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.

RT SCANNER TOOL
TRIAXIAL INDUCTION 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			2994 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										

			Run 1	Run 2
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 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:	TLD, HGNS, 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

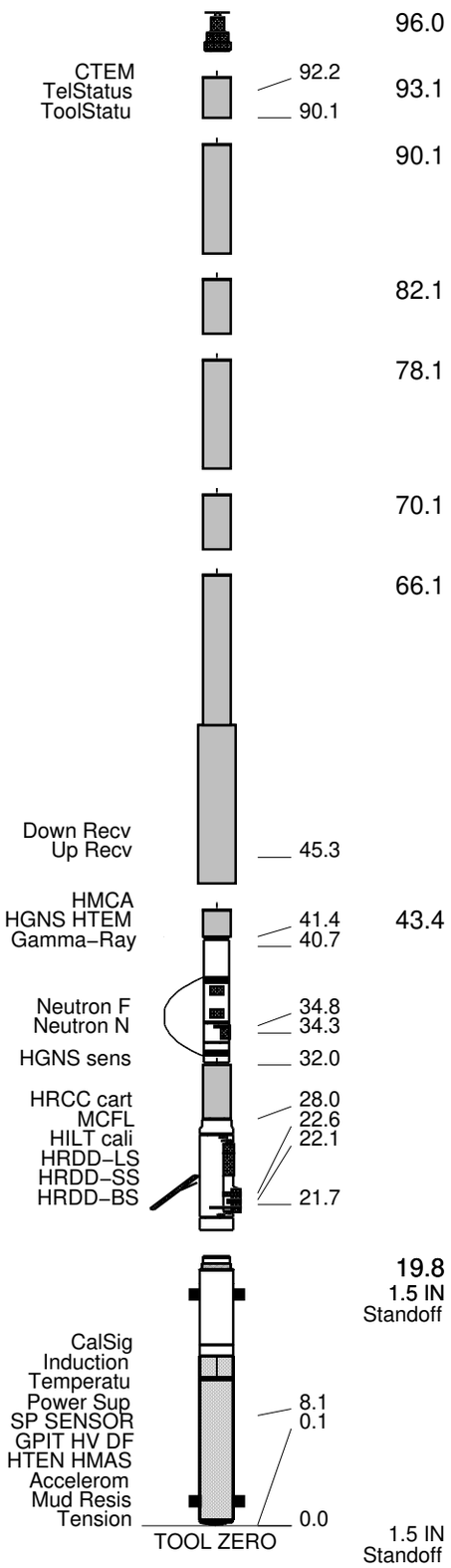
RUN 1 | RUN 2

SURFACE EQUIPMENT

GSR–U/Y
NCT–B
CNB–AB
NCS–VB

WITM (DTS)–A

DOWNHOLE EQUIPMENT



MAXIMUM STRING DIAMETER 6.88 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

	(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

Input DLIS Files

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

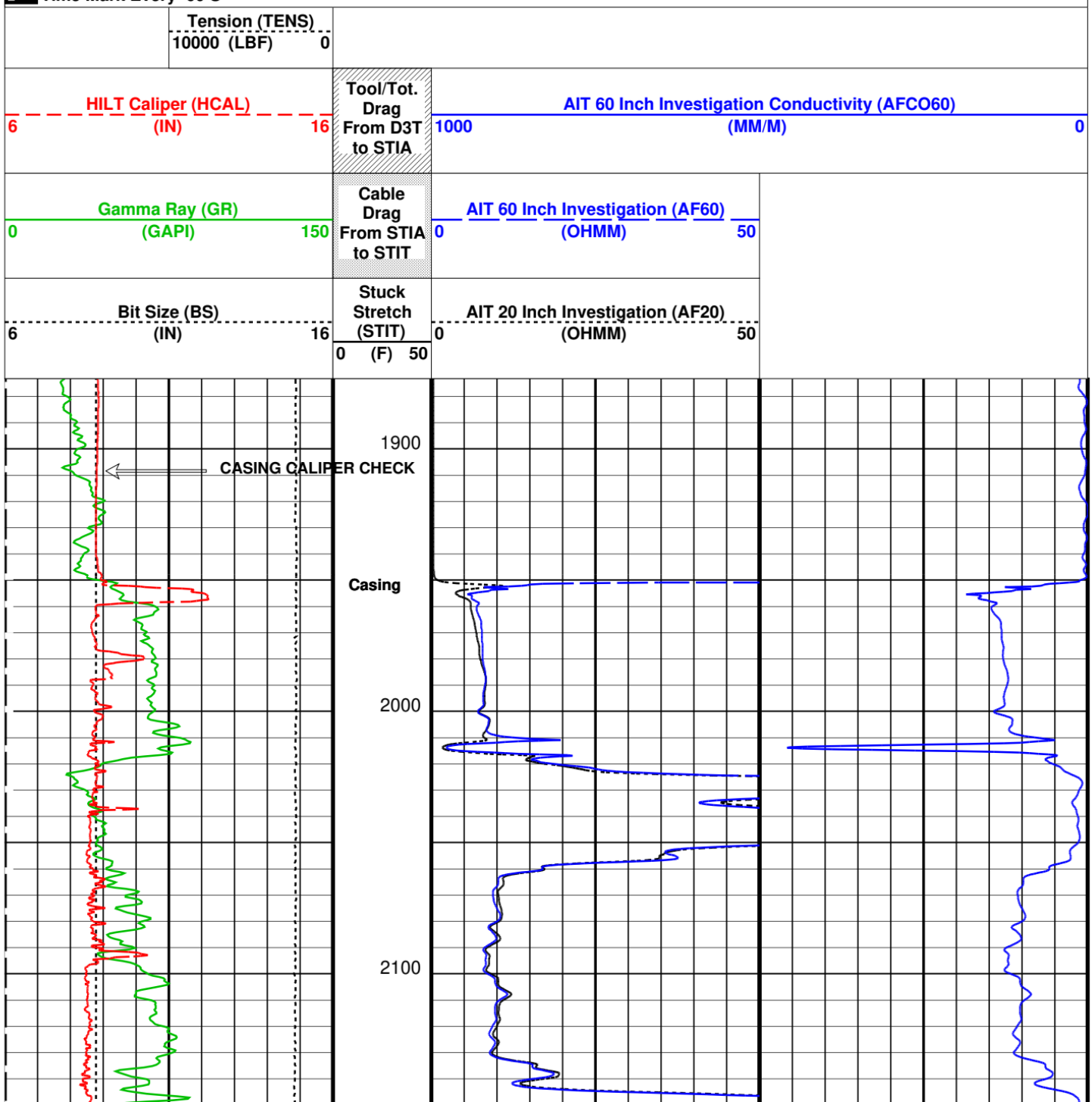
OP System Version: 14C0-302

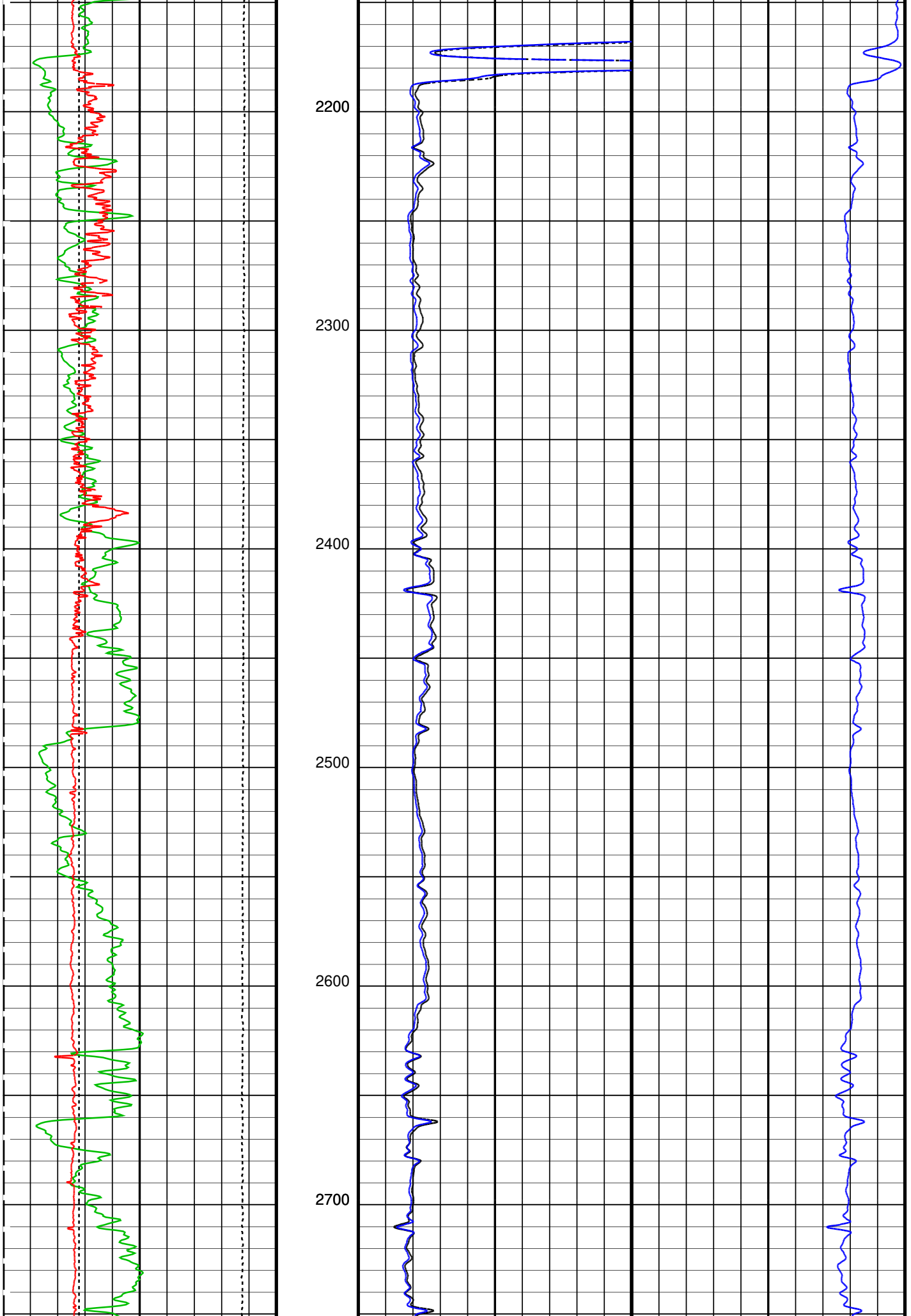
MCM

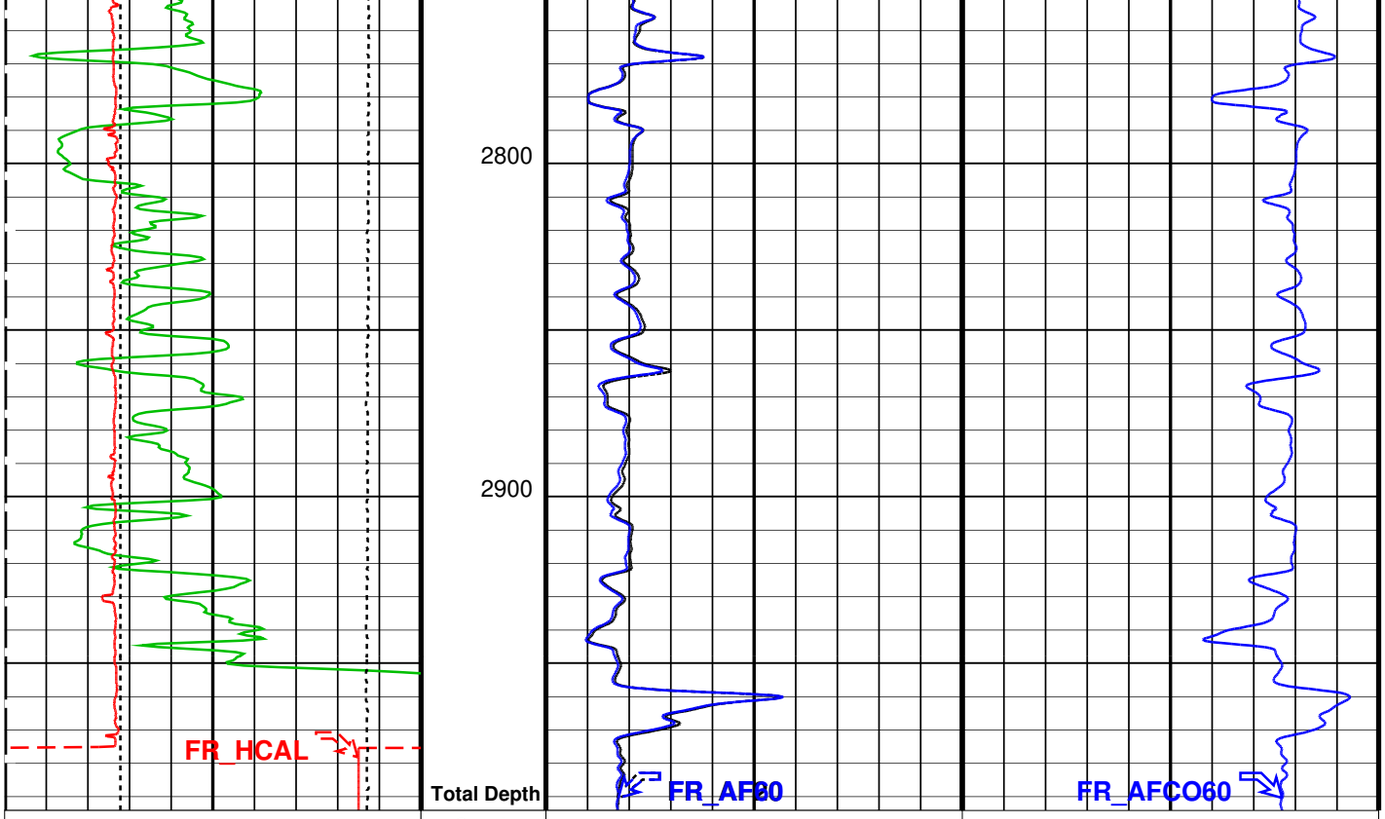
ZAIT	SPC-3254-ZAIT-B	HILTD	SPC-3254-ZAIT-B
EPTG	SRPC-3243-Q4_2006	DTAA	SKK-3248-EDTCB
GPIT-C	SRPC-3243-Q4_2006	DTCH	SRPC-3243-Q4_2006

PIP SUMMARY

Time Mark Every 60 S




2200
2300
2400
2500
2600
2700



Bit Size (BS) 6 (IN) 16	Stuck Stretch (STIT) 0 (F) 50	AIT 20 Inch Investigation (AF20) 0 (OHMM) 50
Gamma Ray (GR) 0 (GAPI) 150	Cable Drag From STIA to STIT	AIT 60 Inch Investigation (AF60) 0 (OHMM) 50
HILT Caliper (HCAL) 6 (IN) 16	Tool/Tot. Drag From D3T to STIA	AIT 60 Inch Investigation Conductivity (AFCO60) 1000 (MM/M) 0
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		
ABLM	Array Induction Basic Logs Mode	6_ONE_TWO_AND_FOUR	
ABLV	Array Induction Basic Logs Code Version Number	212	
ACDE	Array Induction Casing Detection Enable	NO	
AFRSV	Array Induction Response Set Version for Four ft Resolution	40.70.24.20	
AORSV	Array Induction Response Set Version for One ft Resolution	40.70.24.20	
ARFV	Array Induction Radial Profiling Code Version Number	701	
ARPV	Array Induction Radial Parametrization Code Version Number	232	
ATRSV	Array Induction Response Set Version for Two ft Resolution	40.70.24.20	
BHT	Bottom Hole Temperature (used in calculations)	212.0	degF
FEXP	Form Factor Exponent	2.000	
FNUM	Form Factor Numerator	1.000	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.010	degF/ft
GRSE	Generalized Mud Resistivity Selection	GEN9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68.000	degF
TRIBHM	3D Induction Borehole Correction Mode	7_COMPUTEOBMSTANDOFF	
TRIBHV	Array Induction Borehole Correction Code Version Number	167	
TRIRSV	3D Induction Response Set Version	00.10.24.00	
TRIRT	3D Rotation Selector	NORTH	
TRISAP	3D Induction Suspend Answer Product Processing	0_NOSUSPENSION	
TRISTA	3D Tool Standoff	1.500	in
	HILTB–FTB: High resolution Integrated Logging Tool–DTS		
BHT	Bottom Hole Temperature (used in calculations)	212.0	degF
FEXP	Form Factor Exponent	2.000	
FNUM	Form Factor Numerator	1.000	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.010	degF/ft
GRSE	Generalized Mud Resistivity Selection	GEN9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68.000	degF

	EPT–G: Electromagnetic Propagation – G		
BHT	Bottom Hole Temperature (used in calculations)	212.0	degF
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.010	degF/ft
GRSE	Generalized Mud Resistivity Selection	GEN9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68.000	degF
	DIR: Directional Survey Computation		
SPVD	TVD of Starting Point	0.000	ft
TIMD	Along–hole depth of Tie–in Point	0.000	ft
TIVD	TVD of Tie–in Point	0.000	ft
	STI: Stuck Tool Indicator		
STKT	STI Stuck Threshold	2.500	ft
TDD	Total Depth – Driller	3000.0	ft
TDL	Total Depth – Logger	3000.0	ft
	System and Miscellaneous		
ACSED	Array Induction Casing Shoe Estimated Depth		
BS	Bit Size	8.750	in
DFD	Drilling Fluid Density	9.400	lbm/gal
MST	Mud Sample Temperature		
TD	Total Depth	3000.0	ft

Format: COND Vertical Scale: 2" 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

RESISTIVITY– 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	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

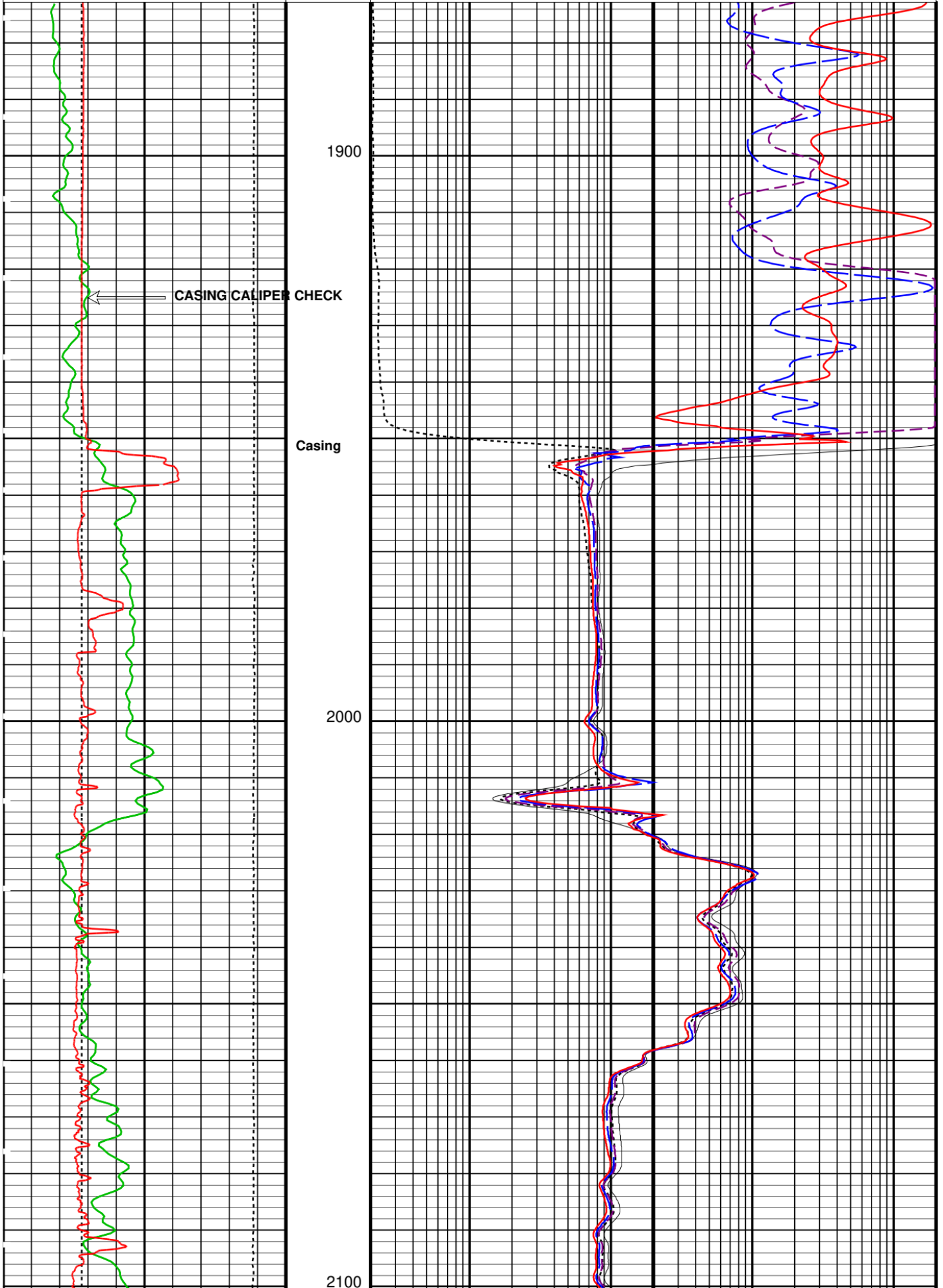
MCM

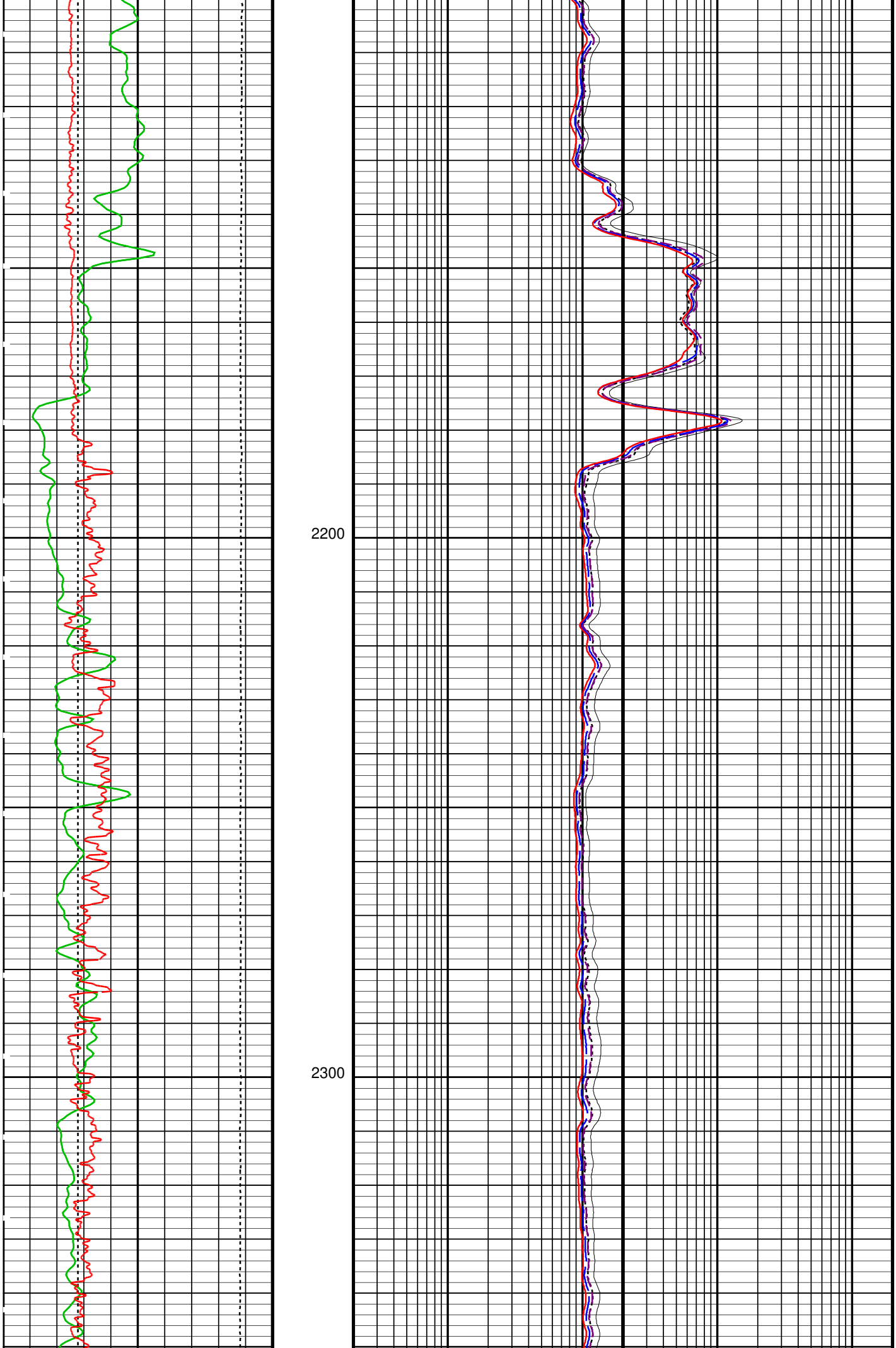
ZAIT–BA	SPC–3254–ZAIT–B	HILTB–FTB	SPC–3254–ZAIT–B
EPT–G	SRPC–3243–Q4_2006	DTA–A	SKK–3248–EDTCB
GPIT–C	SRPC–3243–Q4_2006	DTC–H	SRPC–3243–Q4_2006

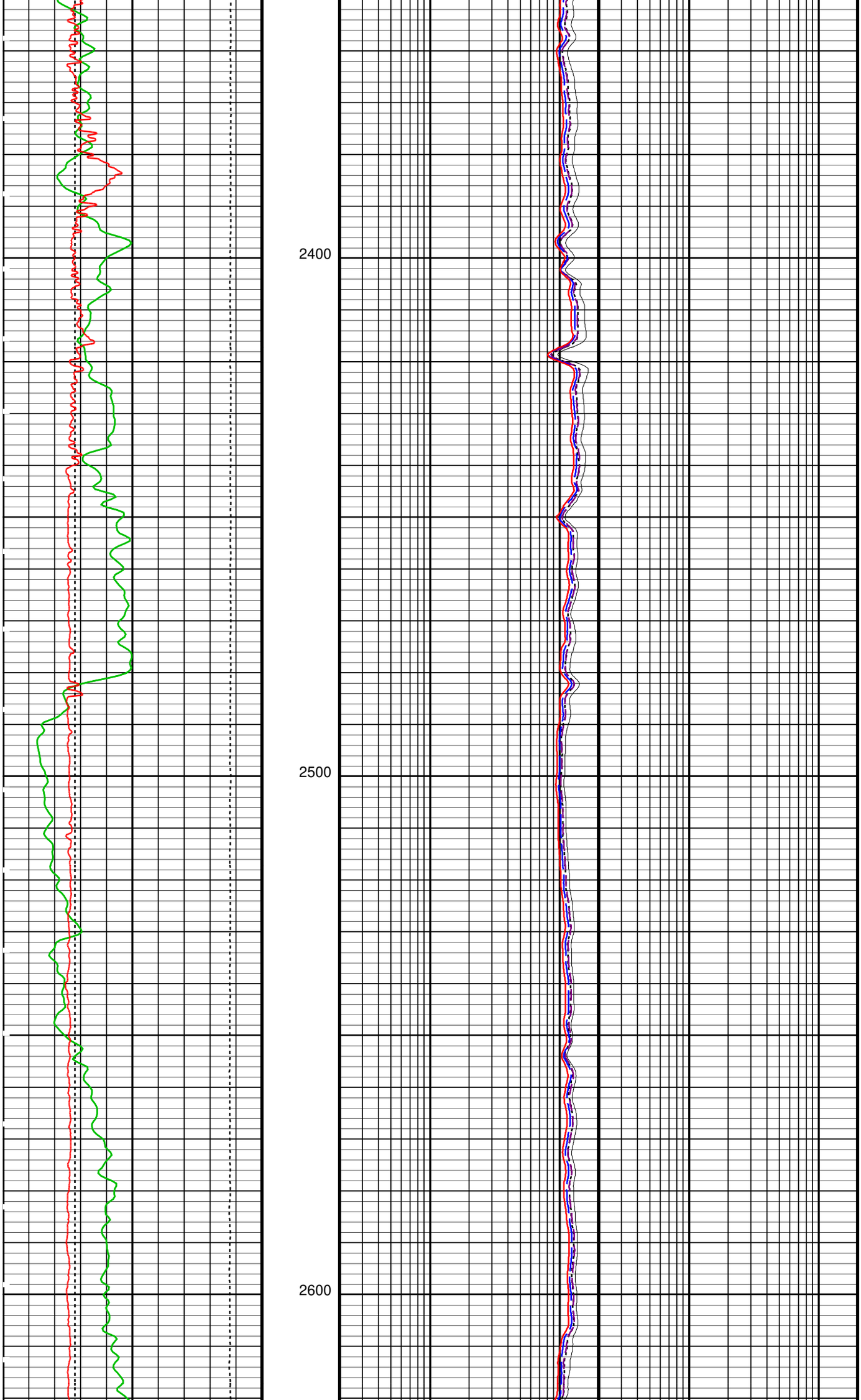
PIP SUMMARY

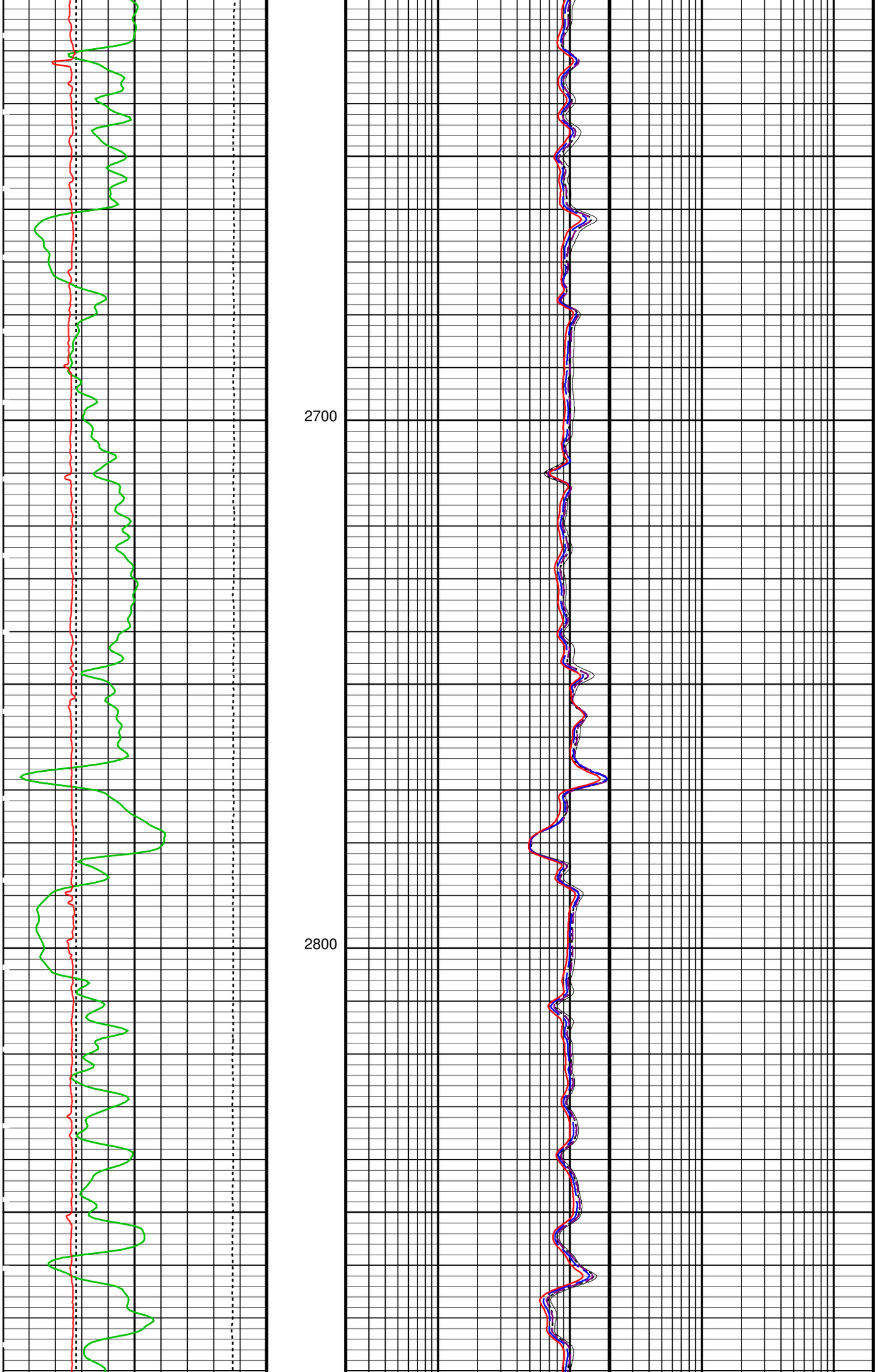
Time Mark Every 60 S

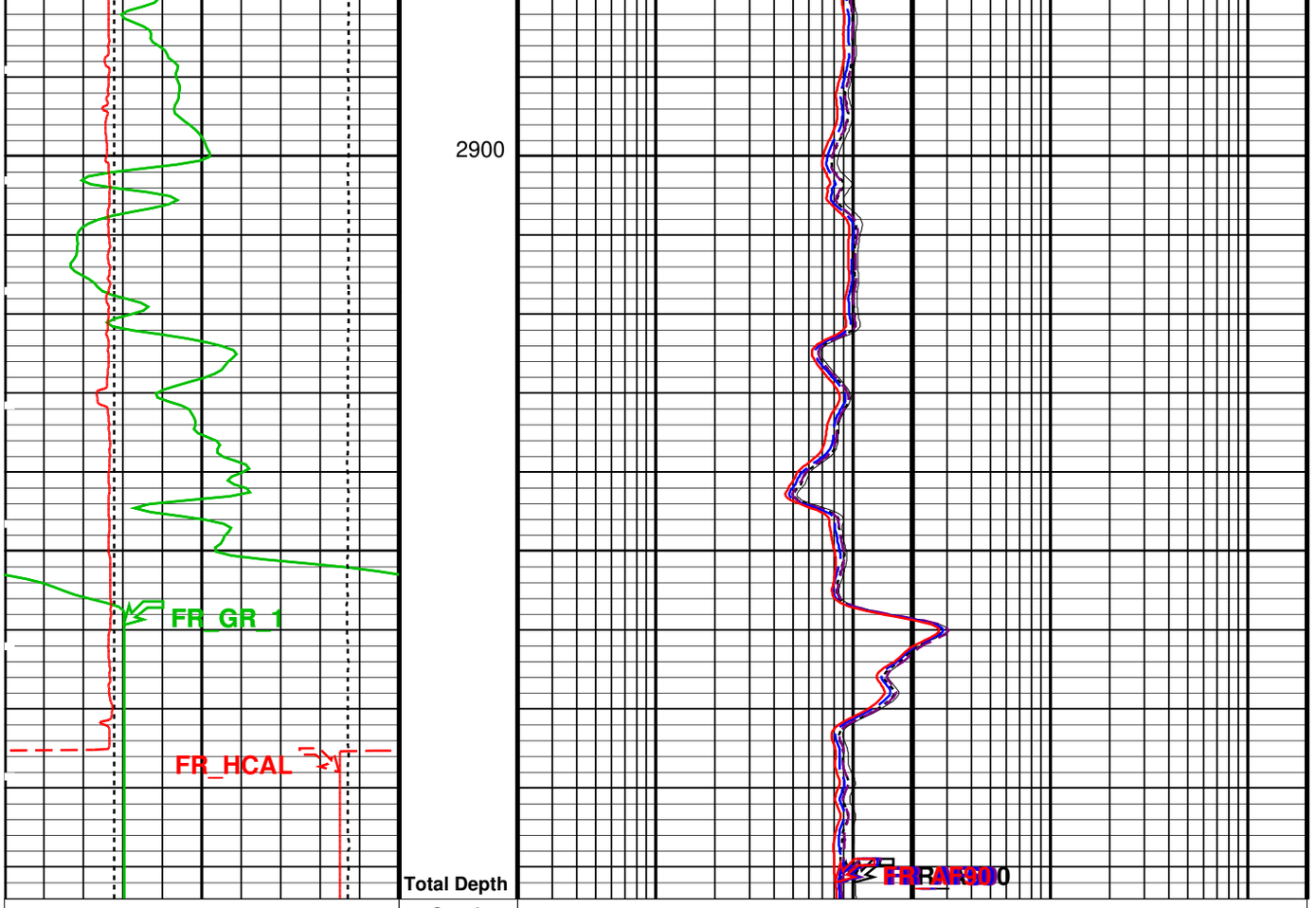
		AIT 90 Inch Investigation (AF90) 0.2 (OHMM) 2000
Tension (TENS) 10000 (LBF) 0		AIT 60 Inch Investigation (AF60) 0.2 (OHMM) 2000
HILT Caliper (HCAL) 6 (IN) 16	Tool/Tot. Drag From D3T to STIA	AIT 30 Inch Investigation (AF30) 0.2 (OHMM) 2000
Gamma Ray (GR) 0 (GAPI) 150	Cable Drag From STIA to STIT	AIT 20 Inch Investigation (AF20) 0.2 (OHMM) 2000
Bit Size (BS) 6 (IN) 16	Stuck Stretch (STIT) 0 (F) 50	AIT 10 Inch Investigation (AF10) 0.2 (OHMM) 2000


1900
CASING CALIPER CHECK
Casing
2000
2100


2200
2300


2400
2500
2600


2700
2800



Bit Size (BS) 6 (IN) 16	Stuck Stretch (STIT) 0 (F) 50	AIT 10 Inch Investigation (AF10) 0.2 (OHMM) 2000
Gamma Ray (GR) 0 (GAPI) 150	Cable Drag From STIA to STIT	AIT 20 Inch Investigation (AF20) 0.2 (OHMM) 2000
HILT Caliper (HCAL) 6 (IN) 16	Tool/Tot. Drag From D3T to STIA	AIT 30 Inch Investigation (AF30) 0.2 (OHMM) 2000
Tension (TENS) 10000 (LBF) 0		AIT 60 Inch Investigation (AF60) 0.2 (OHMM) 2000
		AIT 90 Inch Investigation (AF90) 0.2 (OHMM) 2000

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
ZAIT–BA: 3–D Array Induction Tool – ZAIT–B			
ABLM	Array Induction Basic Logs Mode	6_One_Two_and_Four	
ABLV	Array Induction Basic Logs Code Version Number	212	
ACDE	Array Induction Casing Detection Enable	No	
ACSED	Array Induction Casing Shoe Estimated Depth	–50000	FT
AFRSV	Array Induction Response Set Version for Four ft Resolution	40.70.24.20	
AORSV	Array Induction Response Set Version for One ft Resolution	40.70.24.20	
ARFV	Array Induction Radial Profiling Code Version Number	701	
ARPV	Array Induction Radial Parametrization Code Version Number	232	
ATRSV	Array Induction Response Set Version for Two ft Resolution	40.70.24.20	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
TRIBHM	3D Induction Borehole Correction Mode	7_ComputeOBMStandoff	
TRIBHV	Array Induction Borehole Correction Code Version Number	167	
TRIRSV	3D Induction Response Set Version	00.10.24.00	
TRIRT	3D Rotation Selector	NorTH	
TRISTA	3D Tool Standoff	1.5	IN
HILTB–FTB: High resolution Integrated Logging Tool–DTS			
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF

FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
EPT–G: Electromagnetic Propagation – G			
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
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
MST	Mud Sample Temperature	–50000.00	DEGF
PP	Playback Processing	NORMAL	
TD	Total Depth	3000	FT

Format: AITH_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

RESISTIVITY– 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	1878.0 FT
MTE	AIT_TLD_MCFL_CNL_030PUP	FN:44	PRODUCER	14–Feb–2007 13:08	2994.0 FT	1878.0 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

Tension (TENS)
10000 (LBF) 0

HCAL_REP Curve (HCAL_REP)
6 (IN) 16

GR_REP Curve (GR_REP)
0 (GAPI) 150

Bit Size (BS)
6 (IN) 16

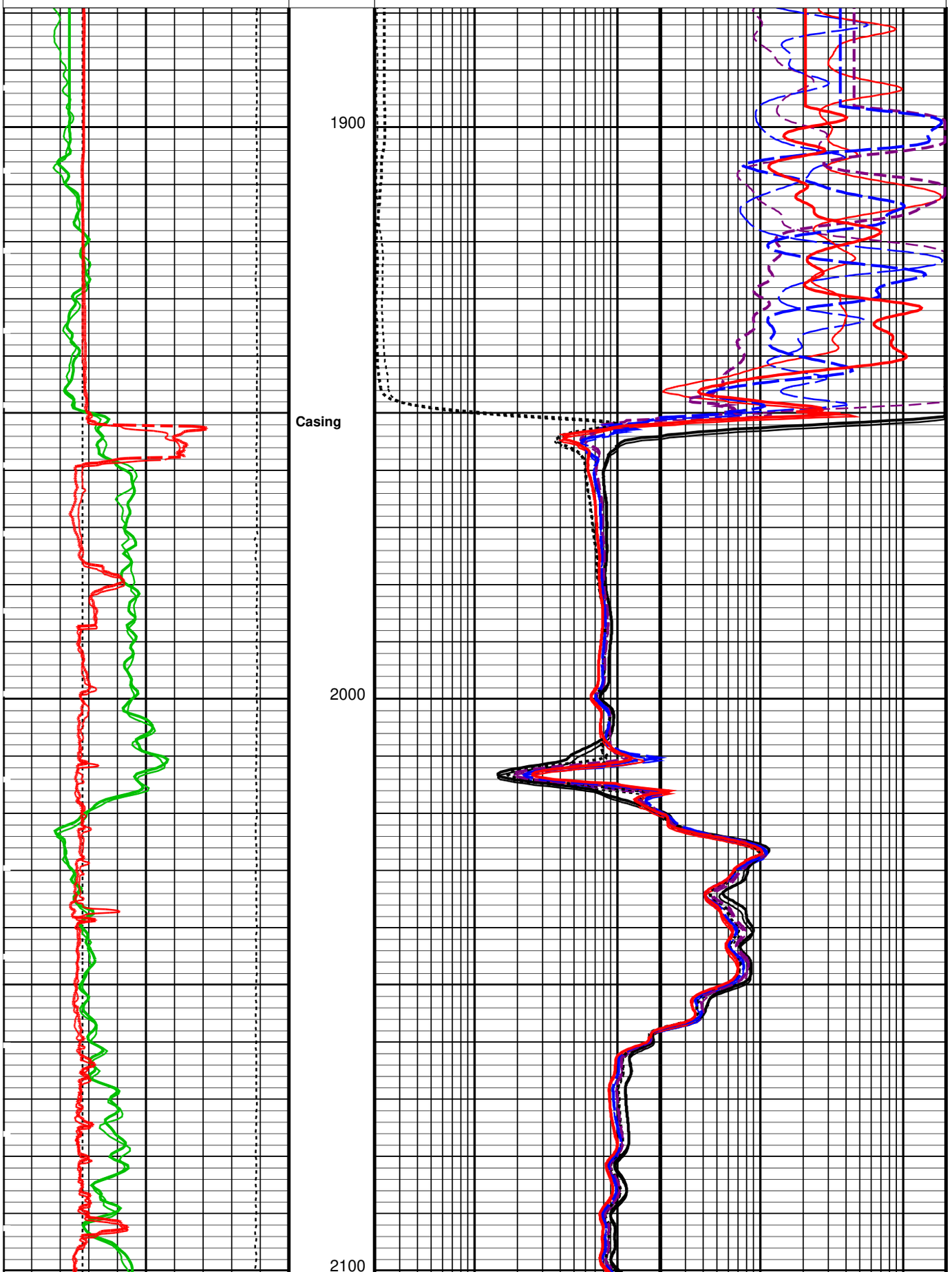
AF90_REP Curve (AF90_REP)
0.2 (OHMM) 2000

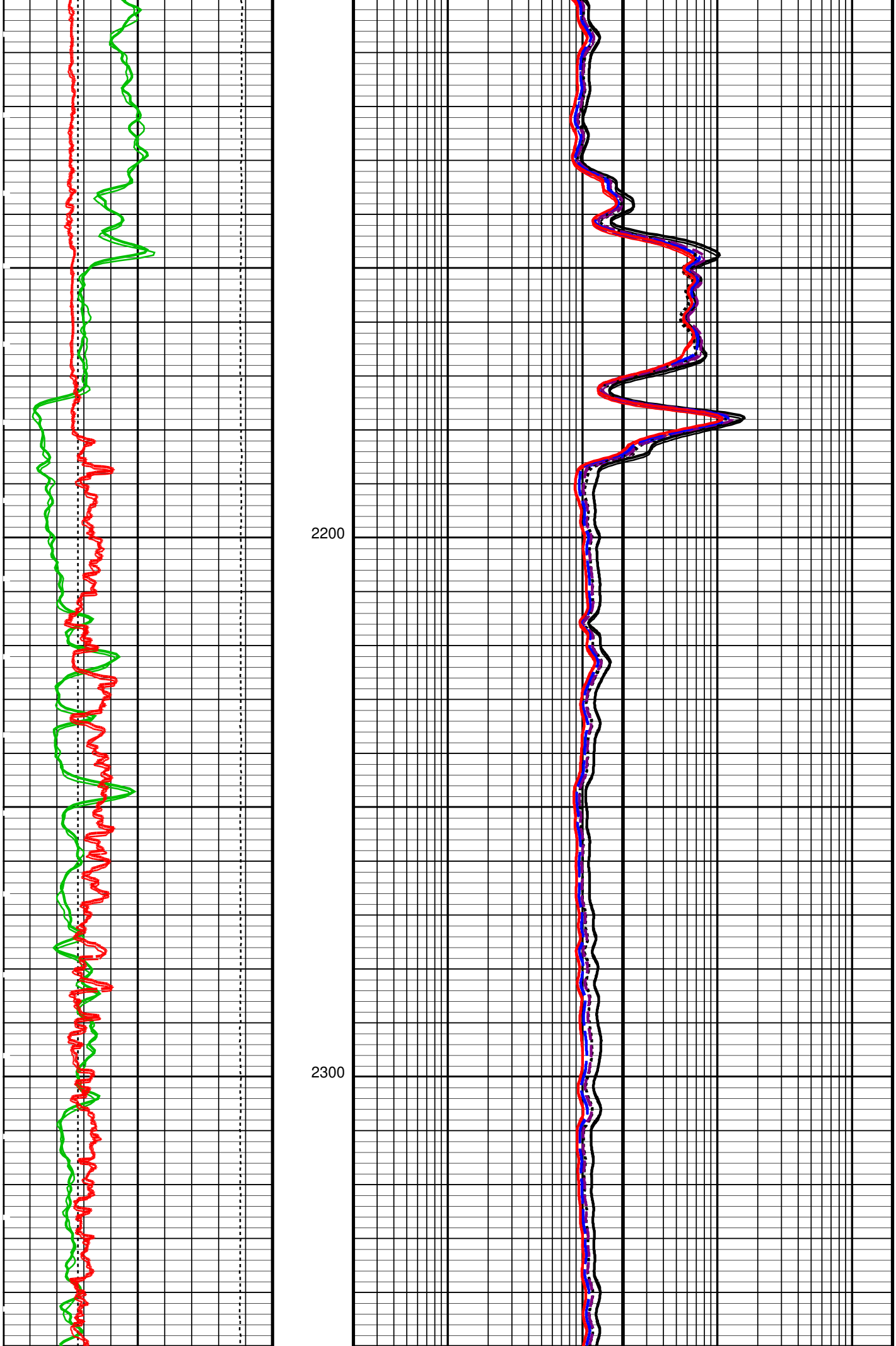
AF60_REP Curve (AF60_REP)
0.2 (OHMM) 2000

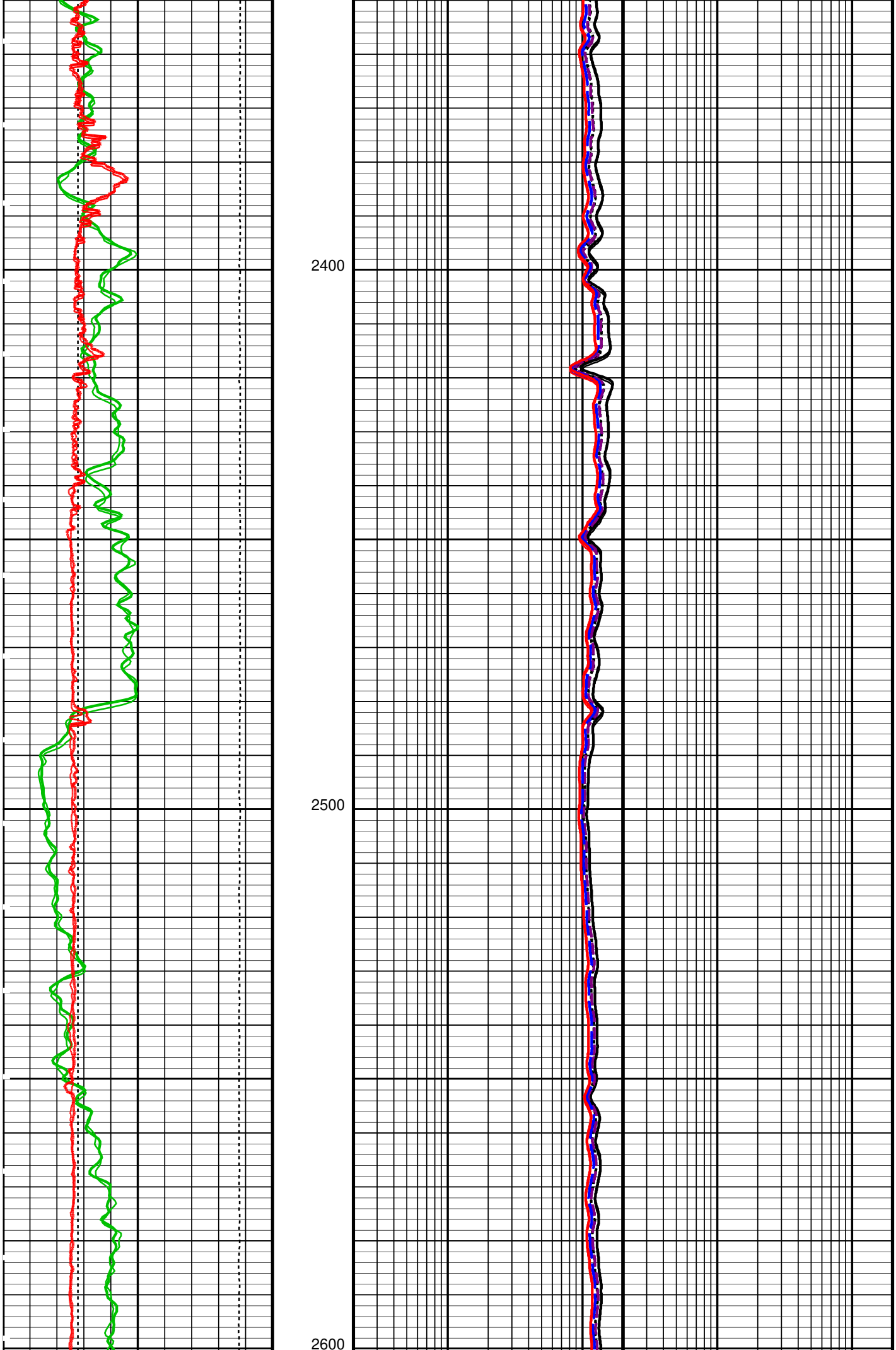
AF30_REP Curve (AF30_REP)
0.2 (OHMM) 2000

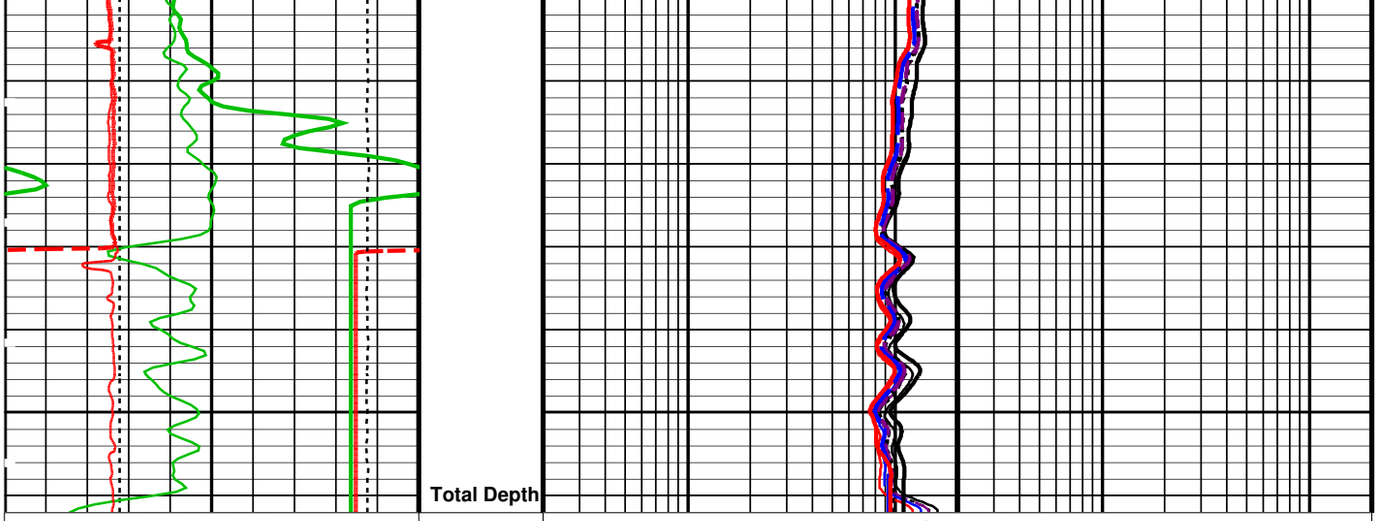
AF20_REP Curve (AF20_REP)
0.2 (OHMM) 2000

AF10_REP Curve (AF10_REP)
0.2 (OHMM) 2000




2200
2300


2400
2500
2600



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	
AF10_REP Curve (AF10_REP)	0.2 (OHMM) 2000	
AF20_REP Curve (AF20_REP)	0.2 (OHMM) 2000	
AF30_REP Curve (AF30_REP)	0.2 (OHMM) 2000	
AF60_REP Curve (AF60_REP)	0.2 (OHMM) 2000	
AF90_REP Curve (AF90_REP)	0.2 (OHMM) 2000	

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	ZAIT–BA: 3–D Array Induction Tool – ZAIT–B		
ABLM	Array Induction Basic Logs Mode	6_One_Two_and_Four	
ABLV	Array Induction Basic Logs Code Version Number	212	
ACDE	Array Induction Casing Detection Enable	No	
ACSED	Array Induction Casing Shoe Estimated Depth	–50000	FT
AFRSV	Array Induction Response Set Version for Four ft Resolution	40.70.24.20	
AORSV	Array Induction Response Set Version for One ft Resolution	40.70.24.20	
ARFV	Array Induction Radial Profiling Code Version Number	701	
ARPV	Array Induction Radial Parametrization Code Version Number	232	
ATRSV	Array Induction Response Set Version for Two ft Resolution	40.70.24.20	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
TRIBHM	3D Induction Borehole Correction Mode	7_ComputeOBMStandoff	
TRIBHV	Array Induction Borehole Correction Code Version Number	167	
TRIRSV	3D Induction Response Set Version	00.10.24.00	
TRIRT	3D Rotation Selector	NorTH	
TRISTA	3D Tool Standoff	1.5	IN
	HILTB–FTB: High resolution Integrated Logging Tool–DTS		
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
	EPT–G: Electromagnetic Propagation – G		
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
	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
MST	Mud Sample Temperature	–50000.00	DEGF
PP	Playback Processing	NORMAL	
TD	Total Depth	3000	FT

Format: AITH_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

LOG QUALITY CONTROL

MAXIS Field Log

Company: BP Alaska Drilling and Wells Well: MT ELBERT

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

			AIT QC Fully Calibrated A8 Signal (AQABN[7]) 2 (MM/M) 20000
		3D Invertability 72 inch HF Array Residual (TRIRSD[11]) 0 (----) 0.5	AIT QC Fully Calibrated A7 Signal (AQABN[6]) 2 (MM/M) 20000
		3D Invertability 54 inch HF Array Residual (TRIRSD[9]) 0 (----) 0.5	AIT QC Fully Calibrated A6 Signal (AQABN[5]) 2 (MM/M) 20000
AIT Input Bhole Diameter (AIBD) 6 (IN) 16	1.0000 2.0000 3.0000 Resolution Flag: White=1 FT, Yellow=2 FT, Green=4	3D Invertability 39 inch HF Array Residual (TRIRSD[7]) 0 (----) 0.5	AIT QC Fully Calibrated A5 Signal (AQABN[4]) 2 (MM/M) 20000

FT, Black=OR (U-AIT_ AERS) (----)

Bit Size (BS)
6 (IN) 16

Tool/Tot. Drag From D3T to STIA

3D Invertability 27 inch HF Array Residual (TRIRSD[5])
0 (----) 0.5

AIT QC Fully Calibrated A4 Signal (AQABN[3])
2 (MM/M) 20000

AIT Bhole/Form Signal Ratio (ABFR)
0 (----) 25

Cable Drag From STIA to STIT

3D Invertability 21 inch HF Array Residual (TRIRSD[3])
0 (----) 0.5

AIT QC Fully Calibrated A3 Signal (AQABN[2])
2 (MM/M) 20000

1.0000 2.0000

Tool Electronics Monitor (seventh division, from TRIES Channel): White=Normal, Blue=Warning, Red=Failure (TRIQTI) (----)

Tension (TENS) (LBF)
4000
6000

3D Invertability 15 inch HF Array Residual (TRIRSD[1])
0 (----) 0.5

AIT QC Fully Calibrated A2 Signal (AQABN[1])
2 (MM/M) 20000

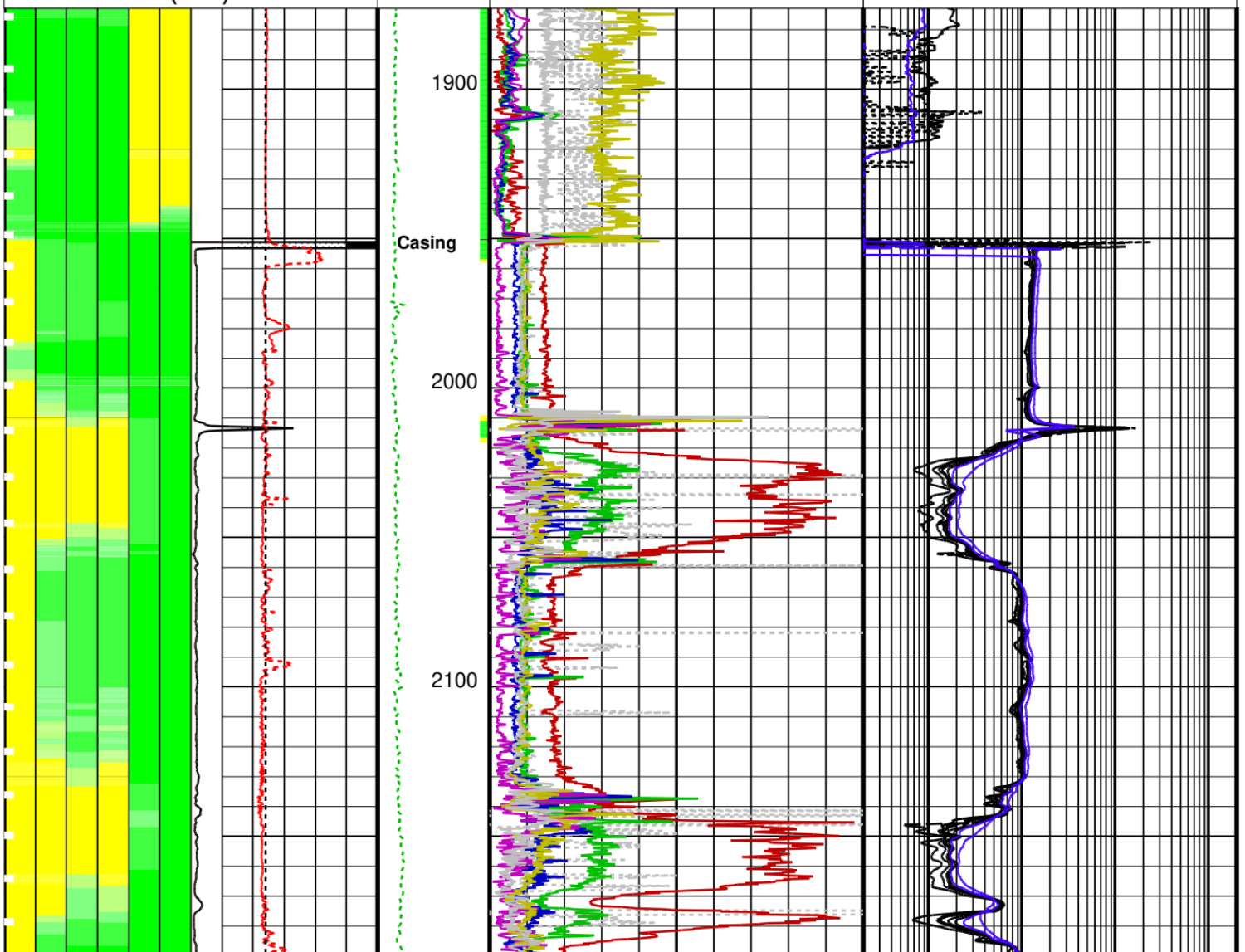
2.0000 2.6700 3.3300 4.0000

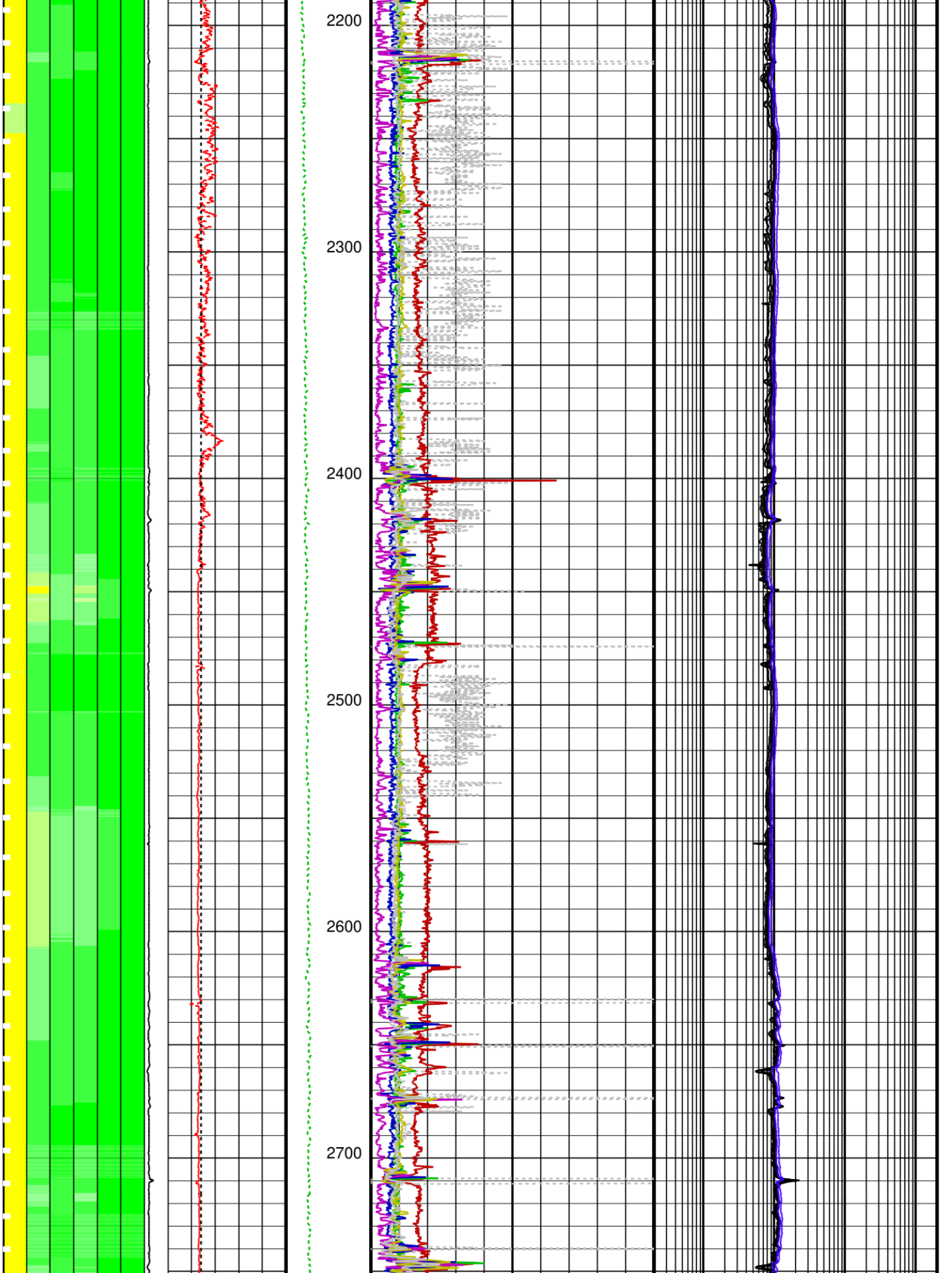
ZAIT Array Ratio Monitor: Green=Normal (TriAxial Arrays One to Six: first to sixth divisions) (TRIQRI) (----)

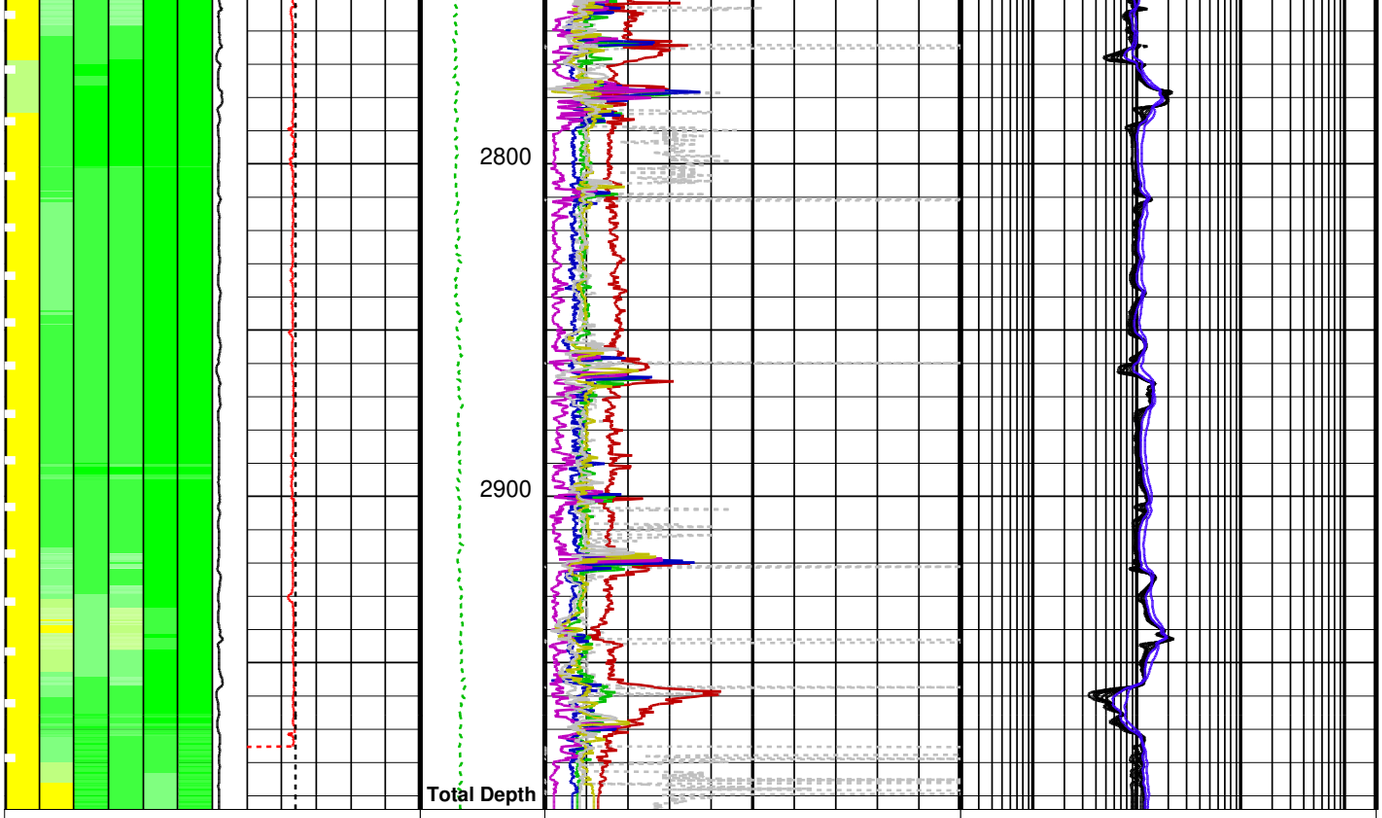
Stuck Stretch (STIT)
0 (F) 50

3D Borehole Correction # Iterations (TRIBHCNI)
0 (----) 50

AIT QC Fully Calibrated A1 Signal (AQABN[0])
2 (MM/M) 20000




2200
2300
2400
2500
2600
2700



2.0000 2.6700 3.3300 4.0000 ZAIT Array Ratio Monitor: Green=Normal (TriAxial Arrays One to Six: first to sixth divisions) (TRIQRI) (----)	Stuck Stretch (STIT) 0 (F) 50	3D Borehole Correction # Iterations (TRIBHCNI) 0 (----) 50	AIT QC Fully Calibrated A1 Signal (AQABN[0]) 2 (MM/M) 20000
1.0000 2.0000 Tool Electronics Monitor (seventh division, from TRIES Channel): White=Normal, Blue=Warning, Red=Failure (TRIQTI) (----)	Tension (TENS) (LBF) 4000 6000	3D Invertability 15 inch HF Array Residual (TRIRSD[1]) 0 (----) 0.5	AIT QC Fully Calibrated A2 Signal (AQABN[1]) 2 (MM/M) 20000
AIT Bhole/Form Signal Ratio (ABFR) 0 (----) 25	Cable Drag From STIA to STIT	3D Invertability 21 inch HF Array Residual (TRIRSD[3]) 0 (----) 0.5	AIT QC Fully Calibrated A3 Signal (AQABN[2]) 2 (MM/M) 20000
Bit Size (BS) 6 (IN) 16	Tool/Tot. Drag From D3T to STIA	3D Invertability 27 inch HF Array Residual (TRIRSD[5]) 0 (----) 0.5	AIT QC Fully Calibrated A4 Signal (AQABN[3]) 2 (MM/M) 20000
AIT Input Bhole Diameter (AIBD) 6 (IN) 16	1.0000 2.0000 3.0000 Resolution Flag: White=1 FT, Yellow=2 FT, Green=4 FT, Black=OR (U-AIT_AERS) (----)	3D Invertability 39 inch HF Array Residual (TRIRSD[7]) 0 (----) 0.5	AIT QC Fully Calibrated A5 Signal (AQABN[4]) 2 (MM/M) 20000
		3D Invertability 54 inch HF Array Residual (TRIRSD[9]) 0 (----) 0.5	AIT QC Fully Calibrated A6 Signal (AQABN[5]) 2 (MM/M) 20000
		3D Invertability 72 inch HF Array Residual (TRIRSD[11]) 0 (----) 0.5	AIT QC Fully Calibrated A7 Signal (AQABN[6]) 2 (MM/M) 20000
			AIT QC Fully Calibrated A8 Signal (AQABN[7]) 2 (MM/M) 20000
PIP SUMMARY			

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
	ZAIT–BA: 3–D Array Induction Tool – ZAIT–B		
ABLM	Array Induction Basic Logs Mode	6_One_Two_and_Four	
ABLV	Array Induction Basic Logs Code Version Number	212	
ACDE	Array Induction Casing Detection Enable	No	
ACSED	Array Induction Casing Shoe Estimated Depth	–50000	FT
AFRSV	Array Induction Response Set Version for Four ft Resolution	40.70.24.20	
AORSV	Array Induction Response Set Version for One ft Resolution	40.70.24.20	
ARFV	Array Induction Radial Profiling Code Version Number	701	
ARPV	Array Induction Radial Parametrization Code Version Number	232	
ATRSV	Array Induction Response Set Version for Two ft Resolution	40.70.24.20	
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
TRIBHM	3D Induction Borehole Correction Mode	7_ComputeOBMStandoff	
TRIBHV	Array Induction Borehole Correction Code Version Number	167	
TRIRSV	3D Induction Response Set Version	00.10.24.00	
TRIRT	3D Rotation Selector	NorTH	
TRISTA	3D Tool Standoff	1.5	IN
	HILTB–FTB: High resolution Integrated Logging Tool–DTS		
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
	EPT–G: Electromagnetic Propagation – G		
BHT	Bottom Hole Temperature (used in calculations)	212	DEGF
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
GRSE	Generalized Mud Resistivity Selection	CHART_GEN_9	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	68	DEGF
	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
MST	Mud Sample Temperature	–50000.00	DEGF
PP	Playback Processing	NORMAL	
TD	Total Depth	3000	FT

Format: ZAIT_3D_LQC 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	Phase	Array Induction Temperature Zero V	Value
Master		0.9906	Master		−0.001124
Before		0.9911	Before		−0.001144
	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
Before		5.016	Before		−0.01124
	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
Before		5.016	Before		−0.01124
	4.500 (Minimum) / 5.000 (Nominal) / 5.500 (Maximum)			−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)
18	−264.4	−3236 (Minimum)	−34.30 (Nominal)	3167 (Maximum)	−380.3	−1971 (Minimum)	0 (Nominal)	1971 (Maximum)
19	2.997	−508.2 (Minimum)	−31.06 (Nominal)	446.1 (Maximum)	−278.9	−8843 (Minimum)	0 (Nominal)	8843 (Maximum)
20	−67.21	−990.0 (Minimum)	78.40 (Nominal)	1147 (Maximum)	485.0	−2886 (Minimum)	0 (Nominal)	2886 (Maximum)
21	−2.146	−332.1 (Minimum)	27.84 (Nominal)	387.8 (Maximum)	513.5	−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

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	−508.2 (Minimum)	−31.06 (Nominal)	446.1 (Maximum)	−278.9	−8843 (Minimum)	0 (Nominal)	8843 (Maximum)
20	−67.21	−990.0 (Minimum)	78.40 (Nominal)	1147 (Maximum)	485.0	−2886 (Minimum)	0 (Nominal)	2886 (Maximum)
21	−2.146	−332.1 (Minimum)	27.84 (Nominal)	387.8 (Maximum)	513.5	−7605 (Minimum)	0 (Nominal)	7605 (Maximum)
22	−171.0	−1710 (Minimum)	−171.8 (Nominal)	1367 (Maximum)	−557.7	−1006 (Minimum)	0 (Nominal)	1006 (Maximum)
23	2.315	−700.5 (Minimum)	−7.184 (Nominal)	686.2 (Maximum)	48.64	−2778 (Minimum)	0 (Nominal)	2778 (Maximum)
24	43.68	−2238 (Minimum)	−131.8 (Nominal)	1975 (Maximum)	−300.7	−4019 (Minimum)	0 (Nominal)	4019 (Maximum)
25	57.55	−888.1 (Minimum)	60.98 (Nominal)	1010 (Maximum)	−369.9	−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

RT SCANNER TOOL

TRIAXIAL INDUCTION LOG

14–FEB–2007