

**Schlumberger**

Company: **CDEX**

Well: **C0009A**

Field: **Kumanonada, Offshore Kii peninsula**

Rig: **Chikyu**

Country: **JAPAN**

**CDEX**

**C0009A**

# Kumanonada, Offshore Kii peninsula

Country: **JAPAN**

[illegible]

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

## DEPTH SUMMARY LISTING

## Depth System Equipment

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-JA	Type:	CMTD-B/A	Type:	7-46A XXS
Serial Number:	6726	Serial Number:	2986	Serial Number:	6019
Calibration Date:	3-Apr-2009	Calibration Date:	16-Apr-2009	Length:	9200 M
Calibrator Serial Number:	17	Calibrator Serial Number:	1049	Conveyance Method: Wireline Rig Type: Offshore Floater with WMC	
Calibration Cable Type:	7-46A XXS	Number of Calibration Points:	10		
Wheel Correction 1:	-6	Calibration RMS:	373		
Wheel Correction 2:	-6	Calibration Peak Error:	499		

Log Sequence:	Subsequent Log In the Well
Reference Log Name:	EMS-HRLA-TLD-CNL-GR-SP
Reference Log Run Number:	1
Reference Log Date:	11-Jul-2009

1. Schlumberger Depth Control Policy followed.
2. IDW used as primary depth control device.
3. Z-Chart used as secondary depth control device.
4. Tide level = 0 m.
- 5.
- 6.

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.

OS1: EMS-HRLA-TLD-CNL-GR-SF  
OS2: MDT Dual Packer & Single Probe  
OS3:  
OS4:  
OS5:

This is the subsequence run in the well.  
The depth correlated with EMS-HRLA-TLD-CNL-GR-SP log on 11-Jul-09.  
Tool ran as per tool sketch and 2.5 inch standoffs used.  
Maximum recorded temperature from logging head thermometers = 33.89 degC.  
Maximum deviation = 0.70 deg @ 2749.79mBRT.  
Logging speed was 1,000 ft/hr.

Repeat section was taken from 2900.0m – 2850.0m as per client request.

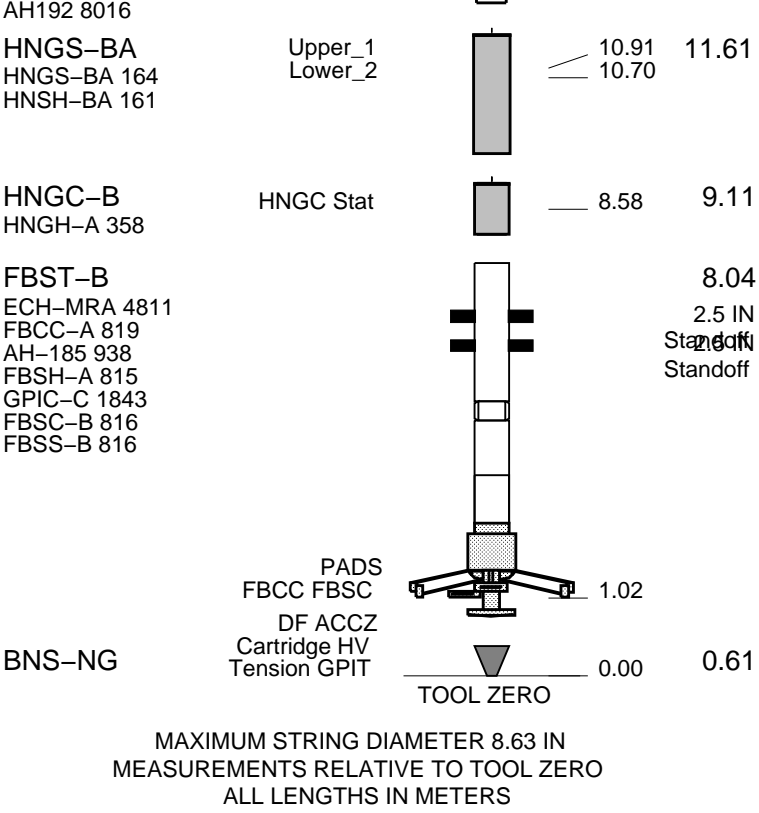
FMI data was recorded using Manual EMEX (175V) and Gain Auto Low range.					
MDEC used -6.587 as per client request.					
Caliper check in casing = 18.75 inch.					
Some of data affected by borehole condition (rugosity/washout).					
Circulation Started: 11-Jul-2009; 1:45am					
Circulation Stopped: 11-Jul-2009; 5:30am					
AV=55 cps, PV=35 cps, YV=40 lb/100ft2, Gel=7-8 lb/100ft2, WL=4.1 ml, MC=0.5 mm					
pH=10.6 ml, Pf=0.2 ml, Pm=0.3 ml, Mf=0.3 ml, Cl-=71,700 mg/l, Ca++Mg++=80/97 mg/l, Sand = 0.2%					
O/S/W=0/6/94 %Vol, MBC=0.5 ml/ml mud, K+=26,400 mg/l					

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

EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		

SURFACE EQUIPMENT		
GSR-Y 1005 WITM (EDTS)-A		

DOWNHOLE EQUIPMENT		
LEH-QT LEH-QT 1296	MDSB_EDTC Mud Tempe	31.77
EDTC-B EDTH-B 8206 EDTC-BB 8218 EDTG-A/B 8215	CTEM Gamma Ray TelStatus EDTCB Ele	30.88
PPC1-B PPC1-B 8169 PPC_CAL_STD	Calipers PPC_Cartr	28.90
MAPC-B MAPC-BA 8038 ECH-SF 8038 MAMS-BA 8048		26.91
		2.5 IN Standoff
	MAMS-PS	22.20
		2.5 IN Standoff
MAXS-B MASS-BA 8038 MAXS-BA 8044		20.50
		2.5 IN Standoff
		2.5 IN Standoff
	MAXS-PS Mud Resis Mud Tempe	14.33
EMS-B EMA-B 8002 RES EMC-B 8027 ECH-KH 8028		14.33



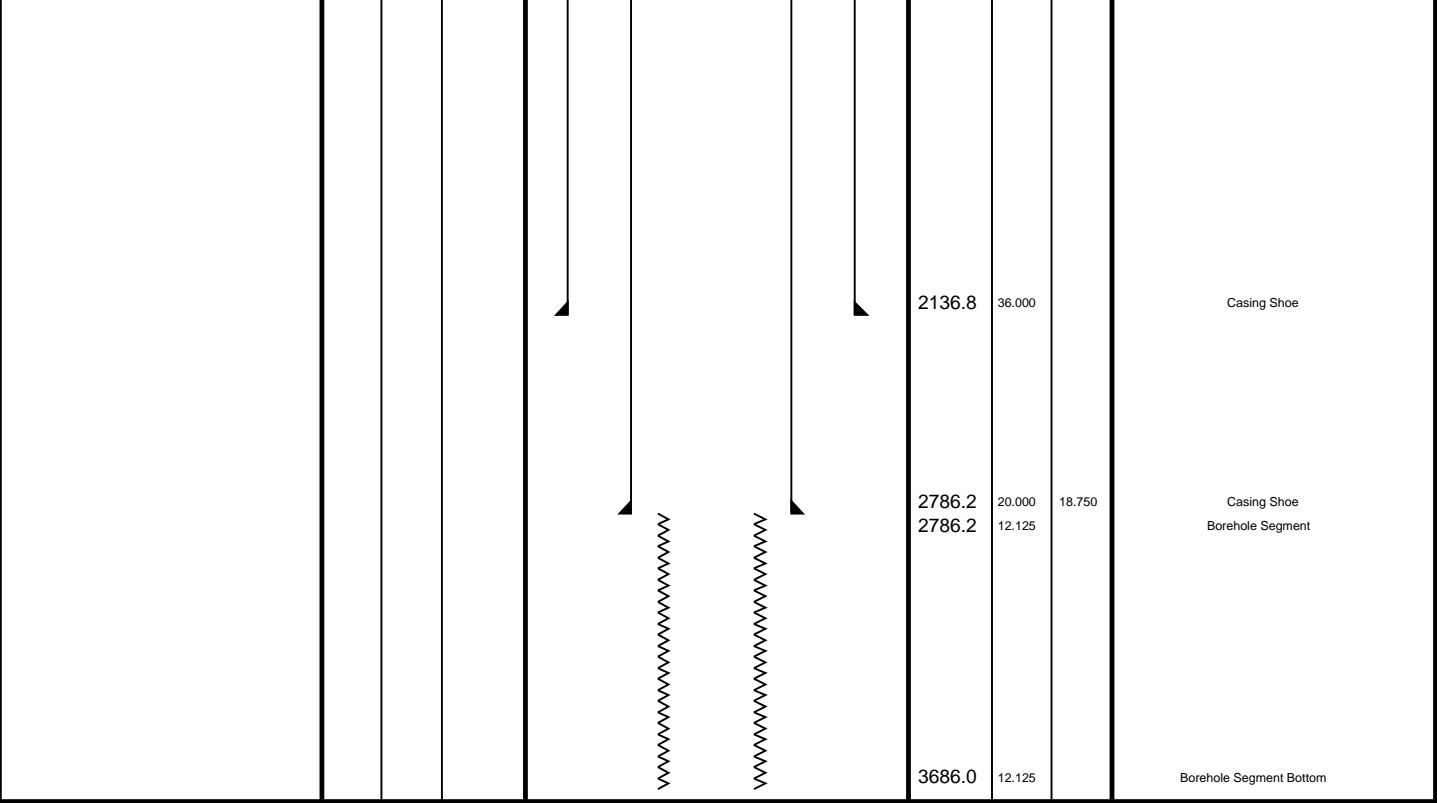
Client: CDEX  
 Well: C0009A  
 Field: Nankai Trough  
 State: Wakayama  
 Country: JAPAN

Rig Name: Chikyu  
 Reference Datum: Mean Sea Level  
 Elevation: 28.3 m

Drawing Date: 7/11/2009

Production String	(in) OD	(in) ID	(m) MD	Well Schematic	(m) MD	(in) OD	(in) ID	Casing String
Derrick Floor Elevation  Mean Sea Level			28.3  0.0		2082.3	36.000		Casing String





**Schlumberger**

**Main Log**  
**1:200**

MAXIS Field Log

Company: CDEX Well: C0009A

Input DLIS Files						
DEFAULT	FMI_NGS_EMS_MAXS_038LUP	FN:114	PRODUCER	13-Jul-2009 17:16	3659.9 M	2752.6 M
Output DLIS Files						
DEFAULT	FMI_NGS_EMS_CAL_006PUP	FN:30	PRODUCER	08-Aug-2009 16:43	3662.2 M	2755.8 M
CLIENT	FMI_NGS_EMS_CAL_006PUC	FN:31	CUSTOMER	08-Aug-2009 16:43	3662.2 M	2755.8 M

Integrated Hole/Cement Volume Summary

Hole Volume = 71.35 M3  
Cement Volume = 71.35 M3 (assuming 0.00 IN casing O.D.)  
Computed from 3662.2 M to 2785.1 M using data channel(s) C1 C2

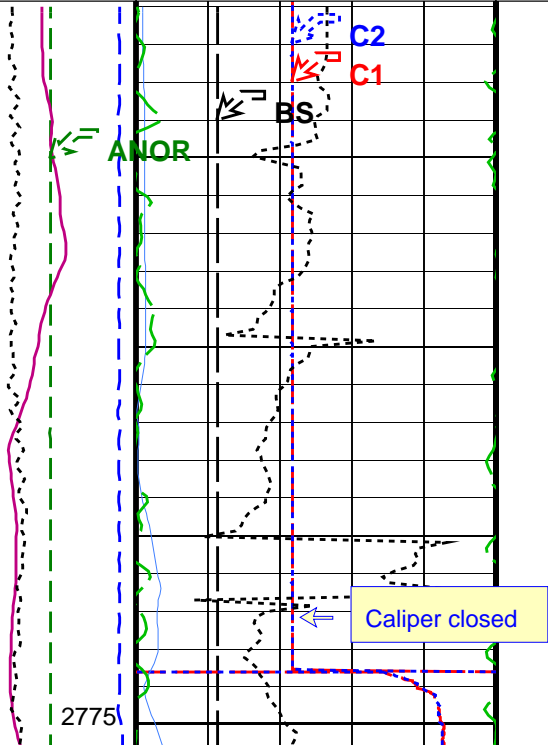
OP System Version: 17C0-154

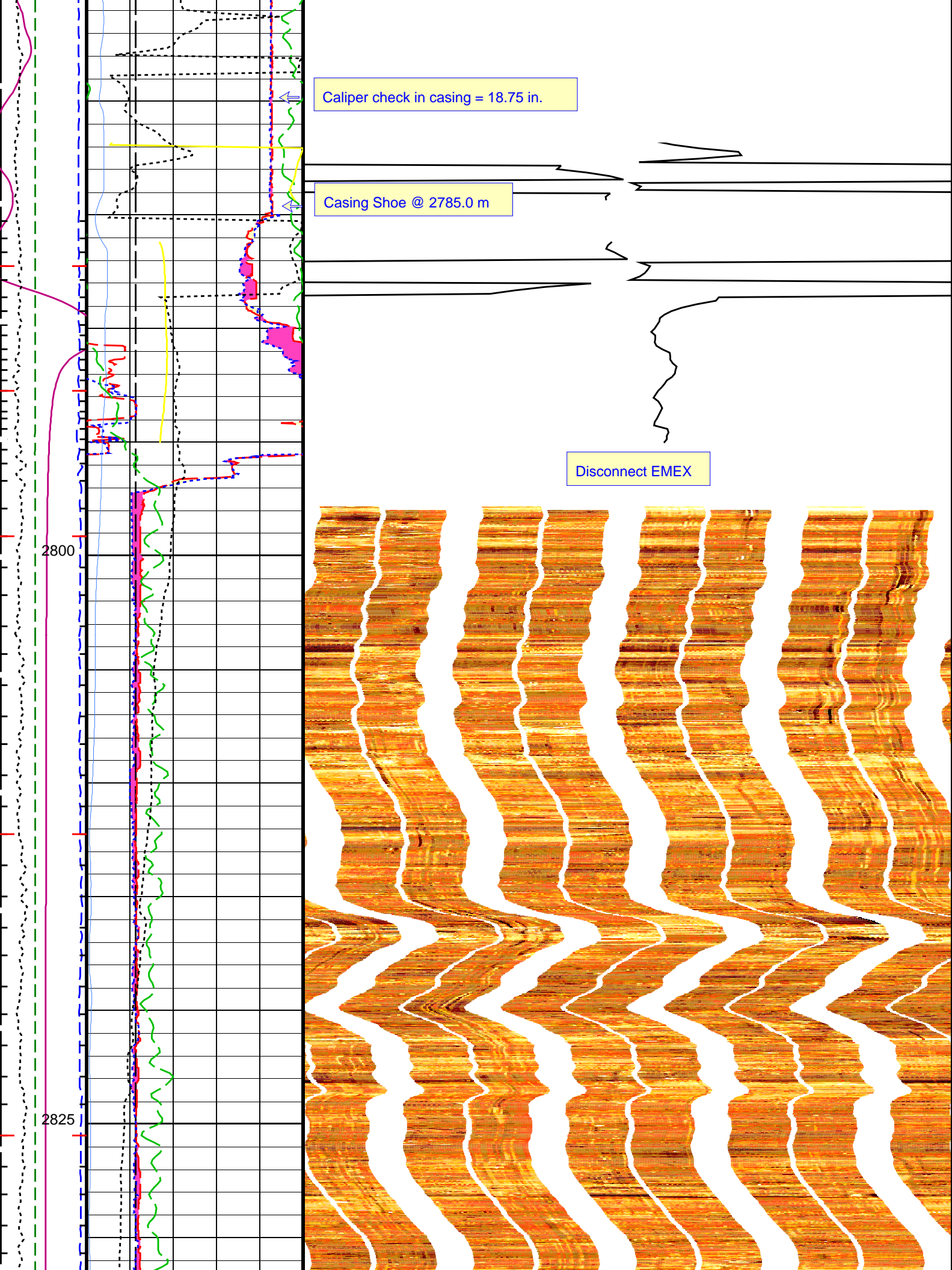
FBST-B	17C0-154	HNGC-B	17C0-154
HNGS-BA	SPC-3839-NUCL	EMS-B	17C0-154
PPC1-B	17C0-154	EDTC-B	17C0-154

PIP SUMMARY

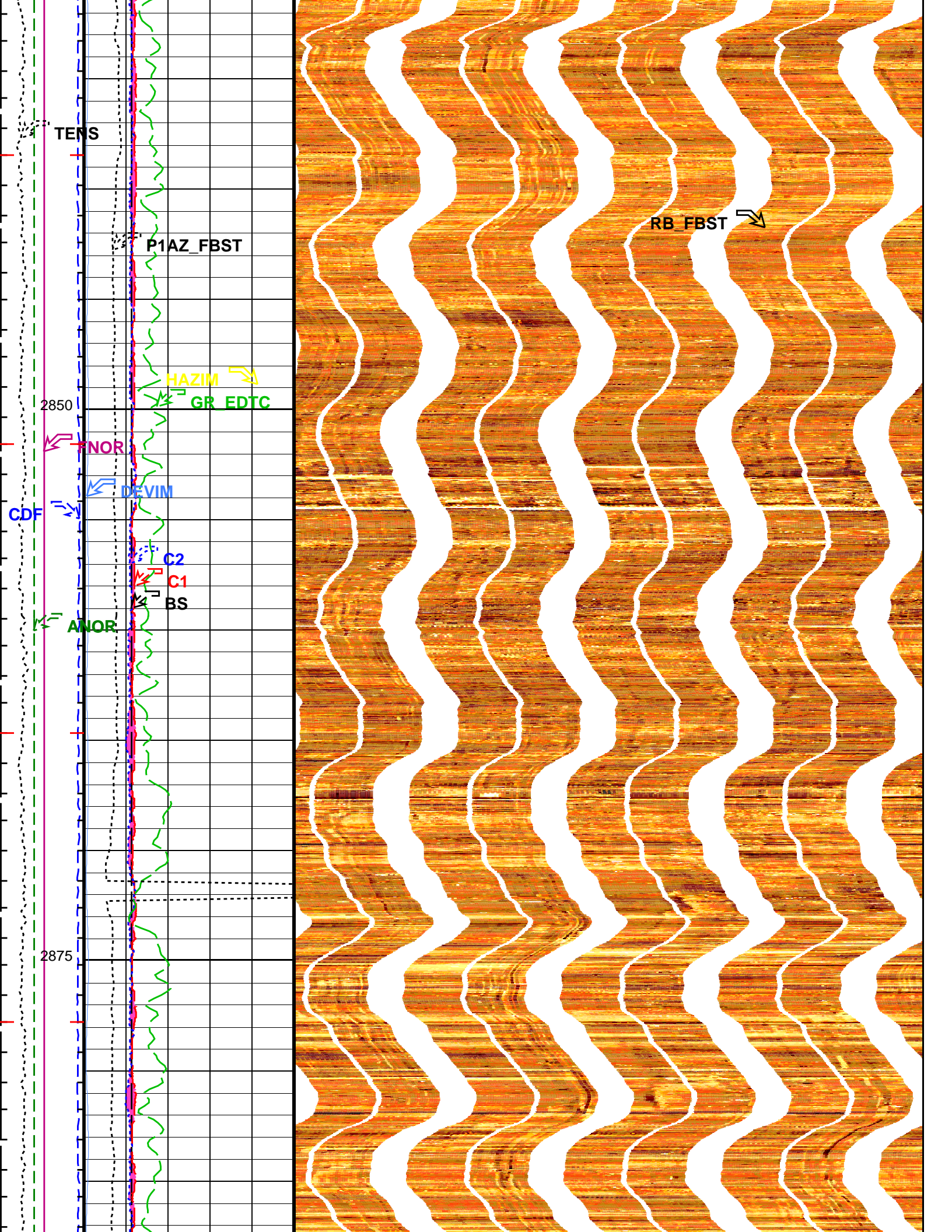
- Integrated Hole Volume Minor Pip Every 0.1 M3
- Integrated Hole Volume Major Pip Every 1 M3
  - Integrated Cement Volume Minor Pip Every 0.1 M3
  - Integrated Cement Volume Major Pip Every 1 M3
- Time Mark Every 60 S

	<div>Pad One Azimuth (P1AZ_</div> <div>FBST)</div> <div>-40 (DEG) 360</div>	
	<div>Hole Azimuth (HAZIM)</div> <div>-40 (DEG) 360</div>	
	<div>Gamma Ray (GR_EDTC)</div> <div>50 (GAPI) 150</div>	
<div>Calibrated</div> <div>Downhole</div> <div>Force</div> <div>(CDF)</div> <div>(LBF)</div> <div>-200 1800</div>	<div>Deviation (DEVIM)</div> <div>0 (DEG) 10</div>	
<div>Magnetome</div> <div>ter Norme</div> <div>(FNOR)</div> <div>(OER)</div> <div>0.2 0.7</div>	<div>Caliper 2 (C2)</div> <div>10 (IN) 20</div>	
<div>Accelerome</div> <div>ter Norme</div> <div>(ANOR)</div> <div>(M/S2)</div> <div>9 11</div>	<div>Caliper 1 (C1)</div> <div>10 (IN) 20</div>	<div>267.6140</div> <div>309.6340</div> <div>337.0040</div> <div>359.0920</div> <div>376.5320</div> <div>391.7280</div> <div>405.4940</div> <div>419.3920</div> <div>434.1890</div> <div>449.8860</div> <div>469.1100</div> <div>493.1850</div> <div>523.8470</div> <div>562.9000</div> <div>620.3240</div> <div>715.1410</div> <div>FBST/PADA (FBAA_P)</div> <div>(-----)</div>
<div>Tension</div> <div>(TENS)</div> <div>(LBF)</div> <div>0 2000</div>	<div>Bit Size (BS)</div> <div>10 (IN) 20</div>	<div>Tool Rotation (RB_FBST)</div> <div>-180 (DEG) 180</div>

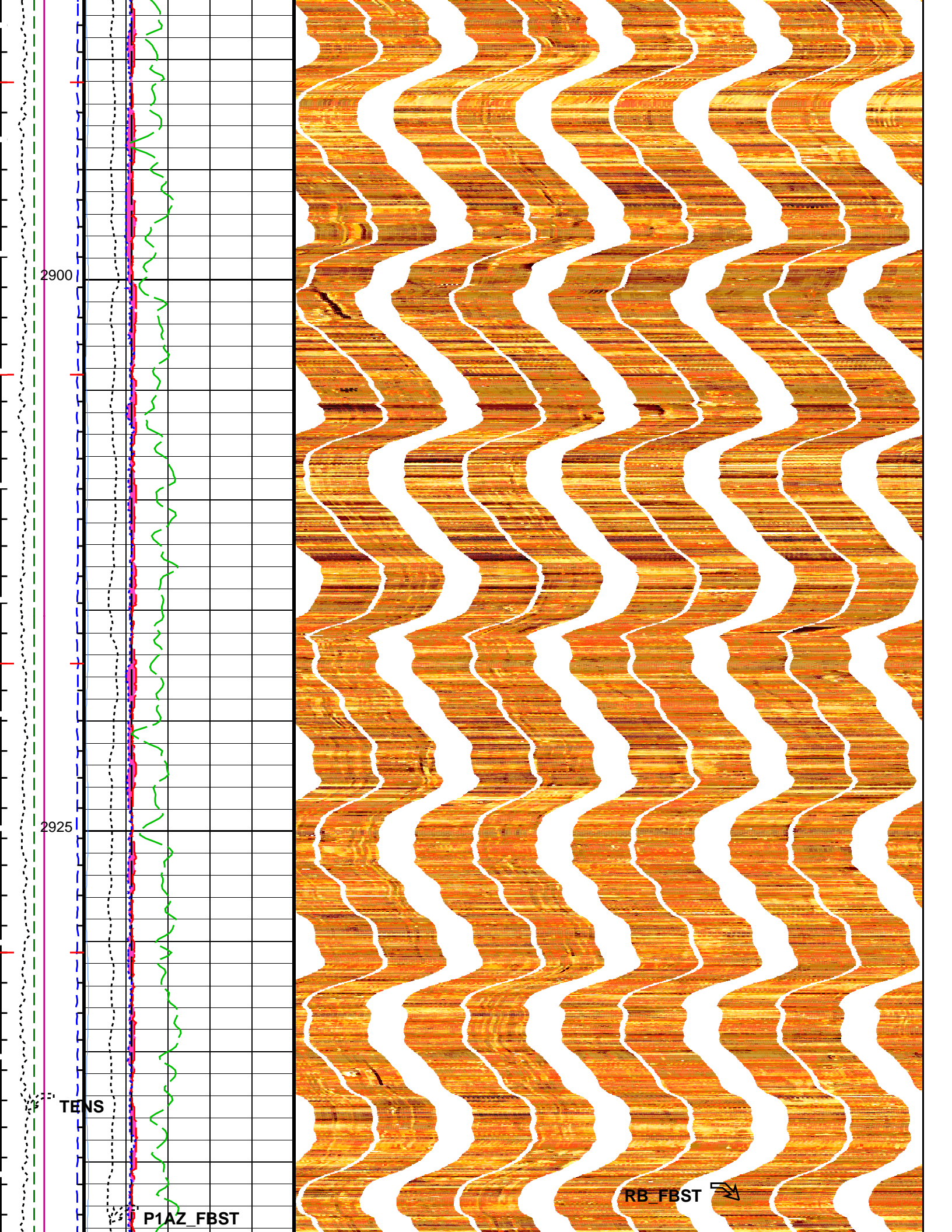




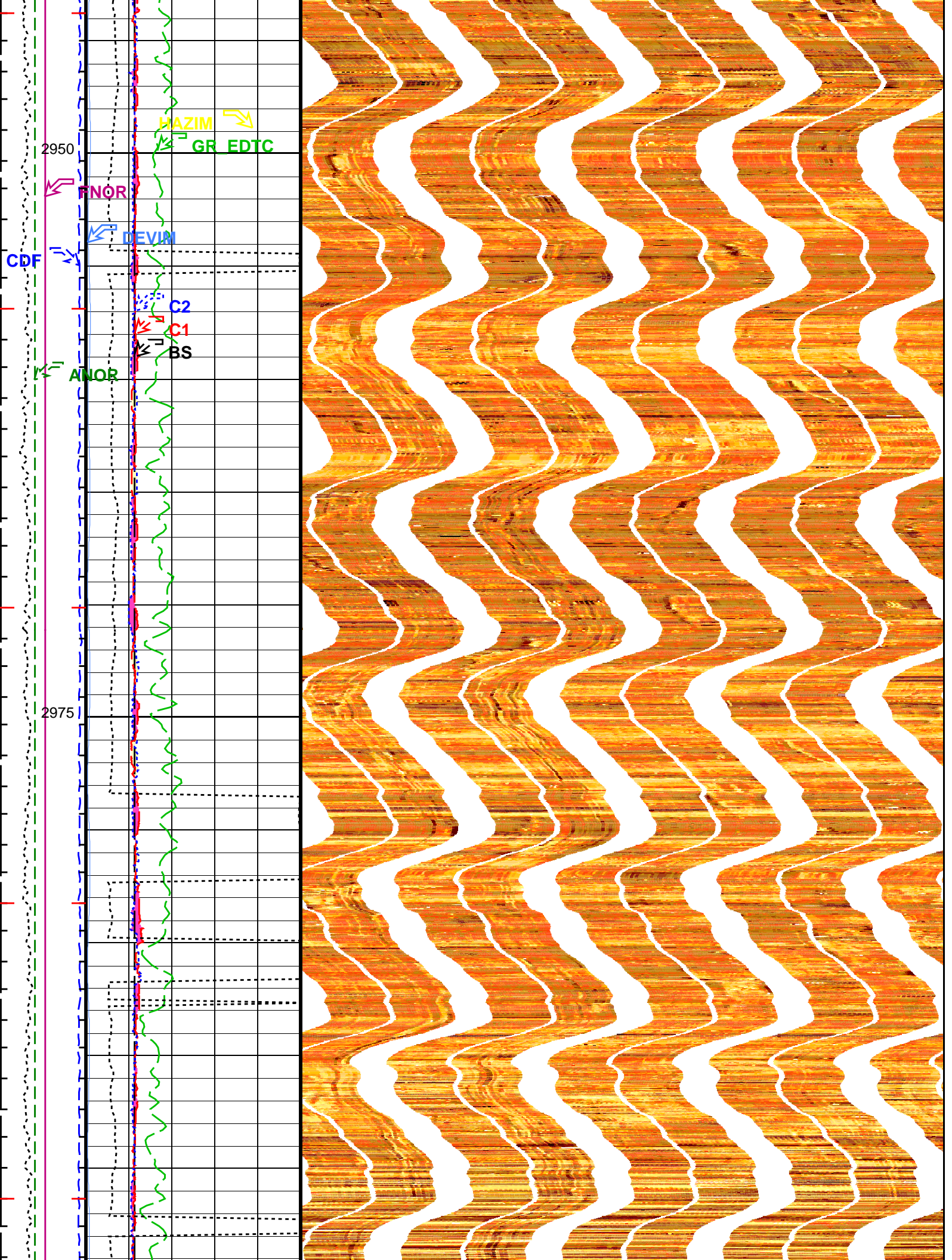




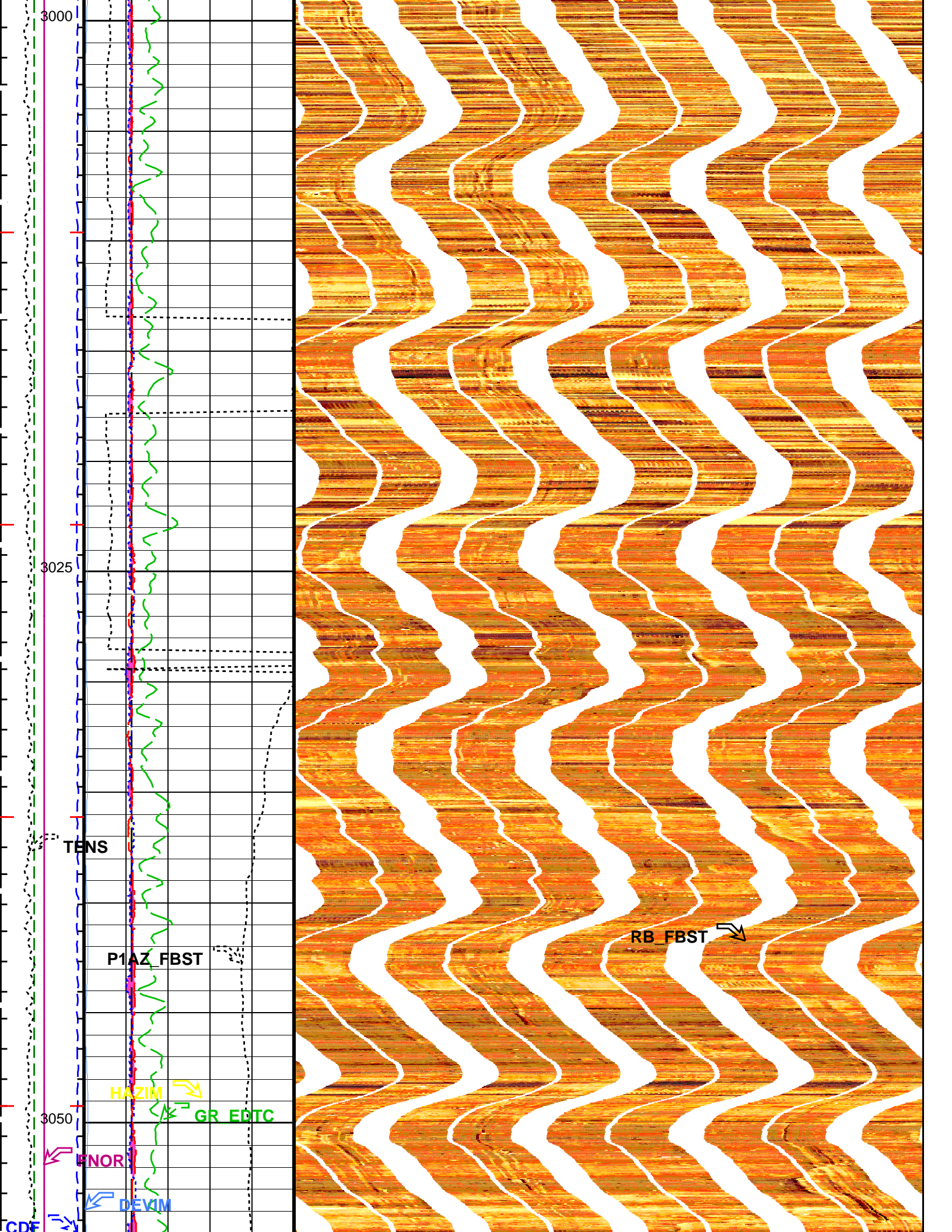




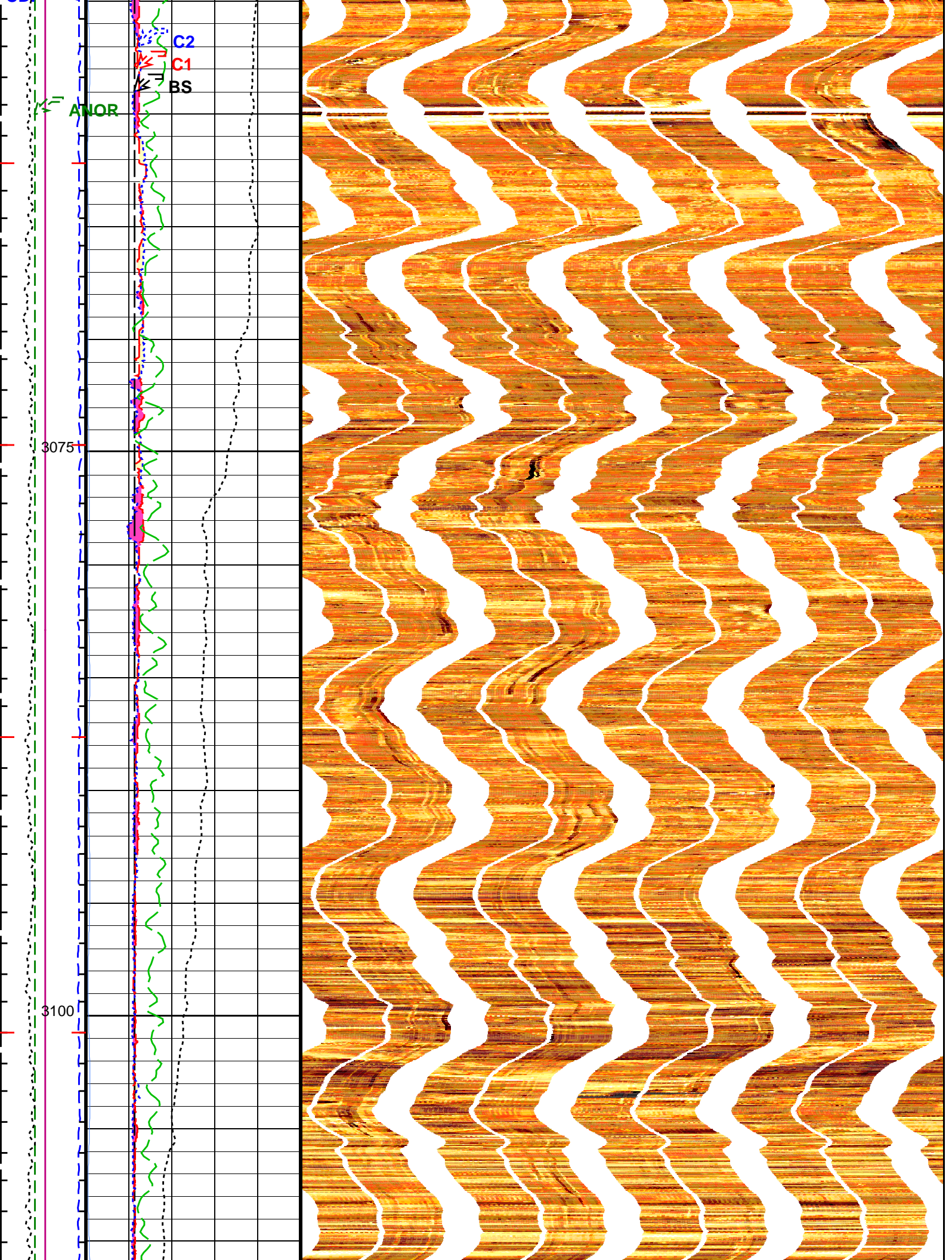




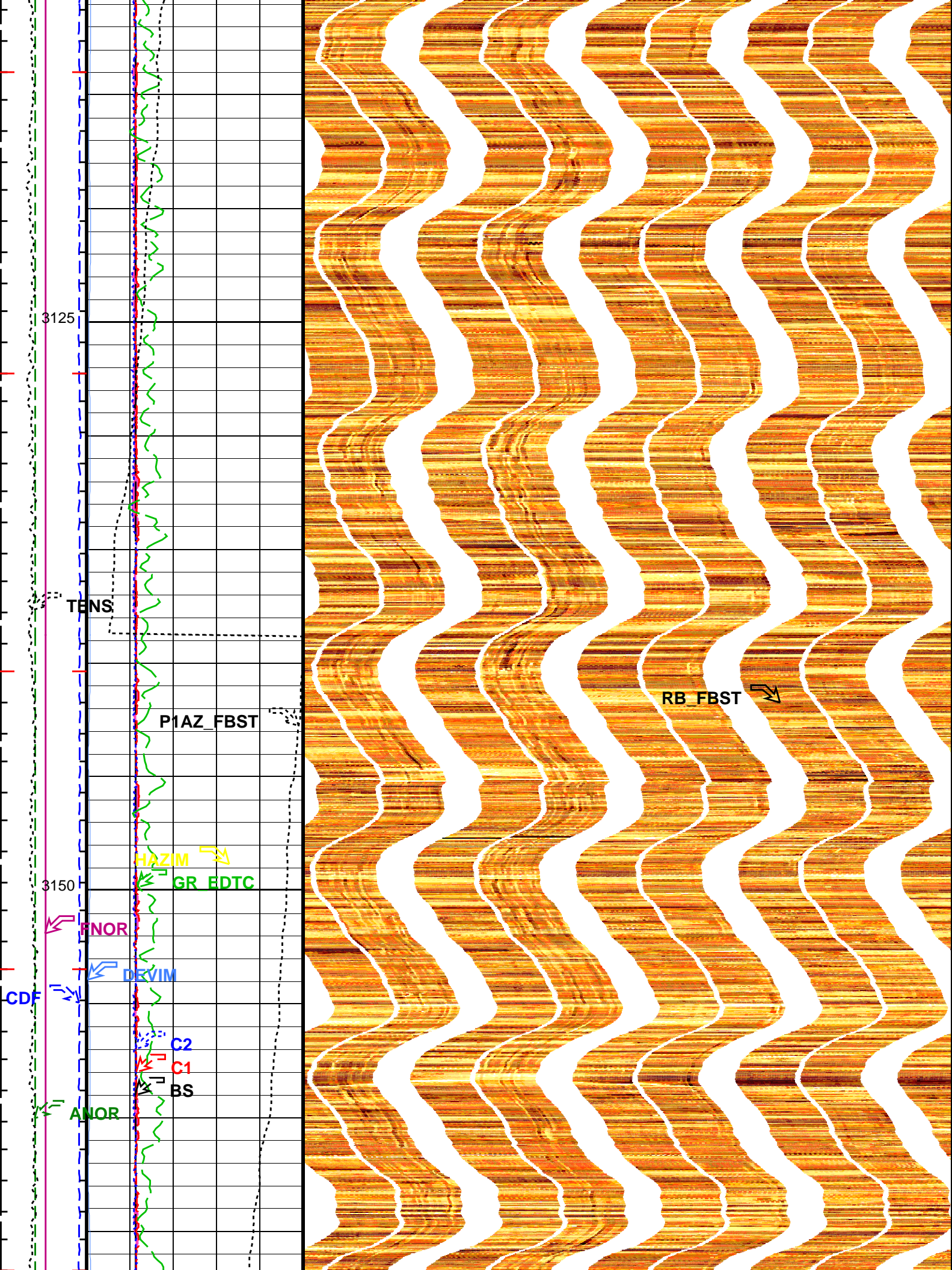




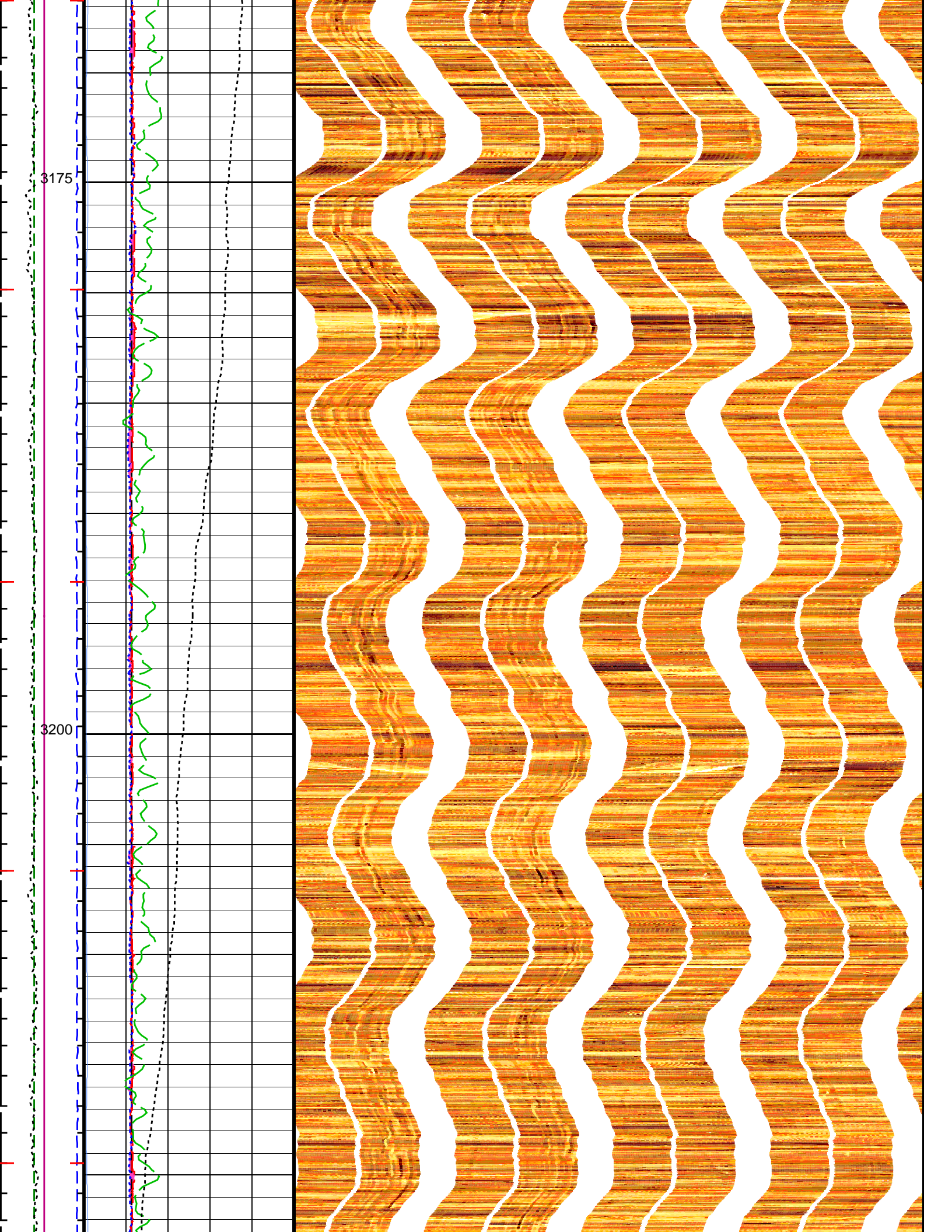




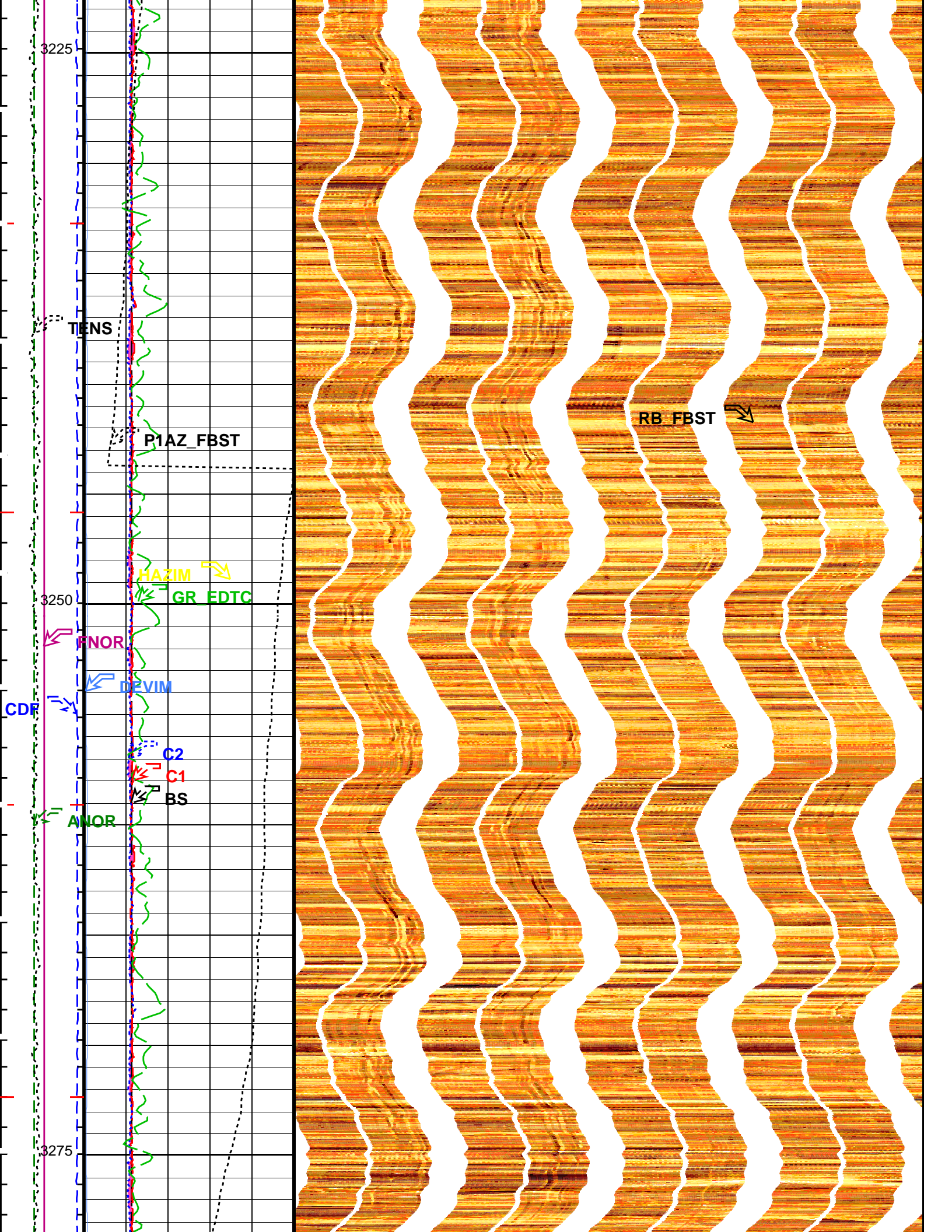




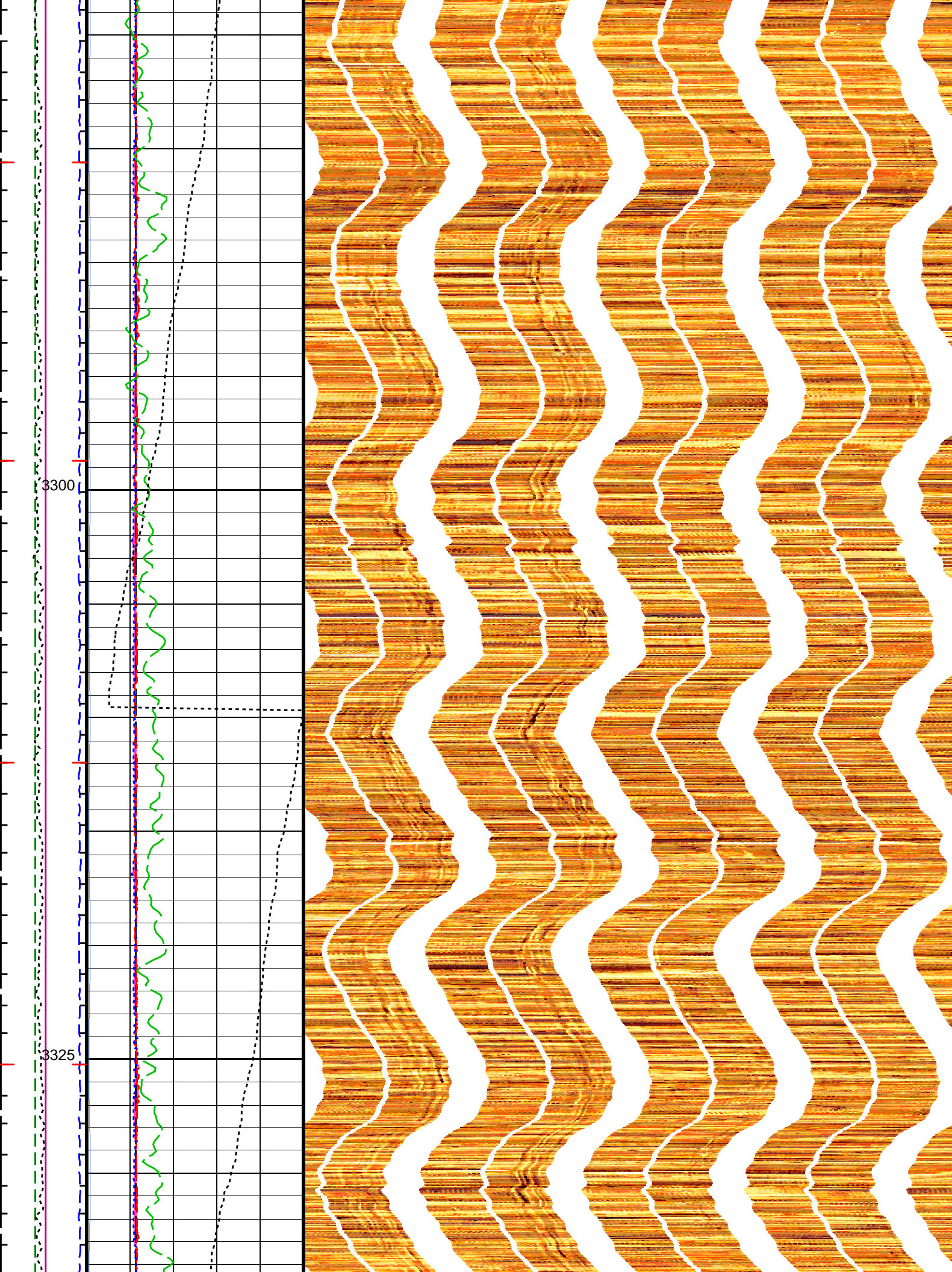




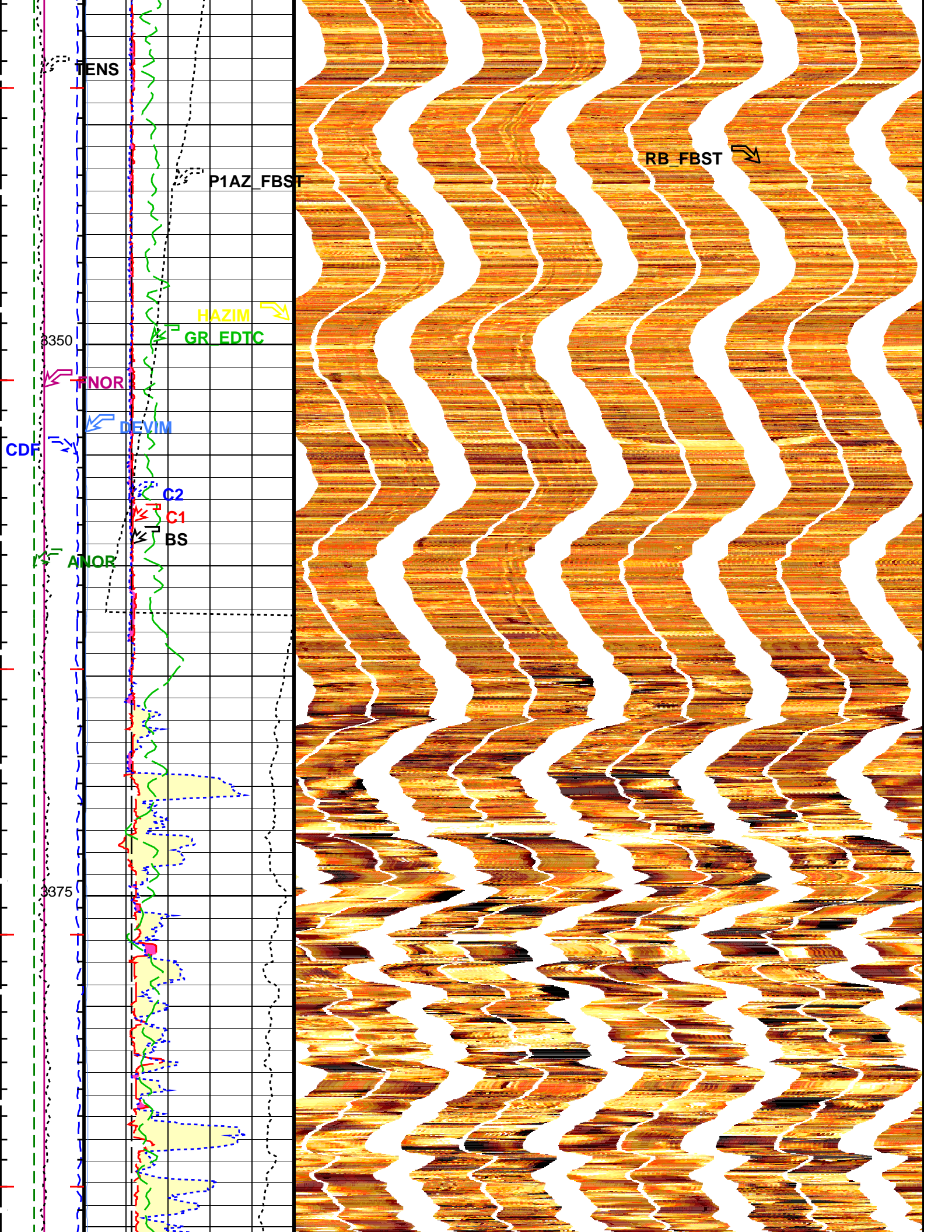




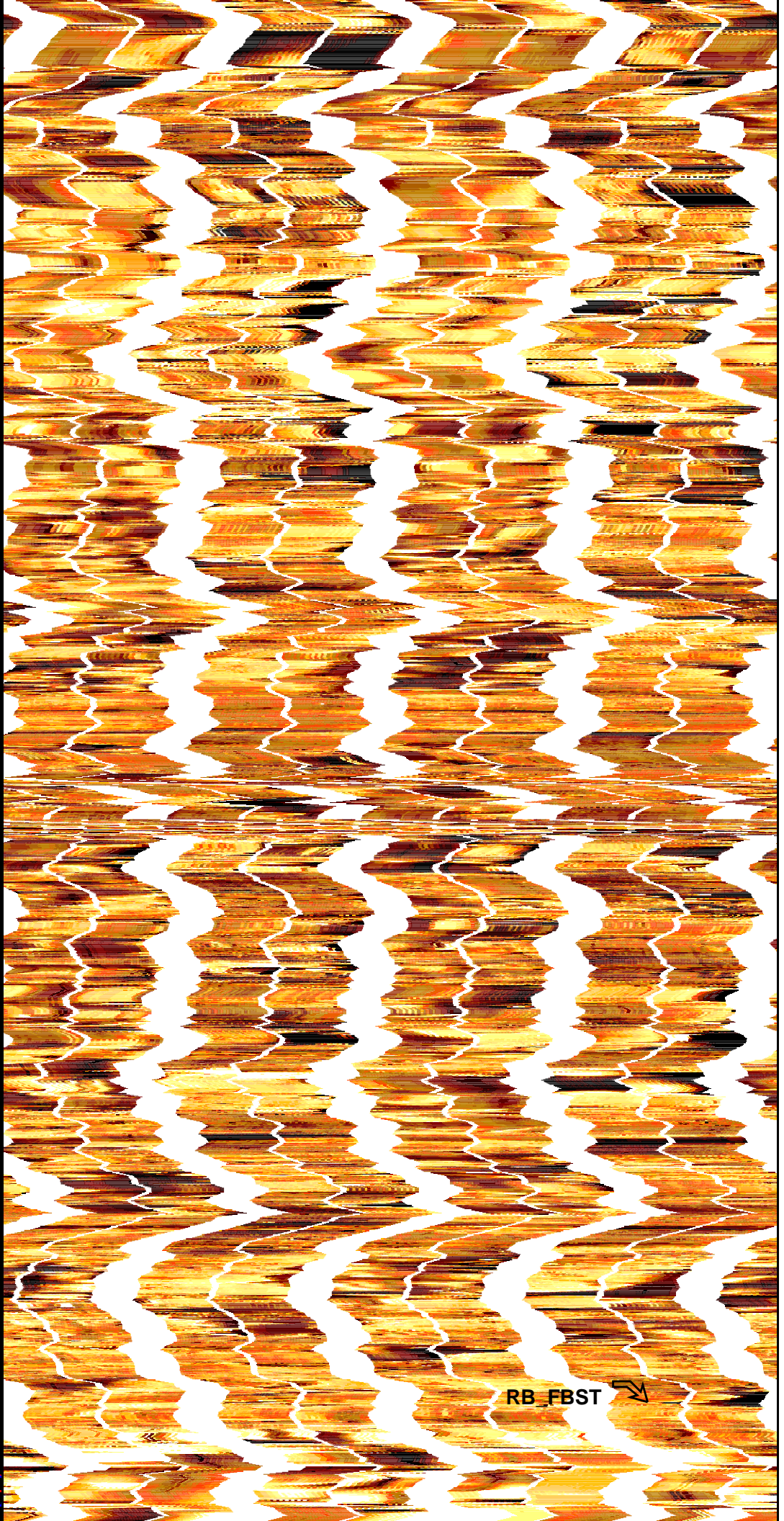
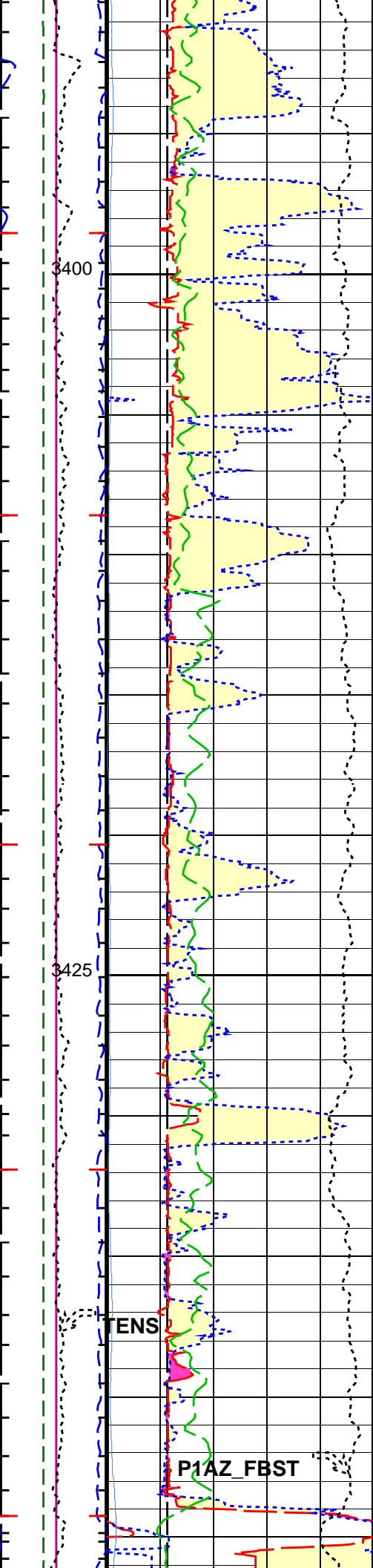








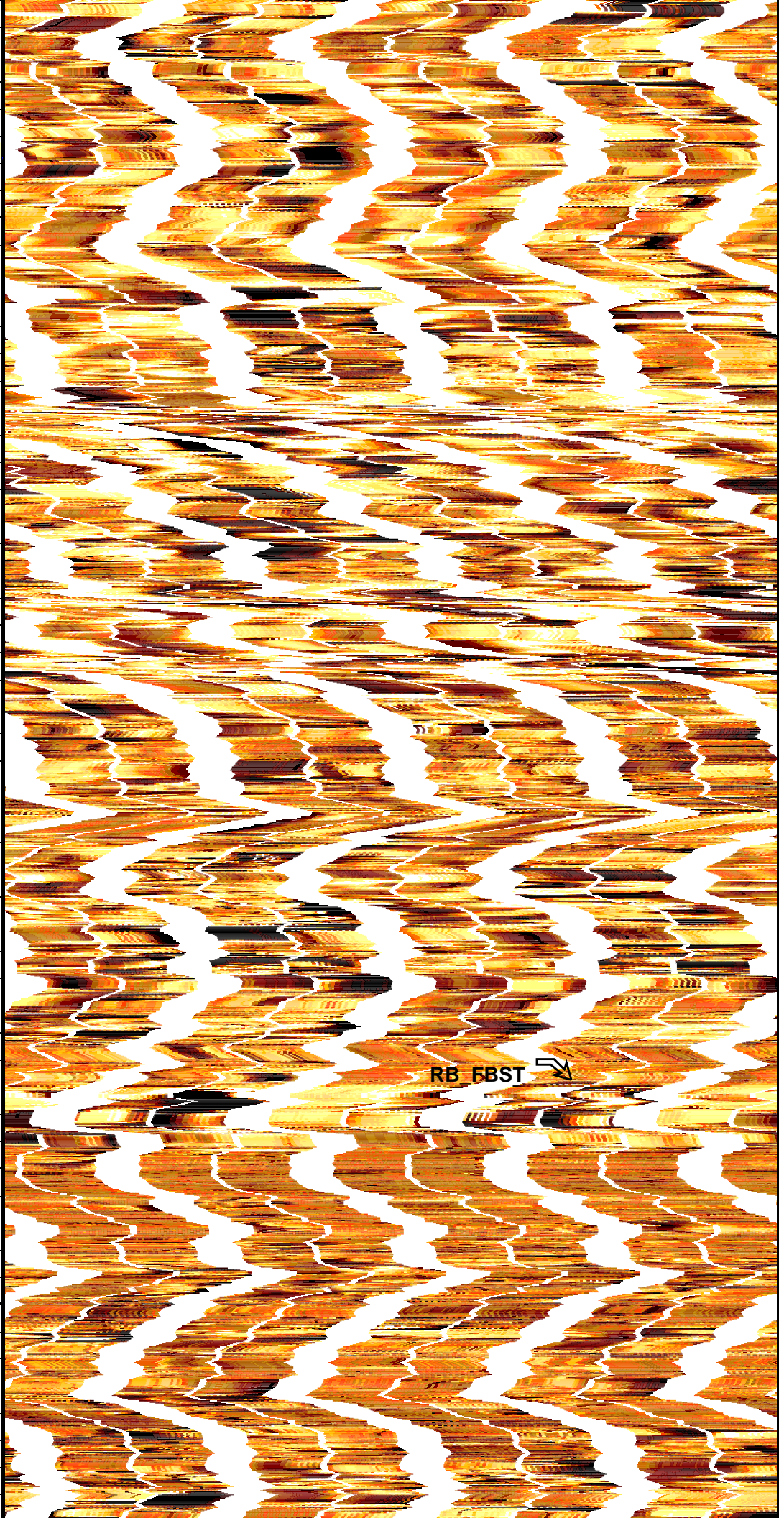
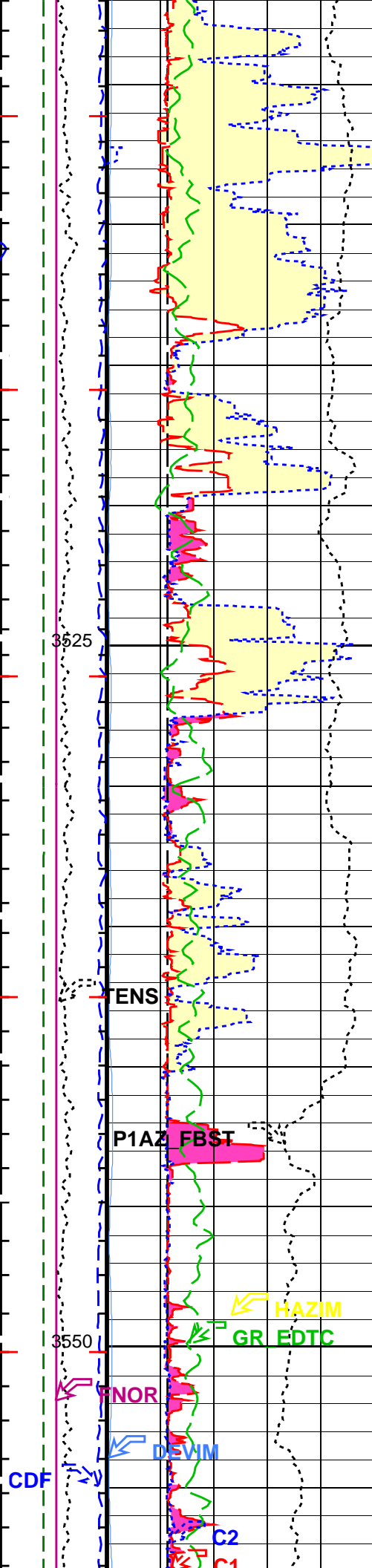




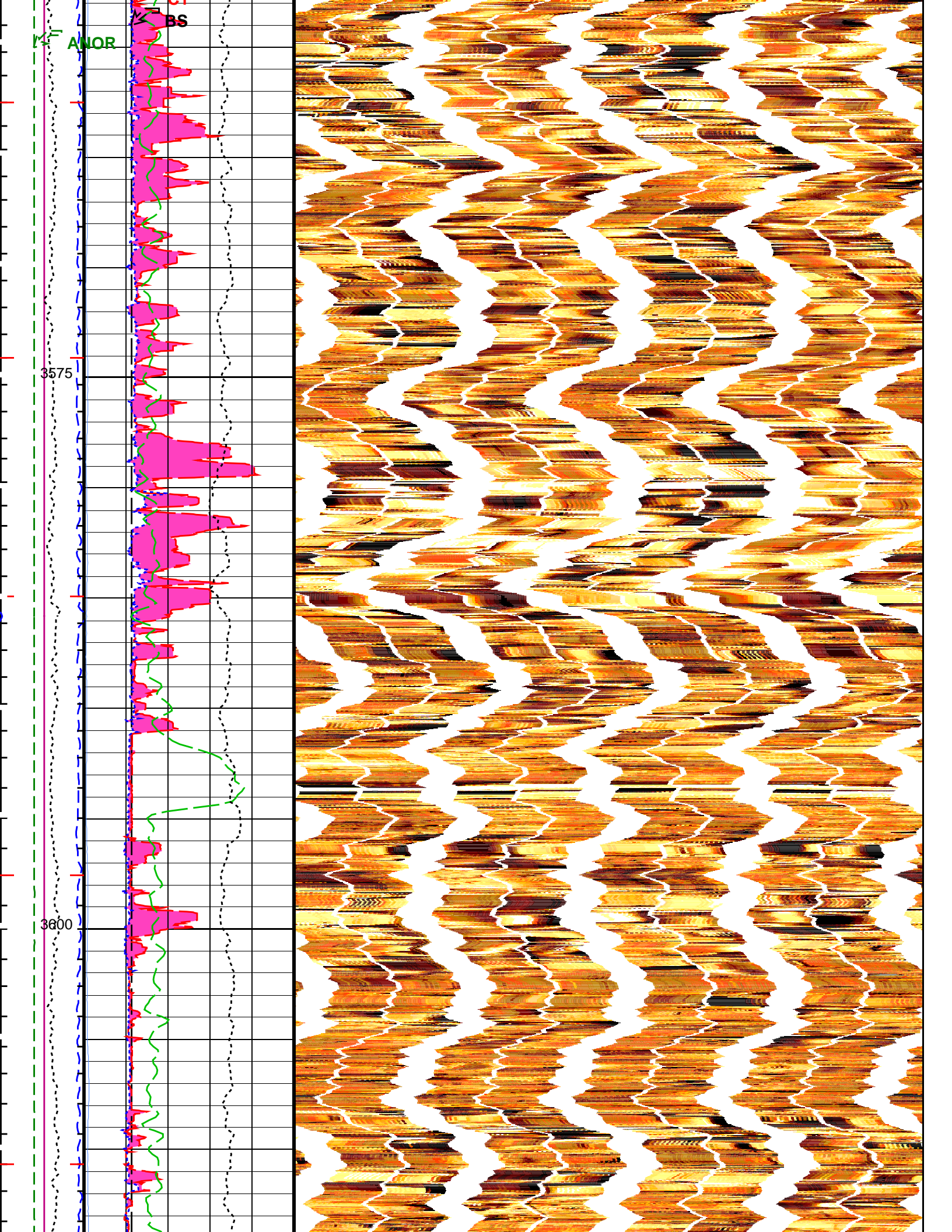




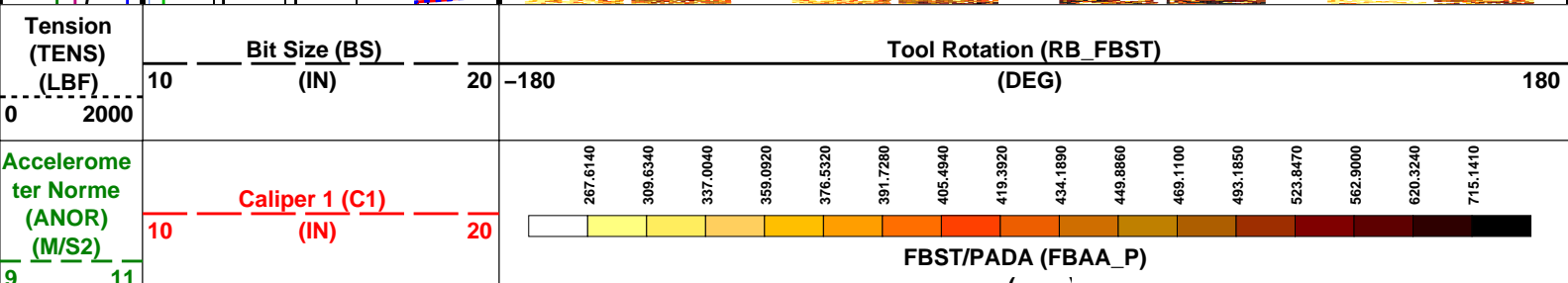
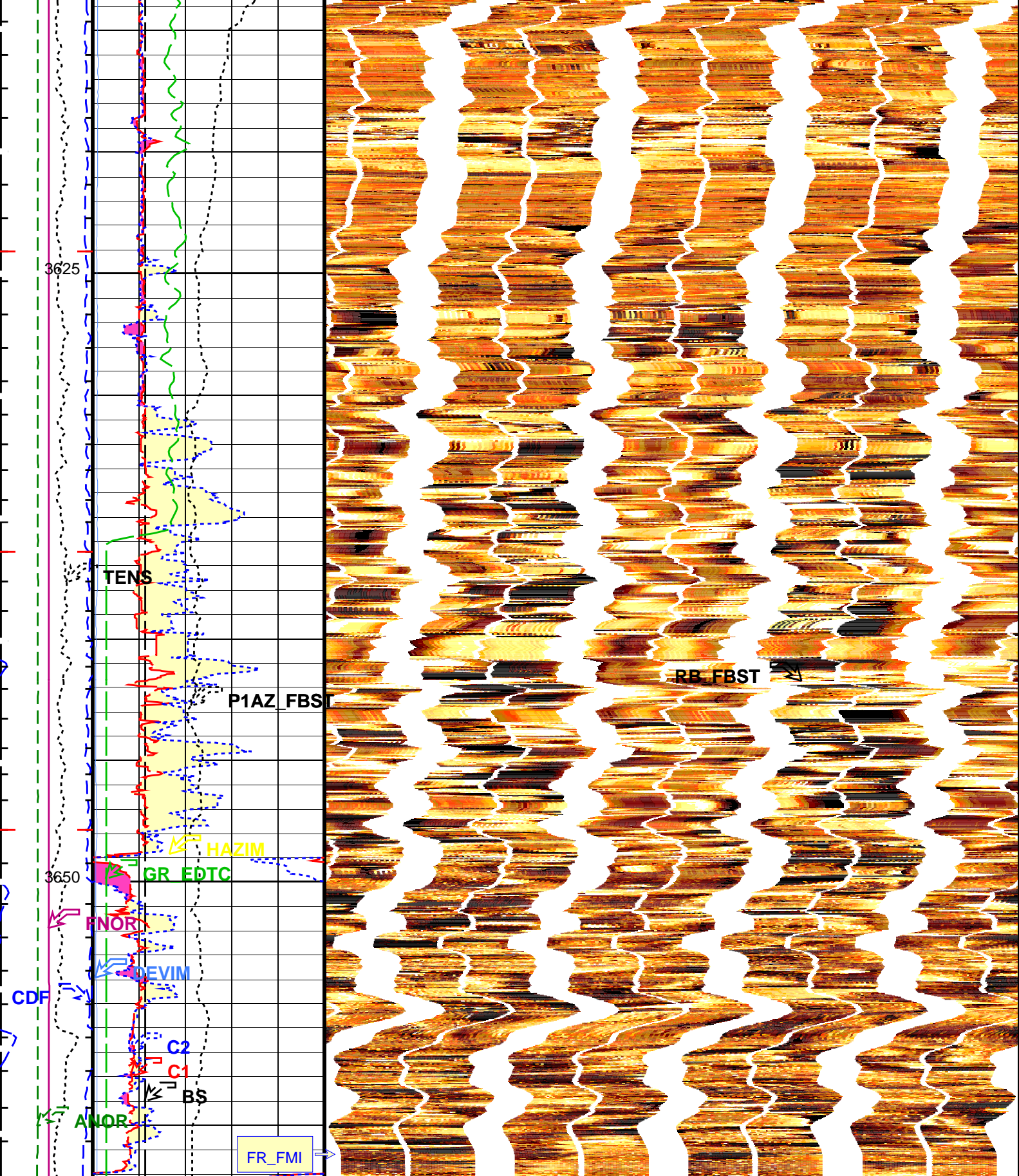












Magnetometer Norme (FNOR) (OER)	Caliper 2 (C2)	
	10 (IN)	20
0.2 0.7		
Calibrated Downhole Force (CDF) (LBF)	Deviation (DEVIM)	
	0 (DEG)	10
-200 1800		
	Gamma Ray (GR_EDTC)	
	50 (GAPI)	150
	Hole Azimuth (HAZIM)	
	-40 (DEG)	360
	Pad One Azimuth (P1AZ_FBST)	
	-40 (DEG)	360
PIP SUMMARY		
<div> <div> <div></div> <div>Integrated Hole Volume Minor Pip Every 0.1 M3</div> </div> <div> <div></div> <div>Integrated Hole Volume Major Pip Every 1 M3</div> </div> <div> <div></div> <div>Integrated Cement Volume Minor Pip Every 0.1 M3</div> </div> <div> <div></div> <div>Integrated Cement Volume Major Pip Every 1 M3</div> </div> <div> <div></div> <div>Time Mark Every 60 S</div> </div> </div>		
<div>FMI Image Equalised , Patched.</div> <div>Resistive (White) to Conductive (Black)</div>		
Format: Image 200 Vertical Scale: 1:200		Graphics File Created: 08–Aug–2009 16:43
OP System Version: 17C0–154		
FBST–B	17C0–154	HNGC–B 17C0–154
HNGS–BA	SPC–3839–NUCL	EMS–B 17C0–154
PPC1–B	17C0–154	EDTC–B 17C0–154
Parameters		
DLIS Name	Description	Value
FBST–B: Full–Bore Scanner – B		
ACPP	Accelerometer PROM Presence	PRESENT
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE
ART	Accelerometer Reference Temperature	20 DEGC
EGCO	FMI EMEX and GAIN Correction	NO
FBCD	Correct Dip Buttons Values by EMEX and Gain	OFF
FBEF	FMI EMEX filtering activation	OFF
FBMV	FMI EMEX maximum voltage calculation	OFF
FDBD	FMI Dead Buttons detection	AUTO
FDBP	FMI Dead Buttons Patching	ON
FDFL	FMI DSP Filter Length	1
FIEQ	FMI Image Equalisation	ON
FIGA	FMI Image Gain	1
FIOF	FMI Image Offset	0
FLM	FMI Logging Mode	8PAD
FPSA	FMI Peak Signal Amplitude for Required Servo Level	ON
GLM	GPIT Logging Mode	DIPM
GMOD	Gain Mode	AUTOLOW
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION
MAPP	Magnetometer PROM Presence	PRESENT
MDEC	Magnetic Field Declination	–6.587 DEG
MRTE	Magneto Reference Temperature	22 DEGC
RBS	Resistivity Button Selection	AUTO
RBSI	Auto RBS Change Interval	10
SOFF	Standoff	–1 IN
TEMS	GPIT Temperature Sensor Used	BOTH
U–GPOF	Playback OLD VERSION GPIT FILE (BEFORE OP14 + SRPC–3098–FEB_2006_C) ?	NO

XGAI_FBST	Gain Value in Manual Mode	0_dB	
XGMO	EMEX & Gain Modes	EmexManu_GainAutoLowRange	
XMOD	EMEX Voltage Regulation Mode	MANU	
XVOL	EMEX Voltage	175	V
HNGBA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGB Detector 1 Barite Constant	1	
BAR2	HNGB Detector 2 Barite Constant	1	
BHK	HNGB Borehole Potassium Correction Concentration	0	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	33.89	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGB Barite Constant Correction Flag	NONE	
GCSE	Generalized Caliper Selection	HD1_PPC1	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	EMS_RESIST	
GTSE	Generalized Temperature Selection	EMS_TEMP	
H1P	HNGB Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGB Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGB Borehole Potassium Running Average	0.0134006	
HALF	HNGB Alpha Filter Length	60	IN
HCRB	HNGB Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGB Processing Enable	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGB Detector 1 Calibration Bismuth Count Rate	1.3	CPS
S2BI	HNGB Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGB Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	CENT	
VBA1	HNGB Detector 1 Variable Barite Factor Running Average	1.03291	
VBA2	HNGB Detector 2 Variable Barite Factor Running Average	1.05889	
EMSB: Environment Measurement Sonde			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	33.89	DEGC
EAAB	EMS Accelerometer Coefficient:Ab	0	
EAAS	EMS Accelerometer Coefficient:As	0	
EABB	EMS Accelerometer Coefficient:Bb	0	
EABS	EMS Accelerometer Coefficient:Bs	0	
EACB	EMS Accelerometer Coefficient:Cb	0	
EACS	EMS Accelerometer Coefficient:Cs	0	
EMUD	EMS Mudcake Correction	OFF	
FCD	Future Casing (Outer) Diameter	0	IN
GCSE	Generalized Caliper Selection	HD1_PPC1	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	EMS_RESIST	
GTSE	Generalized Temperature Selection	EMS_TEMP	
HVCS	Integrated Hole Volume Caliper Selection	PPC1_Calipers	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	20	DEGC
PPC1B: Powered Positioning Device/Caliper 1			
	PPC1 Caliper Type	CAL_STD	
CLBD_PPC	PPC Calibration data selection	ROM	
PWEL_PPC	PPC Primary Tool for WellCAD	NONE	
SWEL_PPC	PPC Secondary Tool for WellCAD (45 Degrees Rotation PPC Tool)	NONE	
WRDR_PPC	PPC Rotation Direction for Secondary Tool	NONE	
EDTCB: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	33.89	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	STAN	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	HD1_PPC1	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	EMS_RESIST	
GTSE	Generalized Temperature Selection	EMS_TEMP	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SDCN	

SDAT	Standoff Data Source	20	DEGC
SHT	Surface Hole Temperature	2.5	IN
SOCN	Standoff Distance	NO	
SOCO	Standoff Correction Option	Centered	
TPOS_EDTC	EDTC Tool Centered/Eccentered		
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	12.250	IN
BSAL	Borehole Salinity	110000.00	PPM
CSIZ	Current Casing Size	20.000	IN
CWEI	Casing Weight	133.00	LB/F
DFD	Drilling Fluid Density	1.10	G/C3
DO	Depth Offset for Playback	3.2	M
DORL	Depth Offset for Repeat Analysis	0.0	M
FLEV	Fluid Level	10.00	M
MST	Mud Sample Temperature	25.70	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.0587	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	3667	M
TDD	Total Depth – Driller	3686.00	M
TDL	Total Depth – Logger	3667.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

### Input DLIS Files

DEFAULT	FMI_NGS_EMS_MAXS_038LUP	FN:114	PRODUCER	13-Jul-2009 17:16	3659.9 M	2752.6 M
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### Output DLIS Files

DEFAULT	FMI_NGS_EMS_CAL_006PUP	FN:30	PRODUCER	08-Aug-2009 16:43
CLIENT	FMI_NGS_EMS_CAL_006PUC	FN:31	CUSTOMER	08-Aug-2009 16:43

**Schlumberger**

**Repeat Section  
1:200**

MAXIS Field Log

Company: CDEX	Well: C0009A
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### Input DLIS Files

DEFAULT	FMI_NGS_EMS_MAXS_039LUP	FN:116	PRODUCER	13-Jul-2009 17:20	2928.4 M	2841.5 M
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### Output DLIS Files

DEFAULT	FMI_NGS_EMS_CAL_005PUP	FN:28	PRODUCER	08-Aug-2009 16:39	2900.0 M	2844.9 M
CLIENT	FMI_NGS_EMS_CAL_005PUC	FN:29	CUSTOMER	08-Aug-2009 16:39	2900.0 M	2844.9 M

### Integrated Hole/Cement Volume Summary

Hole Volume = 4.25 M3  
Cement Volume = 4.25 M3 (assuming 0.00 IN casing O.D.)  
Computed from 2900.0 M to 2845.0 M using data channel(s) C1 C2

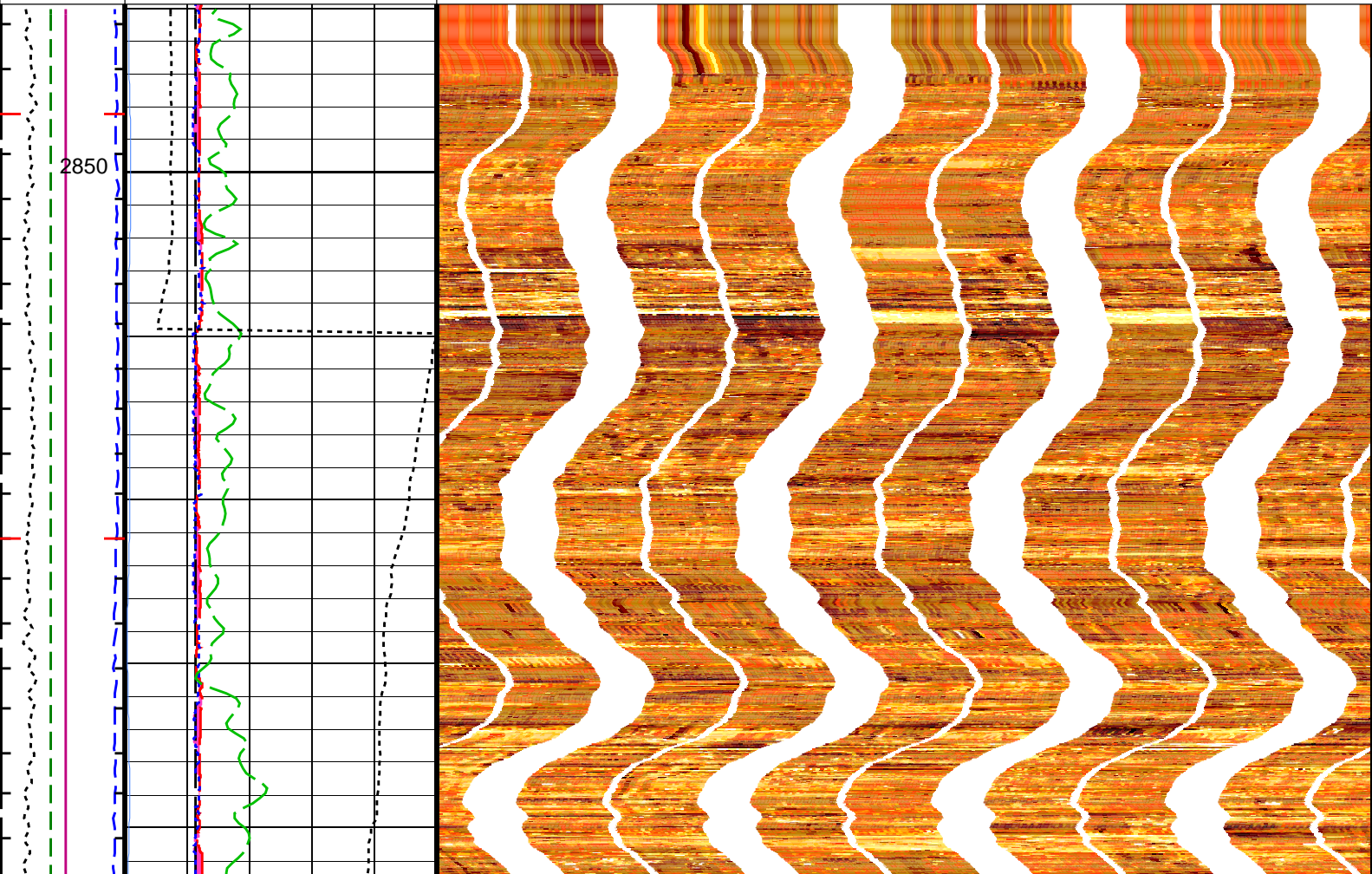
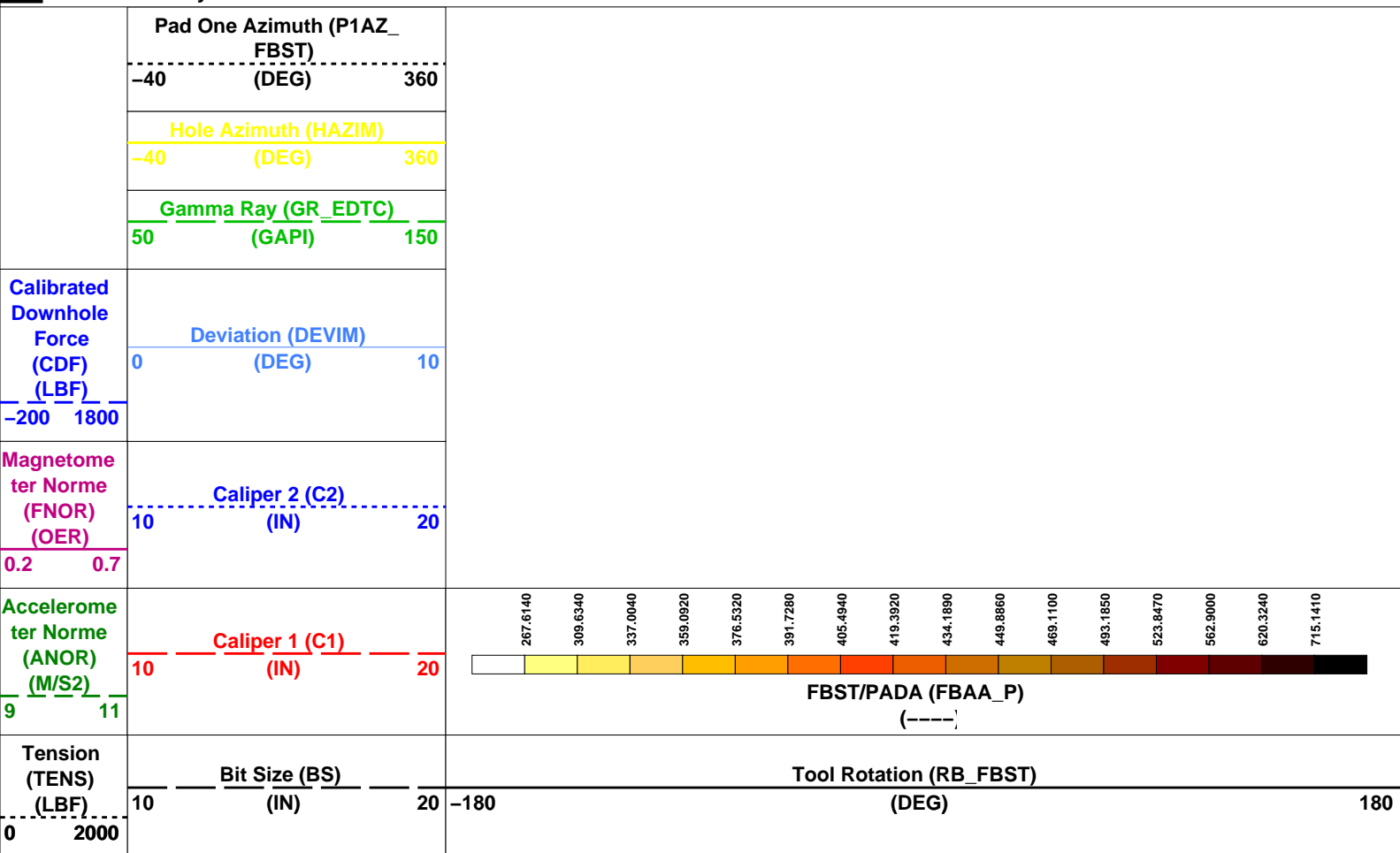
### OP System Version: 17C0-154

FBST-B	17C0-154	HNGC-B	17C0-154
HNGS-BA	SPC-3839-NUCL	EMS-B	17C0-154
PPC1-B	17C0-154	EDTC-B	17C0-154

PIP SUMMARY



Integrated Hole Volume Minor Pip Every 0.1 M3  
Integrated Hole Volume Major Pip Every 1 M3  
Integrated Cement Volume Minor Pip Every 0.1 M3  
Integrated Cement Volume Major Pip Every 1 M3  
Time Mark Every 60 S





Integrated Hole Volume Major Pip Every 1 M3  
└ Integrated Cement Volume Minor Pip Every 0.1 M3  
└ Integrated Cement Volume Major Pip Every 1 M3  
Time Mark Every 60 S

FMI Image Equalised , Patched.

Resistive (White) to Conductive (Black)

Format: Image 200 Vertical Scale: 1:200

Graphics File Created: 08-Aug-2009 16:40

OP System Version: 17C0-154

FBST-B	17C0-154	HNGC-B	17C0-154
HNGS-BA	SPC-3839-NUCL	EMS-B	17C0-154
PPC1-B	17C0-154	EDTC-B	17C0-154

## Parameters

DLIS Name	Description	Value
FBST-B: Full-Bore Scanner - B		
ACPP	Accelerometer PROM Presence	PRESENT
AFMO	Accelerometer Filtering Mode	MOVING_AVERAGE
ART	Accelerometer Reference Temperature	20 DEGC
EGCO	FMI EMEX and GAIN Correction	NO
FBCD	Correct Dip Buttons Values by EMEX and Gain	OFF
FBEF	FMI EMEX filtering activation	OFF
FBMV	FMI EMEX maximum voltage calculation	OFF
FDBD	FMI Dead Buttons detection	AUTO
FDBP	FMI Dead Buttons Patching	ON
FDFL	FMI DSP Filter Length	1
FIEQ	FMI Image Equalisation	ON
FIGA	FMI Image Gain	1
FIOF	FMI Image Offset	0
FLM	FMI Logging Mode	8PAD
FPSA	FMI Peak Signal Amplitude for Required Servo Level	ON
GLM	GPIT Logging Mode	DIPM
GMOD	Gain Mode	AUTOLOW
ICMO	Inclinometry Computation Mode	AUTOMATIC_SELECTION
MAPP	Magnetometer PROM Presence	PRESENT
MDEC	Magnetic Field Declination	-6.587 DEG
MRTE	Magneto Reference Temperature	22 DEGC
RBS	Resistivity Button Selection	AUTO
RBSI	Auto RBS Change Interval	10
SOFF	Standoff	-1 IN
TEMS	GPIT Temperature Sensor Used	BOTH
U-GPOF	Playback OLD VERSION GPIT FILE (BEFORE OP14 + SRPC-3098-FEB_2006_C) ?	NO
XGAI_FBST	Gain Value in Manual Mode	0_dB
XGMO	EMEX & Gain Modes	EmexManu_GainAutoLowRange
XMOD	EMEX Voltage Regulation Mode	MANU
XVOL	EMEX Voltage	175 V
HNGS-BA: Hostile Natural Gamma Ray Sonde		
BAR1	HNGS Detector 1 Barite Constant	1
BAR2	HNGS Detector 2 Barite Constant	1
BHK	HNGS Borehole Potassium Correction Concentration	0
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	33.89 DEGC
CSD1	Inner Casing Outer Diameter	0 IN
CSD2	Outer Casing Outer Diameter	0 IN
CSW1	Inner Casing Weight	0 LB/F
CSW2	Outer Casing Weight	0 LB/F
DBCC	HNGS Barite Constant Correction Flag	NONE
GCSE	Generalized Caliper Selection	HD1_PPC1
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.018227 DC/M
GRSE	Generalized Mud Resistivity Selection	EMS_RESIST
GTSE	Generalized Temperature Selection	EMS_TEMP
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW
HABK	HNGS Borehole Potassium Running Average	0.0134486
HALF	HNGS Alpha Filter Length	60 IN
HCRB	HNGS Apply Borehole Potassium Correction	NONE
HMWM	Mud Weighting Material	NATU
HNPE	HNGS Processing Enable	YES
ISSBAR	Barite Mud Switch	NOBARITE
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	1.3 CPS



S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.3	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	CENT	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	1.03083	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	1.03866	
EMS-B: Environment Measurement Sonde			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	33.89	DEGC
EAAB	EMS Accelerometer Coefficient:Ab	0	
EAAS	EMS Accelerometer Coefficient:As	0	
EABB	EMS Accelerometer Coefficient:Bb	0	
EABS	EMS Accelerometer Coefficient:Bs	0	
EACB	EMS Accelerometer Coefficient:Cb	0	
EACS	EMS Accelerometer Coefficient:Cs	0	
EMUD	EMS Mudcake Correction	OFF	
FCD	Future Casing (Outer) Diameter	0	IN
GCSE	Generalized Caliper Selection	HD1_PPC1	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	EMS_RESIST	
GTSE	Generalized Temperature Selection	EMS_TEMP	
HVCS	Integrated Hole Volume Caliper Selection	PPC1_Calipers	
ISSBAR	Barite Mud Switch	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	20	DEGC
PPC1-B: Powered Positioning Device/Caliper 1			
	PPC1 Caliper Type	CAL_STD	
CLBD_PPC	PPC Calibration data selection	ROM	
PWEL_PPC	PPC Primary Tool for WellCAD	NONE	
SWEL_PPC	PPC Secondary Tool for WellCAD (45 Degrees Rotation PPC Tool)	NONE	
WRDR_PPC	PPC Rotation Direction for Secondary Tool	NONE	
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	33.89	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	STAN	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	HD1_PPC1	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	EMS_RESIST	
GTSE	Generalized Temperature Selection	EMS_TEMP	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	NOBARITE	
ISSBAR_EDTC	Nuclear Mud Type	NOBARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	2.5	IN
SOCO	Standoff Correction Option	NO	
TPOS_EDTC	EDTC Tool Centered/Eccentered	Centered	
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	12.250	IN
BSAL	Borehole Salinity	110000.00	PPM
CSIZ	Current Casing Size	20.000	IN
CWEI	Casing Weight	133.00	LB/F
DFD	Drilling Fluid Density	1.10	G/C3
DO	Depth Offset for Playback	3.2	M
FLEV	Fluid Level	10.00	M
MST	Mud Sample Temperature	25.70	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.0587	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	3667	M
TDD	Total Depth - Driller	3686.00	M
TDL	Total Depth - Logger	3667.00	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

### Input DLIS Files

DEFAULT	FMI_NGS_EMS_MAXS_039LUP	FN:116	PRODUCER	13-Jul-2009 17:20	2928.4 M	2841.5 M
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### Output DLIS Files

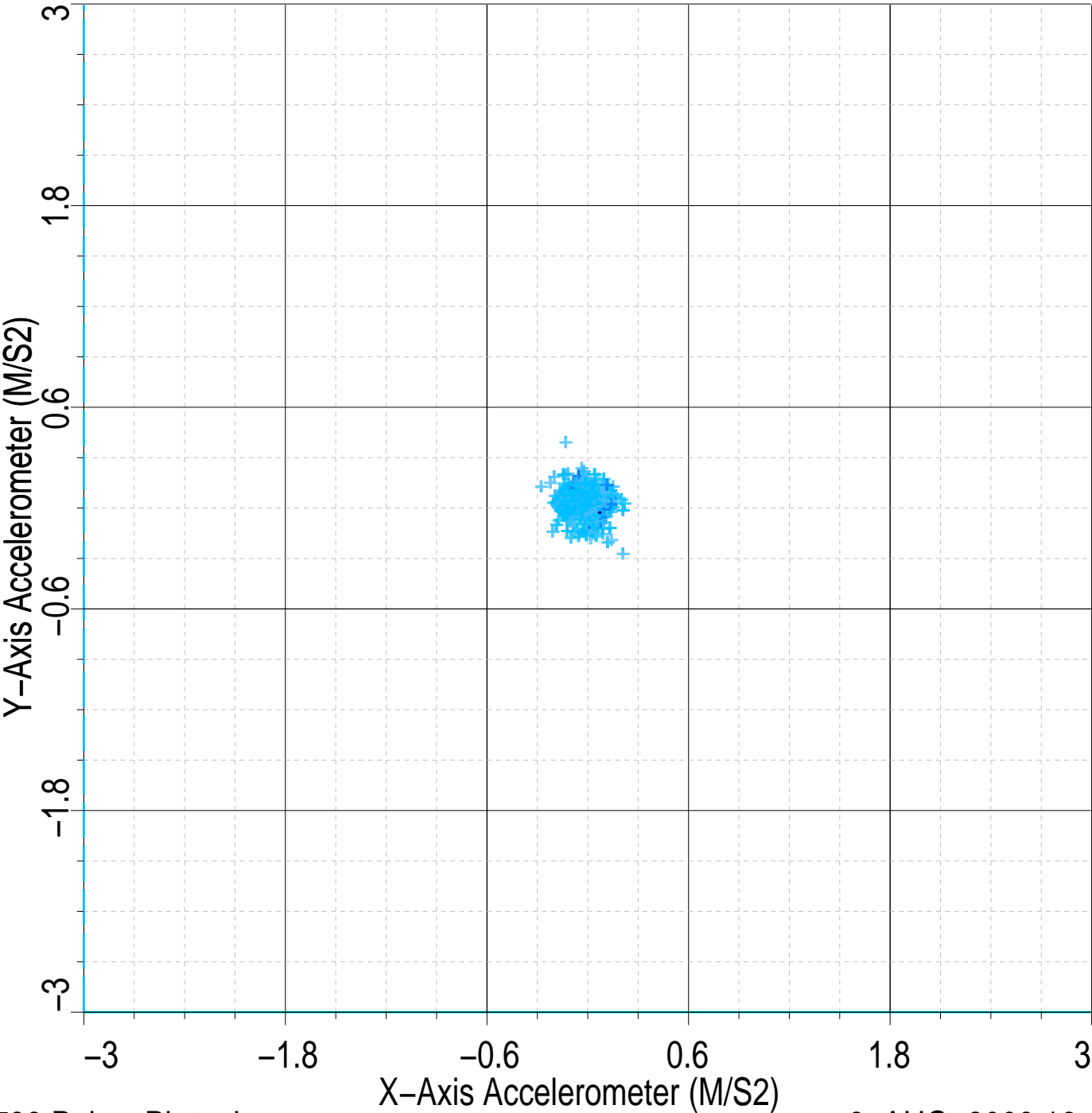
DEFAULT	FMI_NGS_EMS_CAL_005PUP	FN:28	PRODUCER	08-Aug-2009 16:39
CLIENT	FMI_NGS_EMS_CAL_005PUC	FN:29	CUSTOMER	08-Aug-2009 16:39



# Cross Plot

MAXIS Field Log

Index: 3662.2 – 2755.9 M      9.  11.

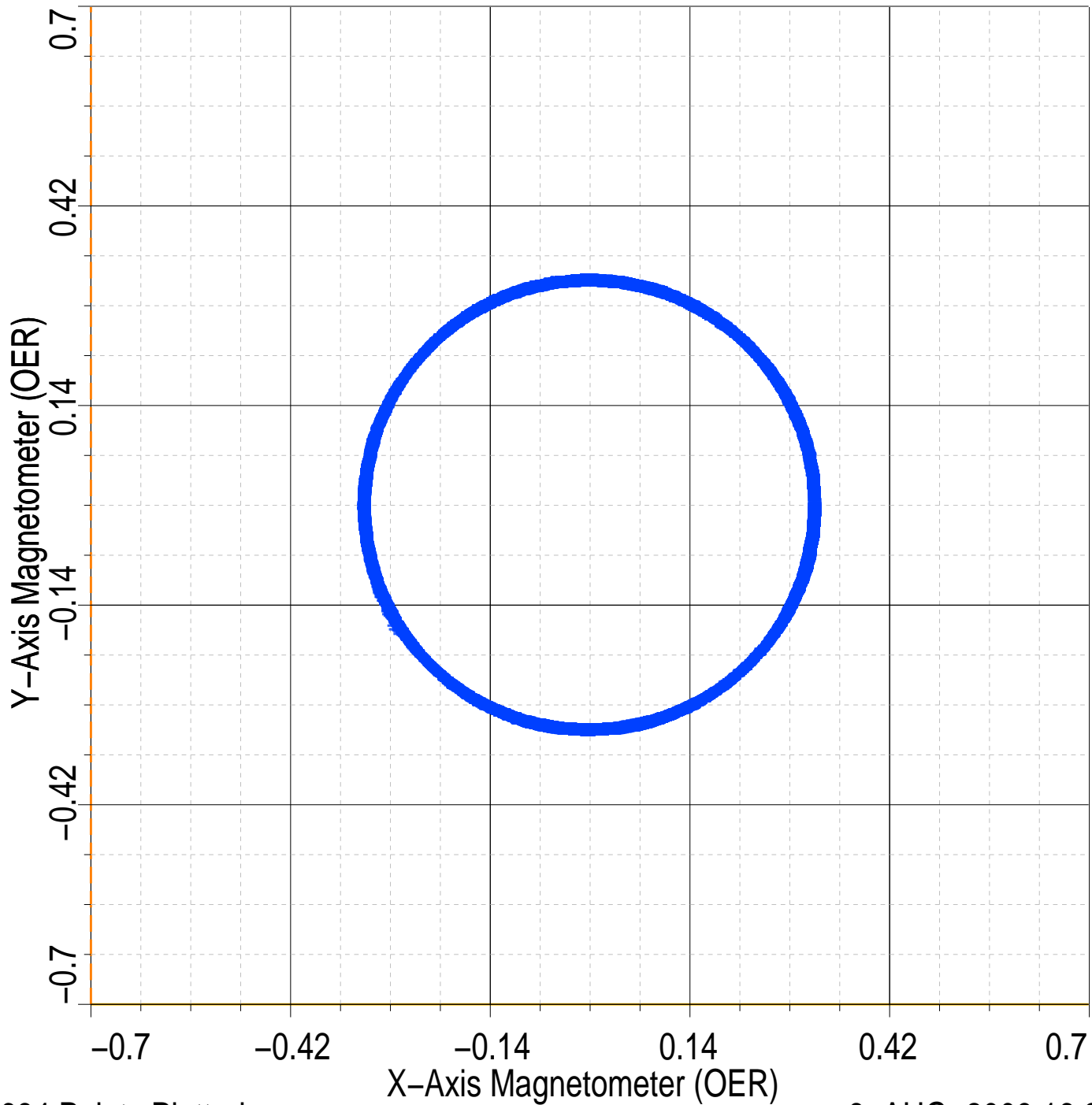


Index: 3662.2 – 2797.9 M

-0.7

Z-Axis Magnetometer (OER)

0.7



22684 Points Plotted

8-AUG-2009 16:24

**Schlumberger**

**Calibrations**

MAXIS Field Log





Measurement	Nominal	Master	Before	After	Change	Limit	Units
Full-Bore Scanner – B Wellsite Calibration – Caliper Calibration							
Before: 12-Jul-2009 11:56							
Caliper 1 Small Jig	8.000	N/A	7.973	N/A	N/A	N/A	IN
Caliper 2 Small Jig	16.00	N/A	16.03	N/A	N/A	N/A	IN
Caliper 1 Large Jig	16.00	N/A	15.80	N/A	N/A	N/A	IN
Caliper 2 Large Jig	8.000	N/A	7.906	N/A	N/A	N/A	IN
Full-Bore Scanner – B Wellsite Calibration – CROUZET ACCELEROMETER PROM HAS BEEN READ CORRECTLY							
Before: 12-Jul-2009 12:49							
TEMPERATURE REFERENCE :	N/A	N/A	20	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	3	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	4	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	852	N/A	N/A	N/A	
Full-Bore Scanner – B Wellsite Calibration – CROUZET MAGNETOMETER PROM HAS BEEN READ CORRECTLY							
Before: 12-Jul-2009 12:49							
TEMPERATURE REFERENCE :	N/A	N/A	22	N/A	N/A	N/A	DEGC
YEAR OF CALIBRATION :	N/A	N/A	97	N/A	N/A	N/A	
MONTH OF CALIBRATION :	N/A	N/A	2	N/A	N/A	N/A	
SERIAL NUMBER :	N/A	N/A	287	N/A	N/A	N/A	
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 5-Jul-2009 18:42 Before: 5-Jul-2009 18:56							
Na 511 Peak Loc	40.00	39.49	39.74	N/A	N/A	1.000	
Na 511 Peak Res	15.50	17.60	16.16	N/A	N/A	2.000	%
High Voltage	1150	1214	1215	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	143.1	143.6	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	9.645	9.431	N/A	N/A	2.000	%
Temperature	15.50	26.77	26.77	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	23.60	23.58	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check							
Master: 5-Jul-2009 18:42 Before: 5-Jul-2009 18:56							
Na 511 Peak Loc	40.00	39.91	39.56	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.82	17.24	N/A	N/A	2.000	%
High Voltage	1150	1105	1106	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	144.3	143.7	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	9.151	8.788	N/A	N/A	2.000	%
Temperature	15.50	26.35	26.46	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	23.75	23.52	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2							
Master: 5-Jul-2009 18:42 Before: 5-Jul-2009 18:56							
Coincidence Count Rate Ratio	1.000	0.9925	1.004	N/A	N/A	0.05000	
Powered Positioning Device/Caliper 1 Wellsite Calibration – PPC1 Caliper Calibration							
Before: 12-Jul-2009 12:03							
PPC1 Radius 1 Raw Small Radius	3.500	N/A	4.426	N/A	N/A	0.5000	IN
PPC1 Radius 1 Raw Large Radius	8.000	N/A	8.666	N/A	N/A	0.5000	IN
PPC1 Radius 2 Raw Small Radius	3.500	N/A	3.337	N/A	N/A	0.5000	IN
PPC1 Radius 2 Raw Large Radius	8.000	N/A	7.746	N/A	N/A	0.5000	IN
PPC1 Radius 3 Raw Small Radius	3.500	N/A	4.219	N/A	N/A	0.5000	IN
PPC1 Radius 3 Raw Large Radius	8.000	N/A	8.465	N/A	N/A	0.5000	IN
PPC1 Radius 4 Raw Small Radius	3.500	N/A	2.510	N/A	N/A	0.5000	IN
PPC1 Radius 4 Raw Large Radius	8.000	N/A	7.022	N/A	N/A	0.5000	IN
Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration							
Before: 12-Jul-2009 13:01							
EDTC Z-Axis Acceleration	9.810	N/A	9.794	N/A	N/A	N/A	M/S2
Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration							
Before: 12-Jul-2009 12:51							
Gamma Ray (Jig – Bkg)	167.1	N/A	167.1	N/A	N/A	15.19	GAPI
Gamma Ray (Calibrated)	160.0	N/A	160.0	N/A	N/A	15.00	GAPI

#### Full-Bore Scanner – B / Equipment Identification

##### Primary Equipment:

FullBore Scanner Sonde	FBSS – B	816
FullBore Scanner Sonde Upper part	FBSH – A	815
FullBore Scanner Sonde Cartridge	FBSC – B	816
GPIT Cartridge – C	GPIC – C	1843
Insulating Sub	AH – 185	938
FullBore Scanner Control Cartridge	FBCC – A	819

##### Auxiliary Equipment:

Full-Bore Scanner – B Wellsite Calibration							
Caliper Calibration							
Phase	Caliper 1 Small Jig IN		Value	Phase	Caliper 2 Small Jig IN		Value
Before			7.973	Before			16.03
	6.800 (Minimum)	8.000 (Nominal)	9.200 (Maximum)		13.60 (Minimum)	16.00 (Nominal)	18.40 (Maximum)
Phase	Caliper 1 Large Jig IN		Value	Phase	Caliper 2 Large Jig IN		Value
Before			15.80	Before			7.906
	13.60 (Minimum)	16.00 (Nominal)	18.40 (Maximum)		6.800 (Minimum)	8.000 (Nominal)	9.200 (Maximum)
Before: 12-Jul-2009 11:56							

## Hostile Natural Gamma Ray Cartridge – B / Equipment Identification

Primary Equipment:  
HNGC Cartridge

HNGC – B 424

Auxiliary Equipment:  
HNGC Housing

HNGH – A 358













## Hostile Natural Gamma Ray Sonde / Equipment Identification






Primary Equipment:  
HNGS Sonde



HNGS – BA 164

Auxiliary Equipment:  
HNGS Sonde Housing  
Gamma Source RadioactiveHNSH – BA 161  
GSR – Y 1005

Hostile Natural Gamma Ray Sonde Wellsite Calibration																
Detector 1 Check																
Phase	Na 511 Peak Loc		Value	Phase	Na 511 Peak Res %		Value	Phase	High Voltage V		Value					
Master	<div><div></div></div>		39.49	Master	<div><div></div></div>		17.60	Master	<div><div></div></div>		1214					
Before	<div><div></div></div>		39.74	Before	<div><div></div></div>		16.16	Before	<div><div></div></div>		1215					
37.50 (Minimum)			40.00 (Nominal)	43.50 (Maximum)			12.00 (Minimum)			15.50 (Nominal)	19.00 (Maximum)	900.0 (Minimum)			1150 (Nominal)	1600 (Maximum)
Phase	Na 1785 Peak Loc		Value	Phase	Na 1785 Peak Res %		Value	Phase	Temperature DEGC		Value					
Master	<div><div></div></div>		143.1	Master	<div><div></div></div>		9.645	Master	<div><div></div></div>		26.77					
Before	<div><div></div></div>		143.6	Before	<div><div></div></div>		9.431	Before	<div><div></div></div>		26.77					
135.0 (Minimum)			142.6 (Nominal)	150.3 (Maximum)			7.000 (Minimum)			8.500 (Nominal)	11.00 (Maximum)	-28.89 (Minimum)			15.50 (Nominal)	60.00 (Maximum)
Phase	Na Count Rate CPS		Value													
Master	<div><div></div></div>		23.60													
Before	<div><div></div></div>		23.58													
10.00 (Minimum)			45.00 (Nominal)									100.0 (Maximum)				
Master: 5-Jul-2009 18:42				Before: 5-Jul-2009 18:56												









Hostile Natural Gamma Ray Sonde Wellsite Calibration																				
Detector 2 Check																				
Phase	Na 511 Peak Loc		Value	Phase	Na 511 Peak Res %		Value	Phase	High Voltage V		Value									
Master			39.91	Master			16.82	Master			1105									
Before			39.56	Before			17.24	Before			1106									
37.50 (Minimum)			40.00 (Nominal)	43.50 (Maximum)			12.00 (Minimum)			15.50 (Nominal)	19.00 (Maximum)			900.0 (Minimum)			1150 (Nominal)	1600 (Maximum)		
Phase	Na 1785 Peak Loc		Value	Phase	Na 1785 Peak Res %		Value	Phase	Temperature DEGC		Value									
Master			144.3	Master			9.151	Master			26.35									
Before			143.7	Before			8.788	Before			26.46									
135.0 (Minimum)			142.6 (Nominal)	150.3 (Maximum)			7.000 (Minimum)			8.500 (Nominal)	11.00 (Maximum)			-28.89 (Minimum)			15.50 (Nominal)	60.00 (Maximum)		

Before		143.7	Before		8.700	Before		20.40
135.0 (Minimum)	142.6 (Nominal)	150.3 (Maximum)	7.000 (Minimum)	8.500 (Nominal)	11.00 (Maximum)	-28.89 (Minimum)	15.50 (Nominal)	60.00 (Maximum)
Phase	Na Count Rate CPS		Value					
Master			23.75					
Before			23.52					
10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)						
Master: 5-Jul-2009 18:42			Before: 5-Jul-2009 18:56					


Hostile Natural Gamma Ray Sonde Wellsite Calibration			
Ratio Of Detector 1 To Detector 2			
Phase	Coincidence Count Rate Ratio	Value	
Master		0.9925	
Before		1.004	
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)
Master: 5-Jul-2009 18:42			
Before: 5-Jul-2009 18:56			

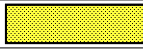


Multimode Array Sonic Power Cartridge / Equipment Identification		
Primary Equipment:		
Multimode Array Sonic Minimum Service So	MAMS – BA	8048
Multimode Array Sonic Control Cartridge	MAPC – BA	8038
Auxiliary Equipment:		
Electronics Cartridge Housing	ECH – SF	8038

Powered Positioning Device/Caliper 1 / Equipment Identification		
Primary Equipment:		
PPC Powered Positioning Device/Caliper	PPC1 – B	8169
PPC1 Caliper Standard	PPC_ –	
Auxiliary Equipment:		

Powered Positioning Device/Caliper 1 Wellsite Calibration						
PPC1 Caliper Calibration						
Phase	PPC1 Radius 1 Raw Small Radius IN	Value	Phase	PPC1 Radius 1 Raw Large Radius IN	Value	
Before		4.426	Before		8.666	
	1.200 (Minimum)	3.500 (Nominal)	5.600 (Maximum)	6.100 (Minimum)	8.000 (Nominal)	9.700 (Maximum)
Phase	PPC1 Radius 2 Raw Small Radius IN	Value	Phase	PPC1 Radius 2 Raw Large Radius IN	Value	
Before		3.337	Before		7.746	
	1.200 (Minimum)	3.500 (Nominal)	5.600 (Maximum)	6.100 (Minimum)	8.000 (Nominal)	9.700 (Maximum)
Phase	PPC1 Radius 3 Raw Small Radius IN	Value	Phase	PPC1 Radius 3 Raw Large Radius IN	Value	
Before		4.219	Before		8.465	
	1.200 (Minimum)	3.500 (Nominal)	5.600 (Maximum)	6.100 (Minimum)	8.000 (Nominal)	9.700 (Maximum)
Phase	PPC1 Radius 4 Raw Small Radius IN	Value	Phase	PPC1 Radius 4 Raw Large Radius IN	Value	
Before		2.510	Before		7.022	
	1.200 (Minimum)	3.500 (Nominal)	5.600 (Maximum)	6.100 (Minimum)	8.000 (Nominal)	9.700 (Maximum)
Before: 12-Jul-2009 12:03						

Enhanced DTS Cartridge / Equipment Identification		
Primary Equipment:		
EDTC Gamma Ray Detector	EDTG – A/B	8215
Enhanced DTS Cartridge	EDTC – BB	8218
Auxiliary Equipment:		

Enhanced DTS Cartridge Wellsite Calibration			
EDTC Accelerometer Calibration			
Phase	EDTC Z-Axis Acceleration M/S2	Value	
Before		9.794	
	9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)
Before: 12-Jul-2009 13:01			

Enhanced DTS Cartridge Wellsite Calibration														
Detector Calibration														
Phase	Gamma Ray Background GAPI			Value	Phase	Gamma Ray (Jig – Bkg) GAPI			Value	Phase	Gamma Ray (Calibrated) GAPI			Value
Before				3.157	Before				167.1	Before				160.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		151.9 (Minimum)	167.1 (Nominal)	182.3 (Maximum)		145.0 (Minimum)	160.0 (Nominal)	175.0 (Maximum)			
Before: 12-Jul-2009 12:51														

Company: **CDEX****Schlumberger**Well: **C0009A**Field: **Kumanonada, Offshore Kii peninsula**Rig: **Chikyu**Country: **JAPAN**

FMI-GR (Image)  
3662.2m – 2798.2m  
Suite 1, Run 2 (1:200)