
7	148.3	−1367 (Minimum)	138.2 (Nominal)	1644 (Maximum)	567.0	−2991 (Minimum)	0 (Nominal)	2991 (Maximum)
8	90.72	−811.7 (Minimum)	141.5 (Nominal)	1095 (Maximum)	−25.51	−372.1 (Minimum)	0 (Nominal)	372.1 (Maximum)
9	−492.9	−3068 (Minimum)	−97.15 (Nominal)	2874 (Maximum)	−220.7	−4300 (Minimum)	0 (Nominal)	4300 (Maximum)
10	18.30	−798.0 (Minimum)	1.896 (Nominal)	801.8 (Maximum)	−581.3	−12390 (Minimum)	0 (Nominal)	12390 (Maximum)
11	−119.2	−770.9 (Minimum)	23.35 (Nominal)	817.6 (Maximum)	994.5	−4594 (Minimum)	0 (Nominal)	4594 (Maximum)
12	−6.887	−734.3 (Minimum)	14.37 (Nominal)	763.0 (Maximum)	1033	−11510 (Minimum)	0 (Nominal)	11510 (Maximum)
13	−394.3	−2770 (Minimum)	−241.5 (Nominal)	2287 (Maximum)	−632.1	−2410 (Minimum)	0 (Nominal)	2410 (Maximum)
14	65.79	−570.4 (Minimum)	31.47 (Nominal)	633.4 (Maximum)	101.5	−4653 (Minimum)	0 (Nominal)	4653 (Maximum)
15	52.97	−2241 (Minimum)	−108.3 (Nominal)	2024 (Maximum)	−554.7	−5251 (Minimum)	0 (Nominal)	5251 (Maximum)
16	87.06	−1029 (Minimum)	43.50 (Nominal)	1116 (Maximum)	−705.2	−6660 (Minimum)	0 (Nominal)	6660 (Maximum)
17	−85.69	−471.1 (Minimum)	−41.64 (Nominal)	387.8 (Maximum)	221.6	−287.3 (Minimum)	0 (Nominal)	287.3 (Maximum)
18	−264.4	−3236 (Minimum)	−34.30 (Nominal)	3167 (Maximum)	−380.3	−1971 (Minimum)	0 (Nominal)	1971 (Maximum)
19	2.997				−278.9			

	−508.2 (Minimum)	−31.06 (Nominal)	446.1 (Maximum)	−8843 (Minimum)	0 (Nominal)	8843 (Maximum)
20	−67.21			485.0		
	−990.0 (Minimum)	78.40 (Nominal)	1147 (Maximum)	−2886 (Minimum)	0 (Nominal)	2886 (Maximum)
21	−2.146			513.5		
	−332.1 (Minimum)	27.84 (Nominal)	387.8 (Maximum)	−7605 (Minimum)	0 (Nominal)	7605 (Maximum)
22	−171.0			−557.7		
	−1710 (Minimum)	−171.8 (Nominal)	1367 (Maximum)	−1006 (Minimum)	0 (Nominal)	1006 (Maximum)
23	2.315			48.64		
	−700.5 (Minimum)	−7.184 (Nominal)	686.2 (Maximum)	−2778 (Minimum)	0 (Nominal)	2778 (Maximum)
24	43.68			−300.7		
	−2238 (Minimum)	−131.8 (Nominal)	1975 (Maximum)	−4019 (Minimum)	0 (Nominal)	4019 (Maximum)
25	57.55			−369.9		
	−888.1 (Minimum)	60.98 (Nominal)	1010 (Maximum)	−3802 (Minimum)	0 (Nominal)	3802 (Maximum)
26	−78.64			74.67		
	−568.8 (Minimum)	−98.79 (Nominal)	371.2 (Maximum)	−150.9 (Minimum)	0 (Nominal)	150.9 (Maximum)
27	−324.3			722.8		
	−2660 (Minimum)	−247.8 (Nominal)	2164 (Maximum)	−1619 (Minimum)	0 (Nominal)	1619 (Maximum)
28	6.777			−93.67		
	−311.9 (Minimum)	19.89 (Nominal)	351.7 (Maximum)	−4748 (Minimum)	0 (Nominal)	4748 (Maximum)
29	−20.82			251.6		
	−238.9 (Minimum)	−0.7571 (Nominal)	237.4 (Maximum)	−1927 (Minimum)	0 (Nominal)	1927 (Maximum)
30	11.65			−837.1		
	−263.8 (Minimum)	−8.173 (Nominal)	247.5 (Maximum)	−3768 (Minimum)	0 (Nominal)	3768 (Maximum)
31	−333.3			829.5		
	−1851 (Minimum)	−192.8 (Nominal)	1465 (Maximum)	−1400 (Minimum)	0 (Nominal)	1400 (Maximum)
32	48.80			442.1		
	−186.8 (Minimum)	22.62 (Nominal)	232.0 (Maximum)	−1526 (Minimum)	0 (Nominal)	1526 (Maximum)
33	5.421			−174.6		
	−1101 (Minimum)	55.12 (Nominal)	1211 (Maximum)	−3024 (Minimum)	0 (Nominal)	3024 (Maximum)
34	−1.054			−100.0		
	−186.5 (Minimum)	−4.793 (Nominal)	176.9 (Maximum)	−2838 (Minimum)	0 (Nominal)	2838 (Maximum)
35	124.1			−78.95		
	−462.5 (Minimum)	63.86 (Nominal)	590.2 (Maximum)	−107.3 (Minimum)	0 (Nominal)	107.3 (Maximum)
36	−319.1			421.2		
	−1876 (Minimum)	−385.5 (Nominal)	1105 (Maximum)	−902.5 (Minimum)	0 (Nominal)	902.5 (Maximum)
37	6.994			−48.20		
	−239.6 (Minimum)	19.09 (Nominal)	277.8 (Maximum)	−4148 (Minimum)	0 (Nominal)	4148 (Maximum)
38	0.5654			122.2		
	−95.40 (Minimum)	8.103 (Nominal)	111.7 (Maximum)	−1441 (Minimum)	0 (Nominal)	1441 (Maximum)
39	1.085			−417.3		
	−232.3 (Minimum)	−11.60 (Nominal)	209.1 (Maximum)	−3221 (Minimum)	0 (Nominal)	3221 (Maximum)
40	−323.3			470.6		
	−840.1 (Minimum)	−332.1 (Nominal)	175.8 (Maximum)	−790.7 (Minimum)	0 (Nominal)	790.7 (Maximum)
41	15.87			227.7		
	−30.50 (Minimum)	11.77 (Nominal)	54.00 (Maximum)	−881.0 (Minimum)	0 (Nominal)	881.0 (Maximum)
42	−0.8276			−78.56		
	−1086 (Minimum)	50.67 (Nominal)	1188 (Maximum)	−1840 (Minimum)	0 (Nominal)	1840 (Maximum)
43	0.7432			−45.15		
	−199.6 (Minimum)	−7.273 (Nominal)	185.1 (Maximum)	−1624 (Minimum)	0 (Nominal)	1624 (Maximum)
44	47.85			−9.689		
	−1.100 (Minimum)	46.99 (Nominal)	95.10 (Maximum)	−91.40 (Minimum)	0 (Nominal)	91.40 (Maximum)
45	−15.48			2082		
	−173.4 (Minimum)	2.034 (Nominal)	177.5 (Maximum)	−2138 (Minimum)	0 (Nominal)	2138 (Maximum)
46	−9.021			368.4		

	−374.2 (Minimum)	−10.87 (Nominal)	352.5 (Maximum)	−2357 (Minimum)	0 (Nominal)	2357 (Maximum)
47	−31.66			780.9		
	−183.8 (Minimum)	−15.64 (Nominal)	152.5 (Maximum)	−986.0 (Minimum)	0 (Nominal)	986.0 (Maximum)
48	11.94			−416.4		
	−261.9 (Minimum)	2.156 (Nominal)	266.2 (Maximum)	−2252 (Minimum)	0 (Nominal)	2252 (Maximum)
49	−17.19			1985		
	−178.2 (Minimum)	−0.6614 (Nominal)	176.9 (Maximum)	−2148 (Minimum)	0 (Nominal)	2148 (Maximum)
50	18.09			139.9		
	−65.70 (Minimum)	8.816 (Nominal)	83.30 (Maximum)	−626.5 (Minimum)	0 (Nominal)	626.5 (Maximum)
51	5.572			784.0		
	−166.5 (Minimum)	2.130 (Nominal)	170.8 (Maximum)	−1981 (Minimum)	0 (Nominal)	1981 (Maximum)
52	8.875			−98.90		
	−52.80 (Minimum)	3.754 (Nominal)	60.30 (Maximum)	−1243 (Minimum)	0 (Nominal)	1243 (Maximum)
53	59.44			−19.65		
	−235.6 (Minimum)	32.53 (Nominal)	300.6 (Maximum)	−41.10 (Minimum)	0 (Nominal)	41.10 (Maximum)
54	−2.308			1017		
	−95.30 (Minimum)	−9.750 (Nominal)	75.80 (Maximum)	−1088 (Minimum)	0 (Nominal)	1088 (Maximum)
55	−1.336			188.6		
	−134.6 (Minimum)	−5.565 (Nominal)	123.5 (Maximum)	−1366 (Minimum)	0 (Nominal)	1366 (Maximum)
56	−1.396			388.1		
	−27.40 (Minimum)	−6.454 (Nominal)	14.50 (Maximum)	−540.6 (Minimum)	0 (Nominal)	540.6 (Maximum)
57	0.9340			−209.3		
	−137.9 (Minimum)	−0.5576 (Nominal)	136.8 (Maximum)	−1274 (Minimum)	0 (Nominal)	1274 (Maximum)
58	1.078			968.0		
	−78.10 (Minimum)	−9.827 (Nominal)	58.50 (Maximum)	−1071 (Minimum)	0 (Nominal)	1071 (Maximum)
59	6.561			72.00		
	−18.10 (Minimum)	5.923 (Nominal)	29.90 (Maximum)	−340.7 (Minimum)	0 (Nominal)	340.7 (Maximum)
60	4.802			391.0		
	−65.40 (Minimum)	0.3248 (Nominal)	66.00 (Maximum)	−1250 (Minimum)	0 (Nominal)	1250 (Maximum)
61	5.034			−48.64		
	−32.10 (Minimum)	3.359 (Nominal)	38.80 (Maximum)	−691.8 (Minimum)	0 (Nominal)	691.8 (Maximum)
62	26.23			2.136		
	−9.800 (Minimum)	27.57 (Nominal)	64.90 (Maximum)	−32.90 (Minimum)	0 (Nominal)	32.90 (Maximum)
63	−2.579			635.4		
	−56.30 (Minimum)	0.6343 (Nominal)	57.60 (Maximum)	−770.3 (Minimum)	0 (Nominal)	770.3 (Maximum)
64	29.50			−951.4		
	−86.20 (Minimum)	−0.04571 (Nominal)	86.10 (Maximum)	−1478 (Minimum)	0 (Nominal)	1478 (Maximum)
65	−15.76			180.9		
	−51.90 (Minimum)	−4.624 (Nominal)	42.60 (Maximum)	−621.1 (Minimum)	0 (Nominal)	621.1 (Maximum)
66	−19.63			918.5		
	−171.8 (Minimum)	−2.056 (Nominal)	167.7 (Maximum)	−1581 (Minimum)	0 (Nominal)	1581 (Maximum)
67	−0.2565			611.6		
	−45.00 (Minimum)	0.1900 (Nominal)	45.40 (Maximum)	−751.4 (Minimum)	0 (Nominal)	751.4 (Maximum)
68	3.726			30.84		
	−42.10 (Minimum)	3.956 (Nominal)	50.00 (Maximum)	−476.3 (Minimum)	0 (Nominal)	476.3 (Maximum)
69	−6.196			286.1		
	−27.40 (Minimum)	0.6414 (Nominal)	28.70 (Maximum)	−517.0 (Minimum)	0 (Nominal)	517.0 (Maximum)
70	−0.5899			−46.72		
	−42.00 (Minimum)	3.171 (Nominal)	48.30 (Maximum)	−935.7 (Minimum)	0 (Nominal)	935.7 (Maximum)
71	22.25			18.34		
	−87.80 (Minimum)	11.76 (Nominal)	111.3 (Maximum)	−62.10 (Minimum)	0 (Nominal)	62.10 (Maximum)
72	0.3745			262.4		
	−24.60 (Minimum)	−2.297 (Nominal)	20.00 (Maximum)	−375.5 (Minimum)	0 (Nominal)	375.5 (Maximum)
73	1.286			−472.1		

	−57.60 (Minimum)	2.100 (Nominal)	61.80 (Maximum)		−1185 (Minimum)	0 (Nominal)	1185 (Maximum)	
74	−1.035				86.88			
	−12.70 (Minimum)	−1.704 (Nominal)	9.300 (Maximum)		−356.7 (Minimum)	0 (Nominal)	356.7 (Maximum)	
75	−1.570				457.0			
	−78.00 (Minimum)	−3.031 (Nominal)	71.90 (Maximum)		−1247 (Minimum)	0 (Nominal)	1247 (Maximum)	
76	2.299				250.6			
	−16.10 (Minimum)	−1.311 (Nominal)	13.50 (Maximum)		−374.3 (Minimum)	0 (Nominal)	374.3 (Maximum)	
77	1.771				17.22			
	−12.80 (Minimum)	2.693 (Nominal)	18.20 (Maximum)		−321.8 (Minimum)	0 (Nominal)	321.8 (Maximum)	
78	0.7233				139.4			
	−11.50 (Minimum)	1.215 (Nominal)	13.90 (Maximum)		−333.1 (Minimum)	0 (Nominal)	333.1 (Maximum)	
79	0.7604				−23.30			
	−13.40 (Minimum)	3.431 (Nominal)	20.30 (Maximum)		−581.6 (Minimum)	0 (Nominal)	581.6 (Maximum)	
80	10.68				16.27			
	−16.30 (Minimum)	11.00 (Nominal)	38.30 (Maximum)		−39.20 (Minimum)	0 (Nominal)	39.20 (Maximum)	
81	−15.45				315.8			
	−67.80 (Minimum)	−6.064 (Nominal)	55.70 (Maximum)		−330.3 (Minimum)	0 (Nominal)	330.3 (Maximum)	
82	−8.384				586.9			
	−75.70 (Minimum)	0.09571 (Nominal)	75.90 (Maximum)		−805.0 (Minimum)	0 (Nominal)	805.0 (Maximum)	
83	−11.00				112.2			
	−42.90 (Minimum)	−3.401 (Nominal)	36.10 (Maximum)		−191.7 (Minimum)	0 (Nominal)	191.7 (Maximum)	
84	13.94				−578.9			
	−56.30 (Minimum)	0.3271 (Nominal)	57.00 (Maximum)		−782.3 (Minimum)	0 (Nominal)	782.3 (Maximum)	
85	−15.01				295.3			
	−56.50 (Minimum)	−5.537 (Nominal)	45.40 (Maximum)		−319.1 (Minimum)	0 (Nominal)	319.1 (Maximum)	
86	4.540				−83.63			
	−16.30 (Minimum)	0.7314 (Nominal)	17.80 (Maximum)		−149.5 (Minimum)	0 (Nominal)	149.5 (Maximum)	
87	−0.8786				7.633			
	−7.600 (Minimum)	−0.1829 (Nominal)	7.200 (Maximum)		−242.5 (Minimum)	0 (Nominal)	242.5 (Maximum)	
88	2.126				−185.6			
	−10.50 (Minimum)	0.3700 (Nominal)	11.30 (Maximum)		−214.9 (Minimum)	0 (Nominal)	214.9 (Maximum)	
89	3.597				20.93			
	−26.20 (Minimum)	2.383 (Nominal)	30.90 (Maximum)		−116.1 (Minimum)	0 (Nominal)	116.1 (Maximum)	
90	−12.18				84.33			
	−30.60 (Minimum)	−9.587 (Nominal)	11.50 (Maximum)		−105.7 (Minimum)	0 (Nominal)	105.7 (Maximum)	
91	−2.645				298.5			
	−38.50 (Minimum)	−1.329 (Nominal)	35.80 (Maximum)		−471.2 (Minimum)	0 (Nominal)	471.2 (Maximum)	
92	−1.279				55.94			
	−17.00 (Minimum)	−2.254 (Nominal)	12.50 (Maximum)		−118.0 (Minimum)	0 (Nominal)	118.0 (Maximum)	
93	2.192				−297.9			
	−27.10 (Minimum)	1.459 (Nominal)	30.00 (Maximum)		−441.4 (Minimum)	0 (Nominal)	441.4 (Maximum)	
94	−10.83				74.61			
	−28.40 (Minimum)	−9.228 (Nominal)	10.00 (Maximum)		−100.3 (Minimum)	0 (Nominal)	100.3 (Maximum)	
95	1.041				−40.80			
	−11.80 (Minimum)	1.184 (Nominal)	14.20 (Maximum)		−100.9 (Minimum)	0 (Nominal)	100.9 (Maximum)	
96	0.9281				3.809			

	−4.600 (Minimum)	0.5421 (Nominal)	5.700 (Maximum)		−141.1 (Minimum)	0 (Nominal)	141.1 (Maximum)	
97	0.2935				−91.97			
	−6.400 (Minimum)	0.8419 (Nominal)	8.100 (Maximum)		−179.1 (Minimum)	0 (Nominal)	179.1 (Maximum)	
98	3.097				14.05			
	−29.10 (Minimum)	3.875 (Nominal)	36.80 (Maximum)		−42.70 (Minimum)	0 (Nominal)	42.70 (Maximum)	
99	−41.39				152.7			
	−208.6 (Minimum)	−22.42 (Nominal)	163.7 (Maximum)		−228.8 (Minimum)	0 (Nominal)	228.8 (Maximum)	
100	15.87				−416.8			
	−110.1 (Minimum)	6.030 (Nominal)	122.1 (Maximum)		−941.8 (Minimum)	0 (Nominal)	941.8 (Maximum)	
101	−6.421				−42.07			
	−40.50 (Minimum)	−1.784 (Nominal)	36.90 (Maximum)		−177.8 (Minimum)	0 (Nominal)	177.8 (Maximum)	
102	−11.33				450.4			
	−218.8 (Minimum)	−8.666 (Nominal)	201.5 (Maximum)		−932.5 (Minimum)	0 (Nominal)	932.5 (Maximum)	
103	−45.67				156.3			
	−201.5 (Minimum)	−21.74 (Nominal)	158.0 (Maximum)		−189.7 (Minimum)	0 (Nominal)	189.7 (Maximum)	
104	−0.1936				−17.73			
	−20.20 (Minimum)	0.1186 (Nominal)	20.50 (Maximum)		−173.1 (Minimum)	0 (Nominal)	173.1 (Maximum)	
105	1.150				−3.397			
	−13.60 (Minimum)	1.554 (Nominal)	16.70 (Maximum)		−123.5 (Minimum)	0 (Nominal)	123.5 (Maximum)	
106	−1.690				24.17			
	−6.300 (Minimum)	0.1929 (Nominal)	6.600 (Maximum)		−93.30 (Minimum)	0 (Nominal)	93.30 (Maximum)	
107	−2.731				55.88			
	−19.70 (Minimum)	−1.369 (Nominal)	17.00 (Maximum)		−145.3 (Minimum)	0 (Nominal)	145.3 (Maximum)	
108	−40.59				126.8			
	−61.80 (Minimum)	−39.44 (Nominal)	−17.10 (Maximum)		−174.6 (Minimum)	0 (Nominal)	174.6 (Maximum)	
109	3.576				−220.5			
	−28.80 (Minimum)	2.697 (Nominal)	34.20 (Maximum)		−490.4 (Minimum)	0 (Nominal)	490.4 (Maximum)	
110	−0.6722				−21.33			
	−11.70 (Minimum)	−1.231 (Nominal)	9.200 (Maximum)		−104.4 (Minimum)	0 (Nominal)	104.4 (Maximum)	
111	−3.843				234.5			
	−57.50 (Minimum)	−3.492 (Nominal)	50.50 (Maximum)		−491.5 (Minimum)	0 (Nominal)	491.5 (Maximum)	
112	−42.31				128.4			
	−67.40 (Minimum)	−39.27 (Nominal)	−11.10 (Maximum)		−150.1 (Minimum)	0 (Nominal)	150.1 (Maximum)	
113	−0.1958				−4.797			
	−10.40 (Minimum)	0.8598 (Nominal)	12.10 (Maximum)		−103.3 (Minimum)	0 (Nominal)	103.3 (Maximum)	
114	1.999				−1.614			
	−3.100 (Minimum)	2.525 (Nominal)	8.100 (Maximum)		−66.30 (Minimum)	0 (Nominal)	66.30 (Maximum)	
115	−0.4481				14.76			
	−3.200 (Minimum)	0.4010 (Nominal)	4.000 (Maximum)		−66.00 (Minimum)	0 (Nominal)	66.00 (Maximum)	
116	2.266				8.951			
	−27.70 (Minimum)	1.505 (Nominal)	30.70 (Maximum)		−57.80 (Minimum)	0 (Nominal)	57.80 (Maximum)	

Master: 29−Jan−2007 15:32

High resolution Integrated Logging Tool−DTS / Equipment Identification

Primary Equipment:

HILT high−Resolution Mechanical Sonde	HRMS − B	754
HILT Rxo Gamma−ray Device	HRGD − B	842
HILT Micro Cylindrically Focused Log Dev	MCFL −	
GR Logging Source	GLS − VJ	5033
HILT High Res. Control Cartridge	HRCC − B	1889
HILT Gamma−Ray Neutron Sonde−DTS	HGNS − B	
HGNS Gamma−Ray Device	HGR −	
HGNS Neutron Detector with Alpha Source	HCNT −	

Auxiliary Equipment:

HGNS Housing	HGNH −
Neutron Calibration Tank	NCT − B
Gamma Source Radioactive	GSR − U/Y

High resolution Integrated Logging Tool–DTS Wellsite Calibration

Stab Measurement Summary

Phase	BS Window Ratio	Value	Phase	SS Window Ratio	Value	Phase	LS Window Ratio	Value
Before		0.7374	Before		0.4690	Before		0.2934
	0.6981 (Minimum) 0.7349 (Nominal) 0.7716 (Maximum)			0.4419 (Minimum) 0.4651 (Nominal) 0.4884 (Maximum)			0.2817 (Minimum) 0.2965 (Nominal) 0.3113 (Maximum)	
Phase	BS Window Sum CPS	Value	Phase	SS Window Sum CPS	Value	Phase	LS Window Sum CPS	Value
Before		9820	Before		9013	Before		1116
	9303 (Minimum) 9792 (Nominal) 10280 (Maximum)			8578 (Minimum) 9029 (Nominal) 9481 (Maximum)			1067 (Minimum) 1124 (Nominal) 1180 (Maximum)	

Before: 10–Feb–2007 15:02

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		1640	Before		1801	Before		2044
	1509 (Minimum) 1609 (Nominal) 1709 (Maximum)			1701 (Minimum) 1801 (Nominal) 1901 (Maximum)			1944 (Minimum) 2044 (Nominal) 2144 (Maximum)	

Before: 10–Feb–2007 15:02

High resolution Integrated Logging Tool–DTS Wellsite Calibration

Crystal Quality Resolutions Calibration

Phase	BS Crystal Resolution %	Value	Phase	SS Crystal Resolution %	Value	Phase	LS Crystal Resolution %	Value
Before		11.90	Before		11.10	Before		10.44
	10.86 (Minimum) 11.86 (Nominal) 12.86 (Maximum)			10.06 (Minimum) 11.06 (Nominal) 12.06 (Maximum)			9.330 (Minimum) 10.33 (Nominal) 11.33 (Maximum)	

Before: 10–Feb–2007 15:02

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		3880	Before		3836	Before		3834
	3565 (Minimum) 3875 (Nominal) 4185 (Maximum)			3524 (Minimum) 3830 (Nominal) 4136 (Maximum)			3524 (Minimum) 3830 (Nominal) 4136 (Maximum)	

Before: 10–Feb–2007 15:09

High resolution Integrated Logging Tool–DTS Wellsite Calibration

HILT Caliper Calibration

Phase	HILT Caliper Zero Measurement IN	Value	Phase	HILT Caliper Plus Measurement IN	Value
Before		7.114	Before		11.30
	6.000 (Minimum) 8.000 (Nominal) 10.00 (Maximum)			9.000 (Minimum) 12.00 (Nominal) 15.00 (Maximum)	

Before: 10–Feb–2007 15:00

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		21.37	Before		167.2	Before		153.5
	0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)			152.0 (Minimum) 167.2 (Nominal) 182.4 (Maximum)			138.5 (Minimum) 153.5 (Nominal) 168.5 (Maximum)	

Before: 10–Feb–2007 15:03

High resolution Integrated Logging Tool–DTS Wellsite Calibration

Zero Measurement

Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		29.72	Master		28.66
Before		30.01	Before		30.65
	5.000 (Minimum) 29.72 (Nominal) 40.00 (Maximum)			5.000 (Minimum) 28.66 (Nominal) 40.00 (Maximum)	

Master: 22–Jan–2007 16:01 Before: 10–Feb–2007 15:01

High resolution Integrated Logging Tool–DTS Wellsite Calibration

Ratio Measurement

Phase	Thermal Near Corr. (Tank) CPS	Value	Phase	Thermal Far Corr. (Tank) CPS	Value	Phase	CNTC/CFTC (Tank)	Value
Master		5739	Master		2396	Master		2.396
	4700 (Minimum) 5800 (Nominal) 6900 (Maximum)			1900 (Minimum) 2400 (Nominal) 2900 (Maximum)			2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)	

Master: 22–Jan–2007 16:01

High resolution Integrated Logging Tool–DTS Wellsite Calibration

Accelerometer Calibration

Phase	Z–Axis Acceleration F/S2	Value
Before		32.25
	31.53 (Minimum) 32.19 (Nominal) 32.84 (Maximum)	

Before: 14–Feb–2007 7:52

High resolution Integrated Logging Tool–DTS Master Calibration

Inversion results

Phase	Rho Aluminum G/C3	Value	Phase	Rho Magnesium G/C3	Value
Master		2.596	Master		1.689
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		2.568	Master		2.611
2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)	2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)

Master: 22–Jan–2007 21:16

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		0.3577	Master		0.4003	Master		0.7110
–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		0.8287	Master		0.7964	Master		1.165
–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: 22–Jan–2007 21:16

High resolution Integrated Logging Tool–DTS Master Calibration

Zero Measurement

Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		29.72	Master		28.66
5.000 (Minimum)	29.72 (Nominal)	40.00 (Maximum)	5.000 (Minimum)	28.66 (Nominal)	40.00 (Maximum)

Master: 22–Jan–2007 16:01

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		5739	Master		2396	Master		2.396
4700 (Minimum)	5800 (Nominal)	6900 (Maximum)	1900 (Minimum)	2400 (Nominal)	2900 (Maximum)	2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)

Master: 22–Jan–2007 16:01

Electromagnetic Propagation – G / Equipment Identification

Primary Equipment:

EPT–G ENDFIRE Sonde	EPS – EA	13
EPT Cartridge – DA	EPC – DA	14

Auxiliary Equipment:

Electronics Cartridge Housing	ECH – KU

Electromagnetic Propagation – G Wellsite Calibration

Electronics Calibration

Phase	EATT Electronics DB/M	Value	Phase	TPL Electronics NS/M	Value
Before		503.5	Before		11.33
400.0 (Minimum)	500.0 (Nominal)	600.0 (Maximum)	10.85 (Minimum)	11.35 (Nominal)	11.85 (Maximum)

Before: 14–Feb–2007 7:55

General Purpose Inclinometer / Equipment Identification

Primary Equipment:

GPIT Cartridge – C	GPIC – C	872

Auxiliary Equipment:

GPIT Housing	GPIH – B

DTS Telemetry Tool / Equipment Identification

Primary Equipment:

DTC–H Auxiliary Cartridge	DTCH – A
DTC–H Telemetry Cartridge	DTCH – A

Auxiliary Equipment:

DTCH Telemetry Cartridge Housing	ECH – KC

Company: **BP EXPLORATION (ALASKA), INC.**

Schlumberger

Well: **MT. ELBERT–01**
Field: **MILNE POINT UNIT**
Borough: **NORTH SLOPE**
State: **ALASKA**

FINAL

PLATFORM EXPRESS
COMPENSATED NEUTRON / LITHODENSITY LOG
14–FEB–2007