

DEPTH SUMMARY LISTING	
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Date Created: 15-OCT-2011 13:28:23

Depth Measuring Device		Tension Device		Logging Cable	
Type:	IDW-B	Type:	CMTD-B/A	Type:	7-39P LXS
Serial Number:	6420	Serial Number:	1095	Serial Number:	7052
Calibration Date:	18-JUL-2011	Calibration Date:	04-OCT-2011	Length:	9800 FT
Calibrator Serial Number:		Calibrator Serial Number:	108244	Conveyance Method:	Wireline
Calibration Cable Type:	7-39P LXS	Number of Calibration Points:	10	Rig Type:	LAND
Wheel Correction 1:	-6	Calibration RMS:	14		
Wheel Correction 2:	-4	Calibration Peak Error:	24		

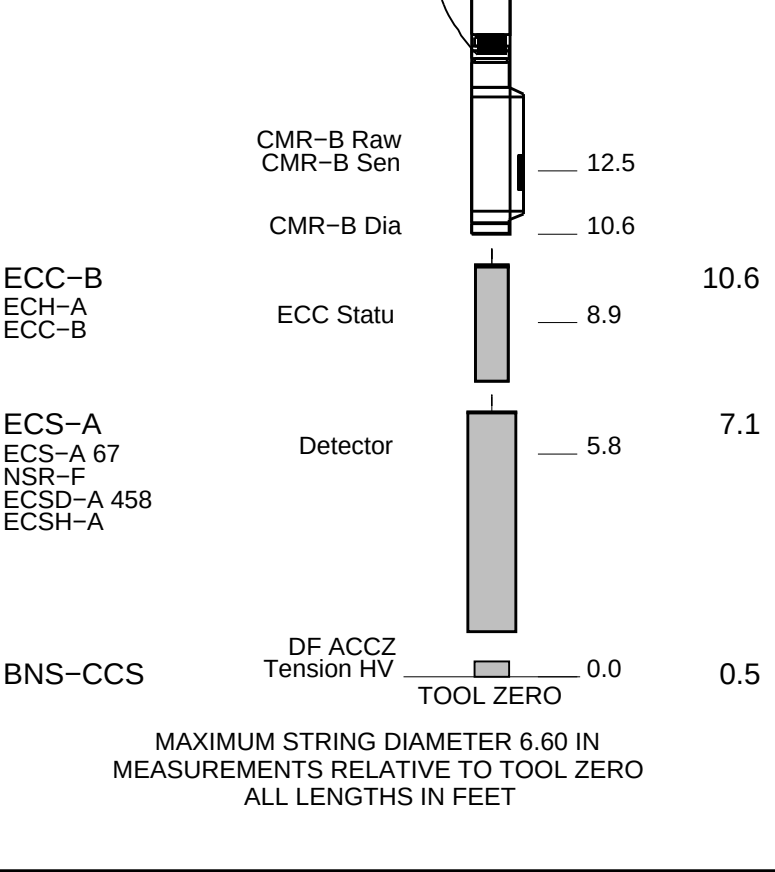
Log Sequence:	Subsequent Trip To the Well
Reference Log Name:	PLATFORM EXPRESS
Reference Log Run Number:	1
Reference Log Date:	31-AUG-2011
Subsequent Trip Down Log Correction:	

1. IDW USED AS PRIMARY DEPTH CONTROL 2. Z CHART USED AS SECONDARY DEPTH CONTROL 3. 4. 5. 6.
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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: RUN 2A: PEX-AIT	OS1:
OS2: RUN 2B: FMI-MSIP	OS2:
OS3: RUN 2C: CMR-ECS-HNGS	OS3:
OS4: RUN 2D: USIT-DSLT	OS4:
OS5: RUN 2E: VSP SEISMIC	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
THANK YOU FOR CHOOSING SCHLUMBERGER!!!	
MATRIX: SANDSTONE	
MATRIX DENSITY: 2.65 G/CC	

RIG: UNION RIG 48	
CREW: PAUL REYNOLDS, BRYAN AUSTIN, NAT DORSAY	
RUN 1 SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL: BMNA-00055 19C0-187 0 ft	RUN 2 SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:
LOGGED INTERVAL START STOP	LOGGED INTERVAL START STOP
EQUIPMENT DESCRIPTION	
RUN 1	RUN 2
SURFACE EQUIPMENT GSR-U 1284 WITM (EDTS)-A	
DOWNHOLE EQUIPMENT LEH-QT LEH-QT 47.3 EDTC-B EDTH-B 8298 EDTC-B EDTG-A/B MDSB_EDTC Mud Tempe 44.4 44.4 CTEM Gamma Ray EFTB DIAG TelStatus EDTCB Ele 40.9 39.0 37.9 HNGS-BA HNGS-BA 95 HNSH-BA 98 Upper_1 Lower_2 35.6 34.9 37.9 HNGC-AB HNGH-A 26 HNGC-AB 35 HNGC Stat 27.9 29.7 CMRT-B CMRH-AA CMRS-BA 109 CMRC-B 152 EME-F 26.2	



MAIN PASS 5"=100'

MAXIS Field Log

Company: SANDIA TECHNOLOGIES, LLC Well: NYSTA TANDEM LOT 1

Input DLIS Files

DEFAULT ECS_CMN_NGS_041LUP FN:72 PRODUCER 16-Oct-2011 07:57 6862.5 FT 1268.5 FT

Output DLIS Files

DEFAULT ECS_CMN_NGS_045PUP FN:76 PRODUCER 16-Oct-2011 13:52 6870.0 FT 1275.5 FT

CMR DEPTH LOG REPORT

PARAMETER SUMMARY

Tool Type: CMR-Plus	Cart. Number: 152	Sonde Number: 109	
Kit Number: 28	DHC Version : 17.2	DSP Version : 14	SP Version : 10182006
Mode: Carbonate Depth Log – B Mode		LFST Freq(khz) : 2228	LFST Temp(degC) : 34.72
Log Direction: Up	Polarization Correction: On	EPM: Yes	EPM T1/T2: Auto
Despiking: Off	High Res: Off	KBFV: Off	DMRP: Off
Echo Spacing(us):	(200 200)		
Polarization Times(sec) for:	T1=1s: (infinity 0.02)	T1=3s: (4.803 0.02)	T1=5s: (4.756 0.02)
Number of Echoes:	(1000 200)		

Number of Echoes: (1800 30)

Repetition: (1 10)

Duty Cycle (highest): 0.0282

Regularization: Auto

T2 Min(msec): 0.3

T2 Max(msec): 3000

T2 Cutoff(msec): 100

T1/T2: 2

Number of Components: 30

Downhole Stacking: 3

Uphole Stacking: 1

First Echo Used: No

Multiple T2 Cutoffs(msec): (0.3 1 3 10 33 100 300 1000 3000)

Sample Int.(in): 7.5

Req Log Speed (f/h): 1200

PIP SUMMARY

 Time Mark Every 60 S

Transmitter Disable Flag (TDIS_FLAG)	
0	(-----) 5

Tuning Mode (TUNING_ MODE)
-1 (----) 3

(NO_UPDATE_COUNT)	0 (-----) 10
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Noise Out of Tolerance

**Caution
Moderate
Noise**

Insuff. WT
Flag

**Bad Hole
Flag**

Small Pore Porosity

Capillary Bound Fluid Porosity

Total CMR Porosity (TCMR)
0.4 (V/V)

T2 Distribution (T2_DIST_MW)		
60	(US)	89

Tension (TENS)
0000 (LBF) 0

Timur/Coates Permeability
(KTIM)

CMR 3ms Porosity (CMRP_3MS)
0.4 (V/V)

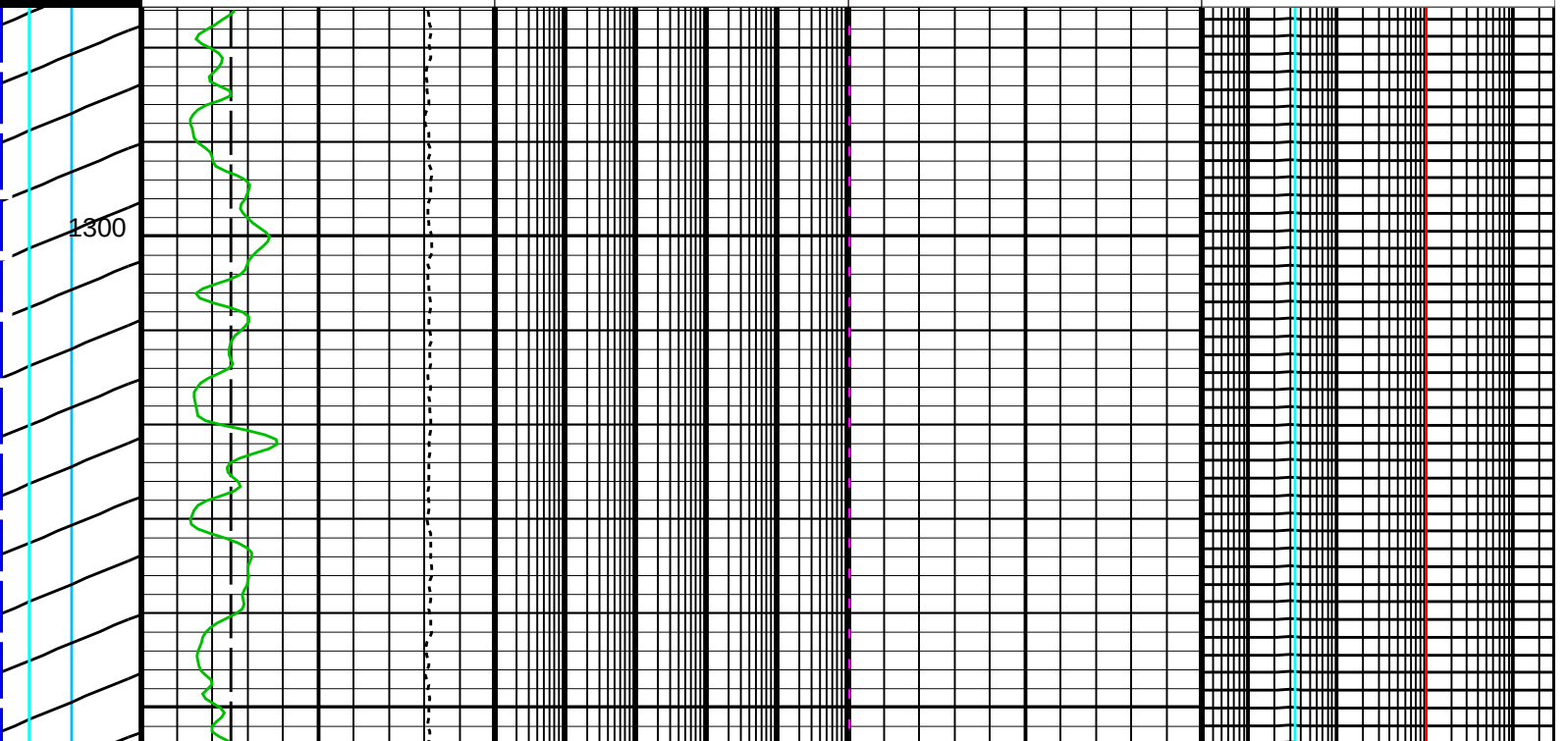
T2 Logarithmic Mean (T2LM)		
0.3	(MS)	3000

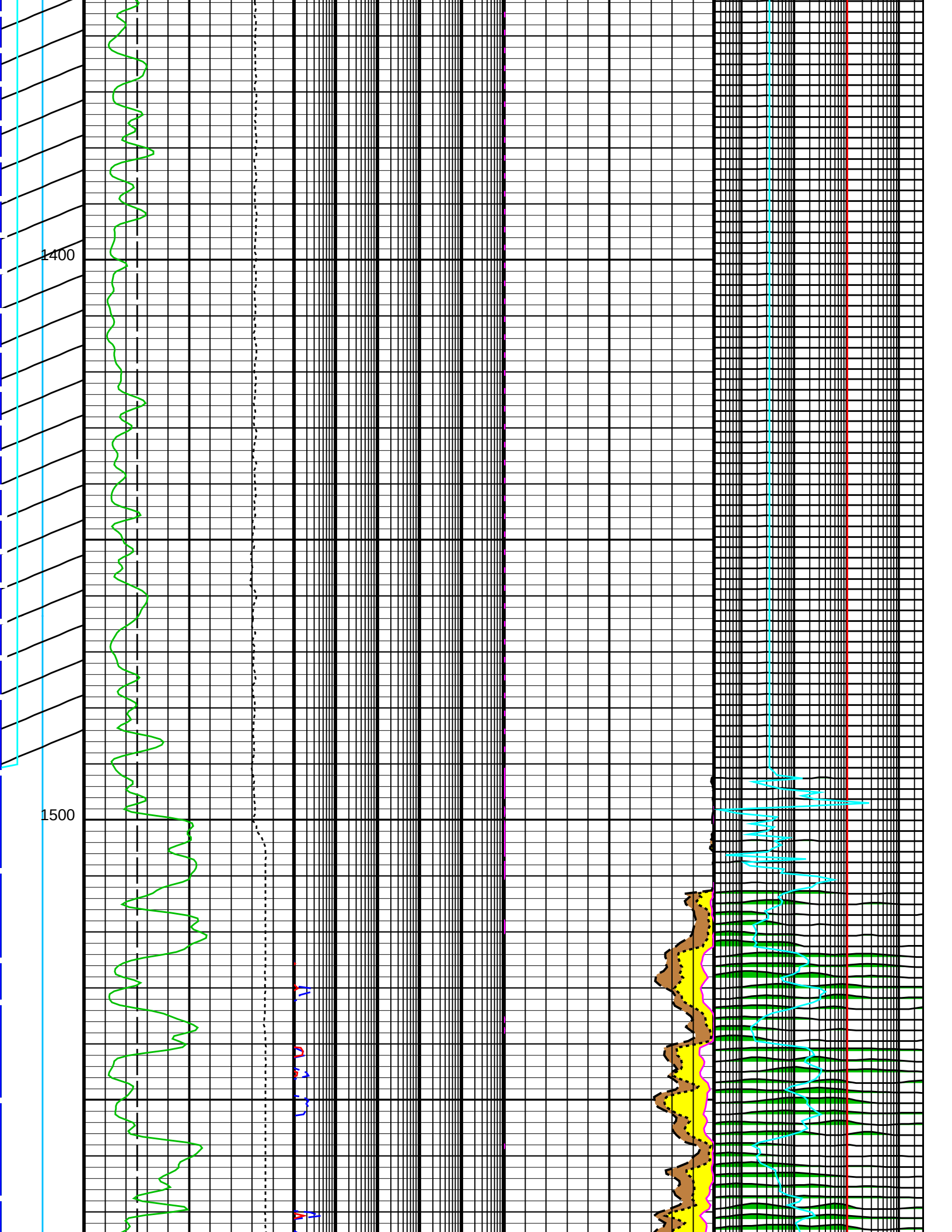
Gamma Ray (GR_EDTC)
(GAPI) 200

SDR Permeability (KSDR)
0.1 (MD) 1000

CMR Free Fluid Porosity
(CMFF)
0.4 (V/V)

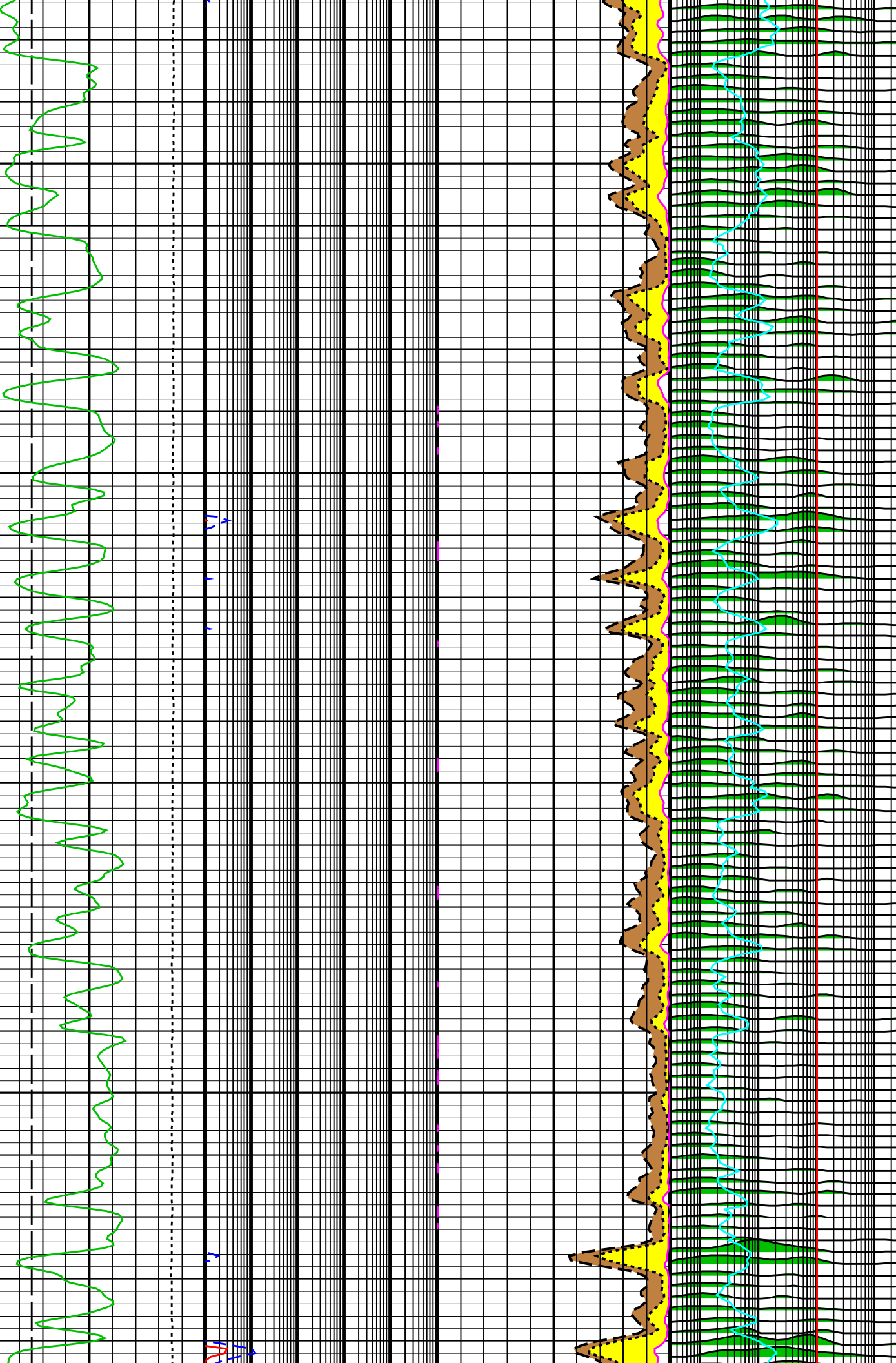
Bound Fluid Cutoff (T2CUTOFF)		
0.3	(MS)	3000

$$\frac{\text{Bit Size (BS)}}{(\text{IN})} \frac{\text{---}}{16}$$




1600

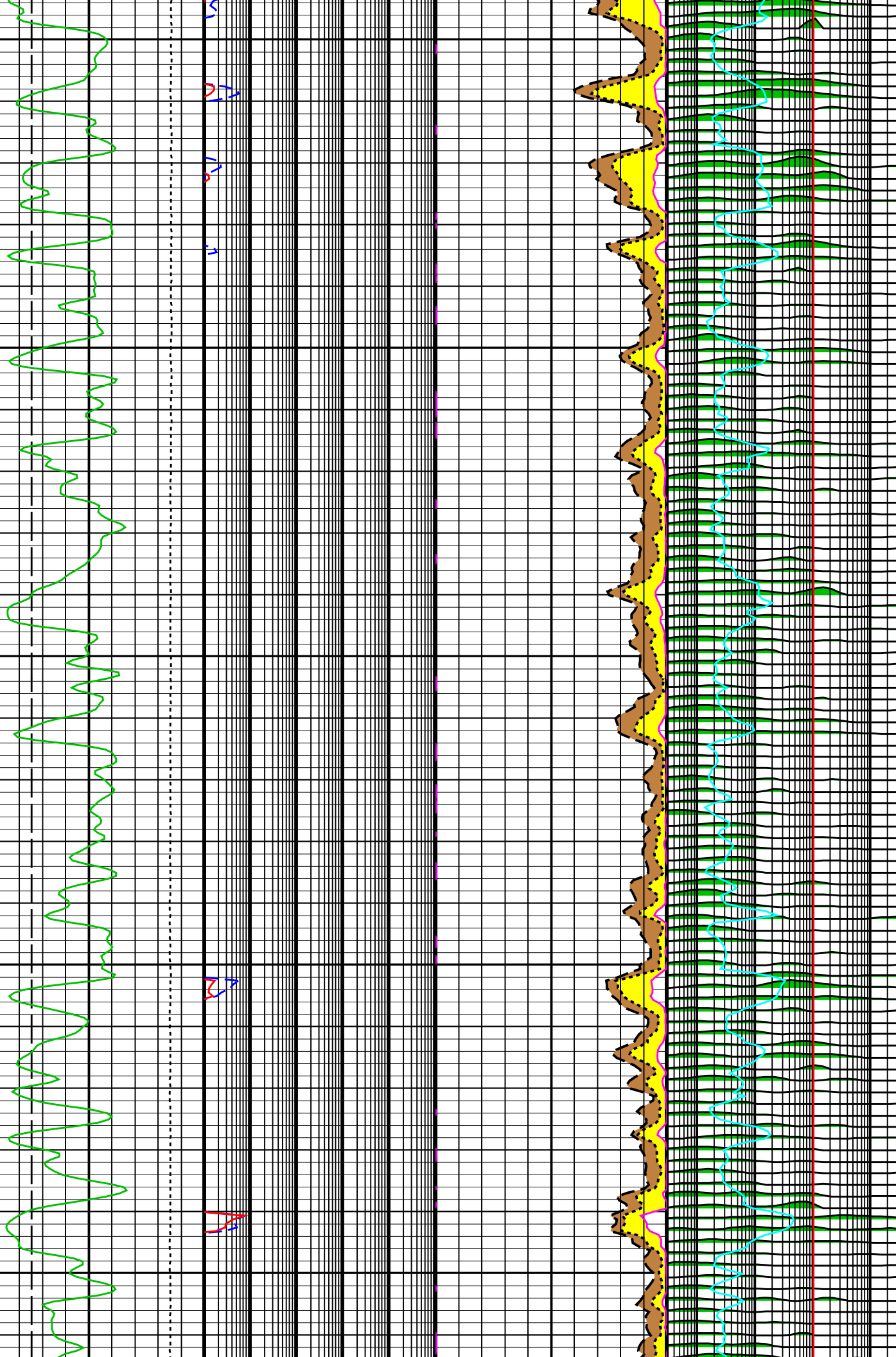
1700



1800

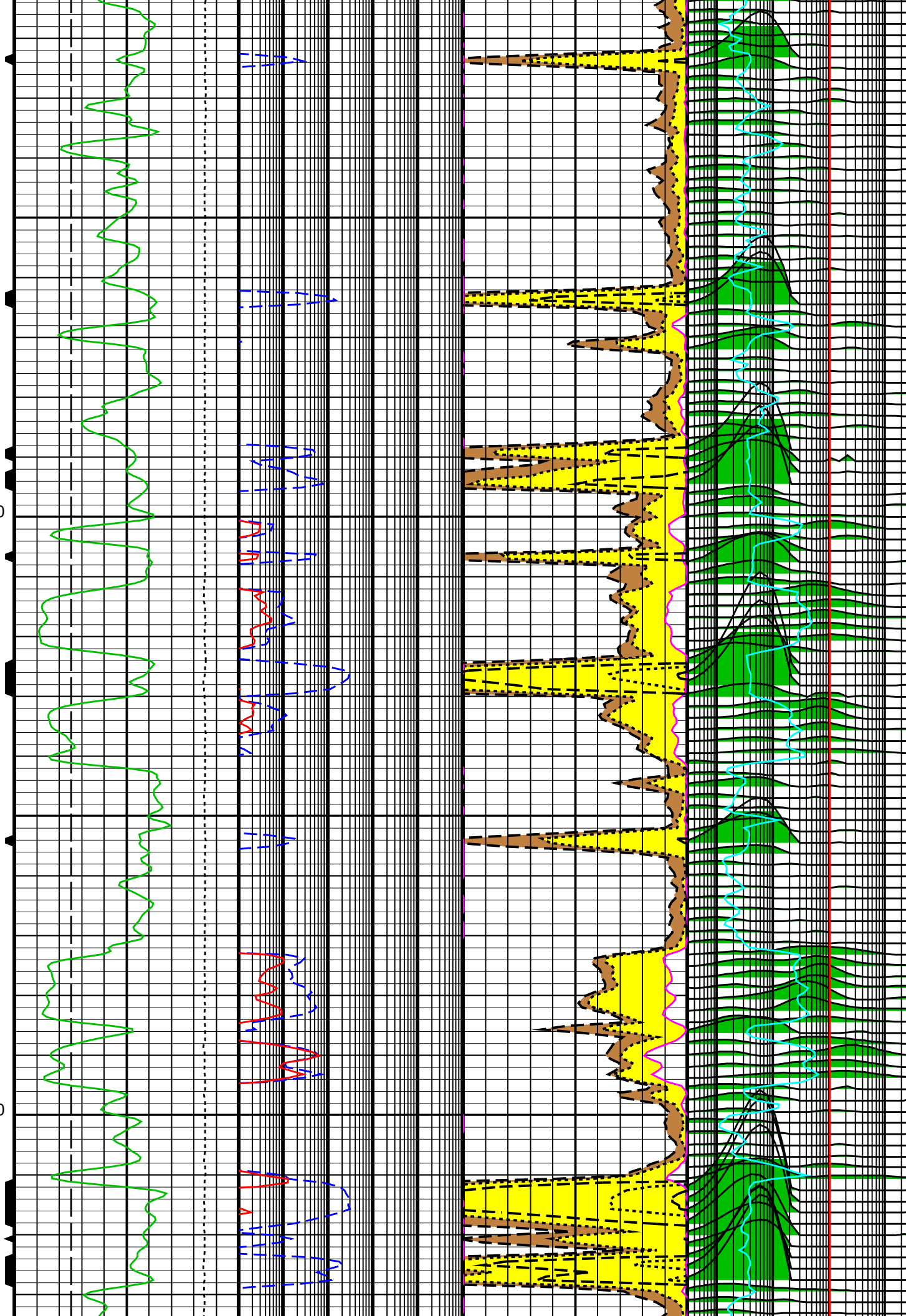
1900

2000



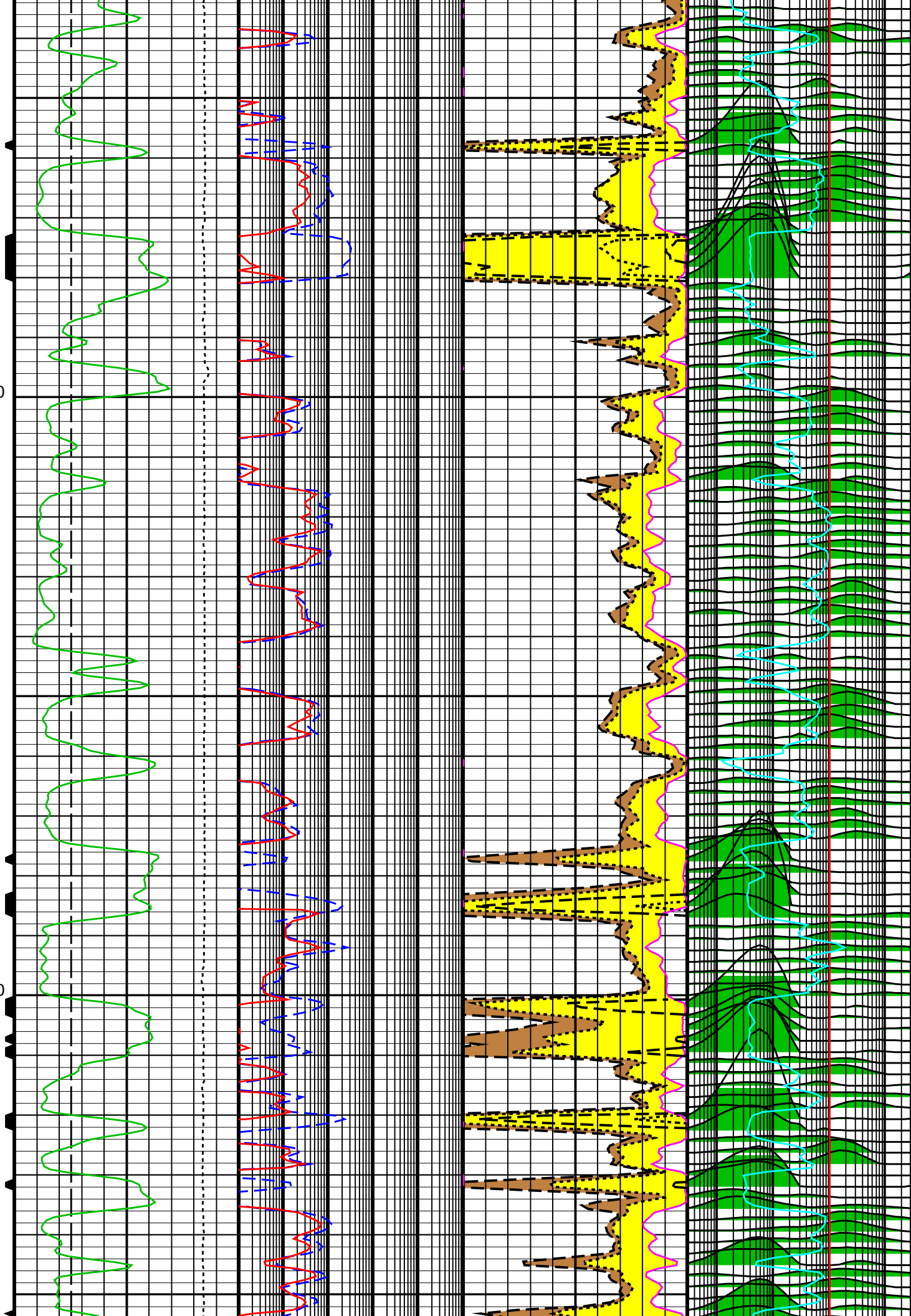
2100

2200



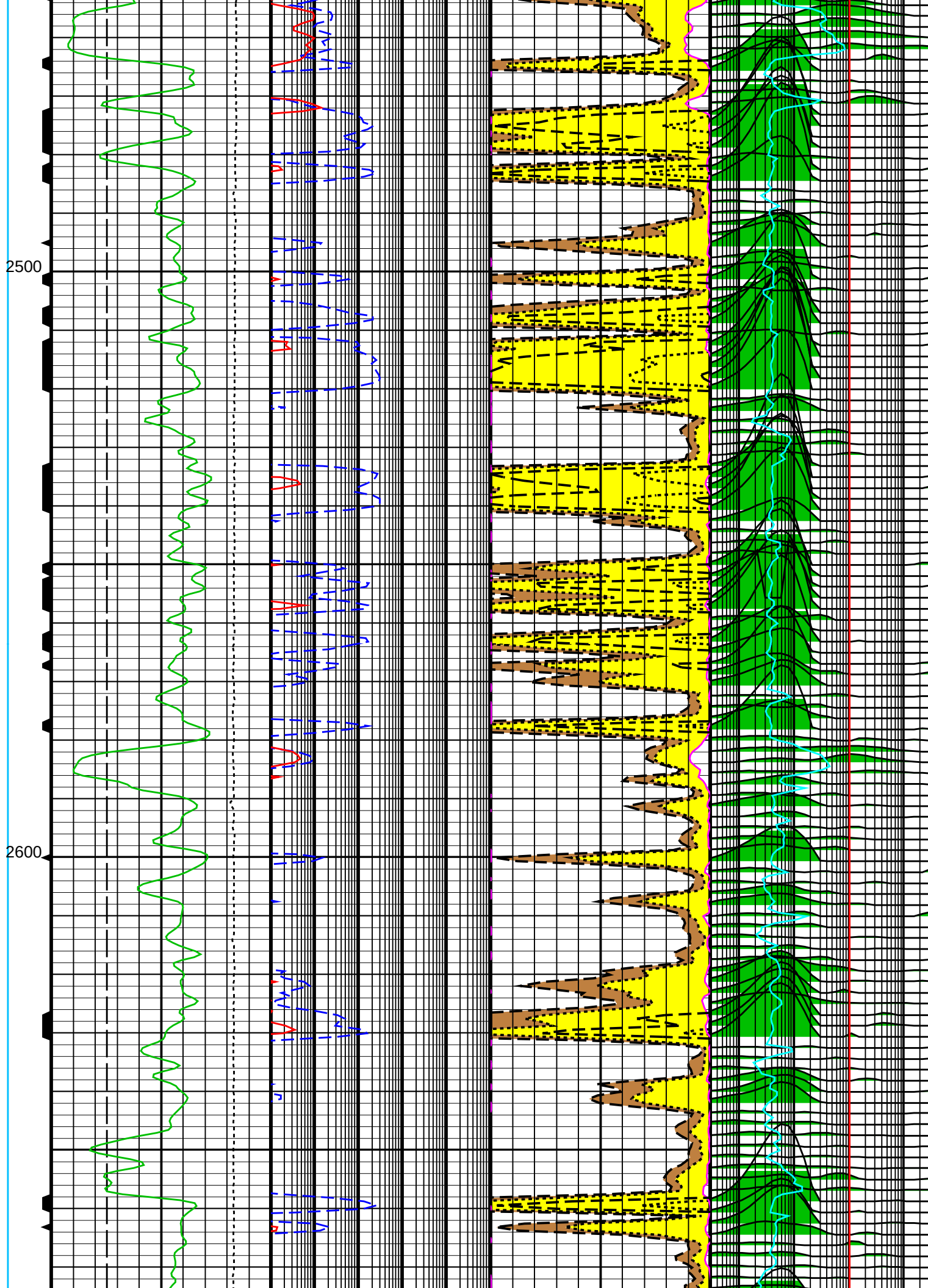
2300

2400



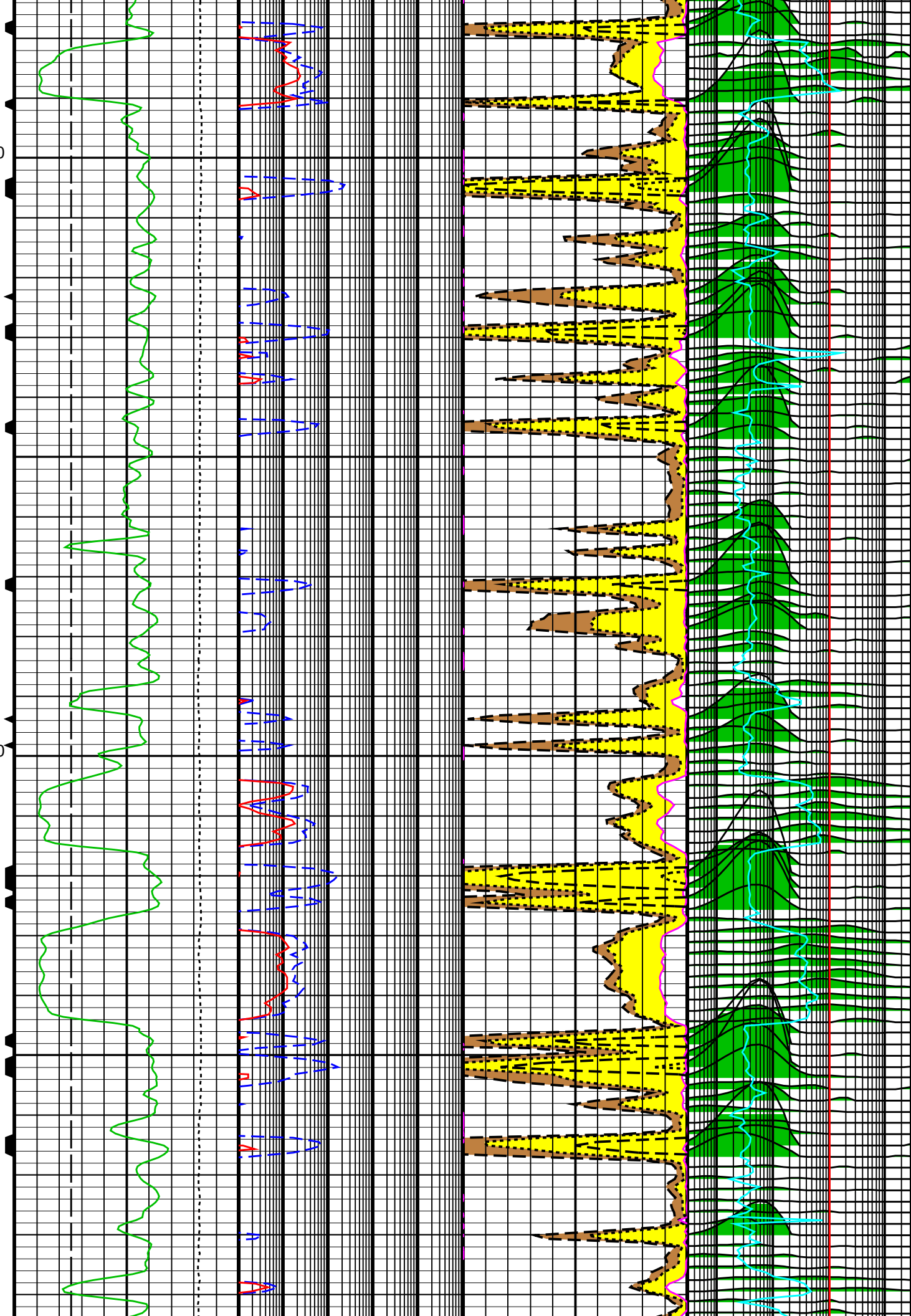
2500

2600



2700

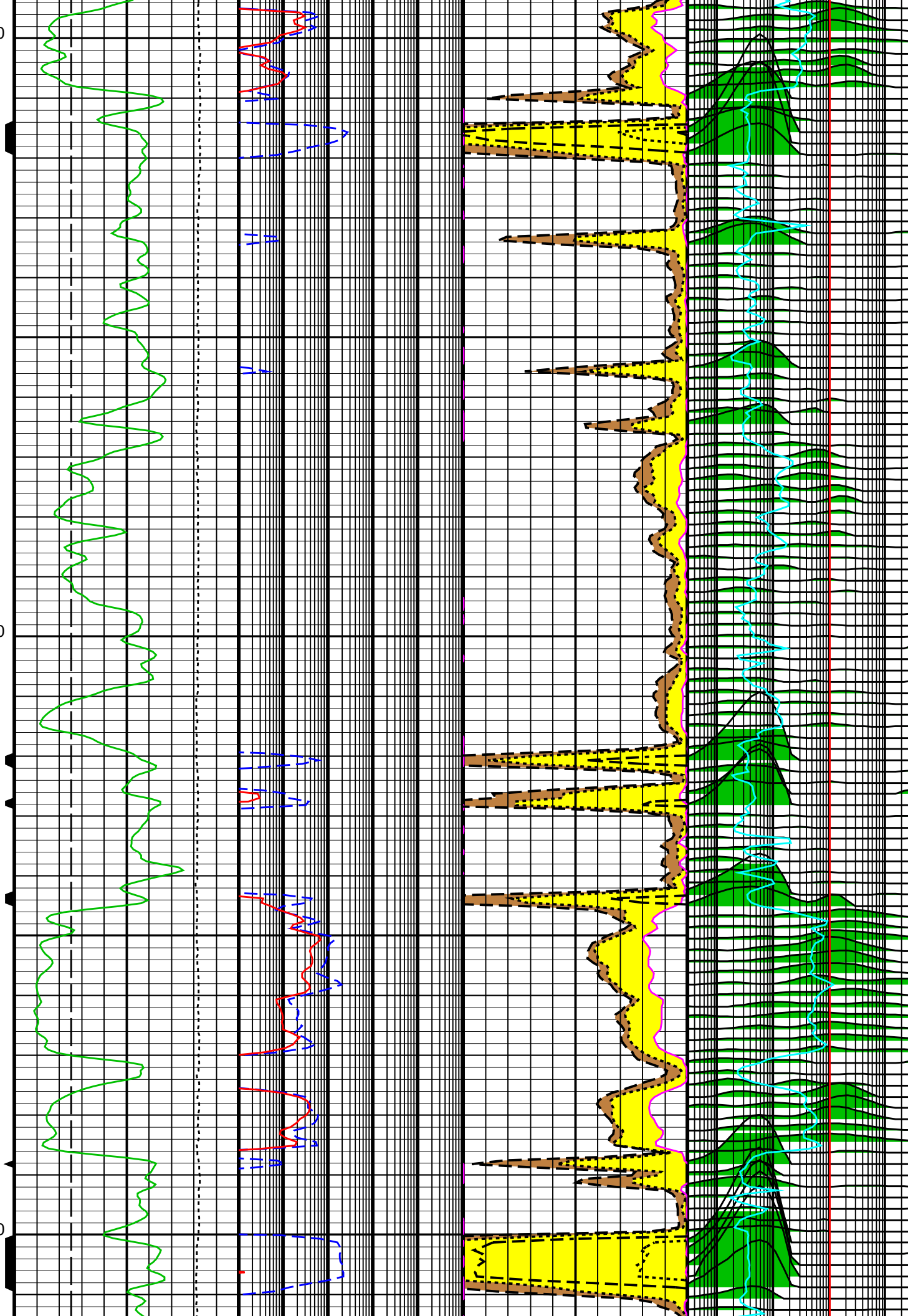
2800



2900

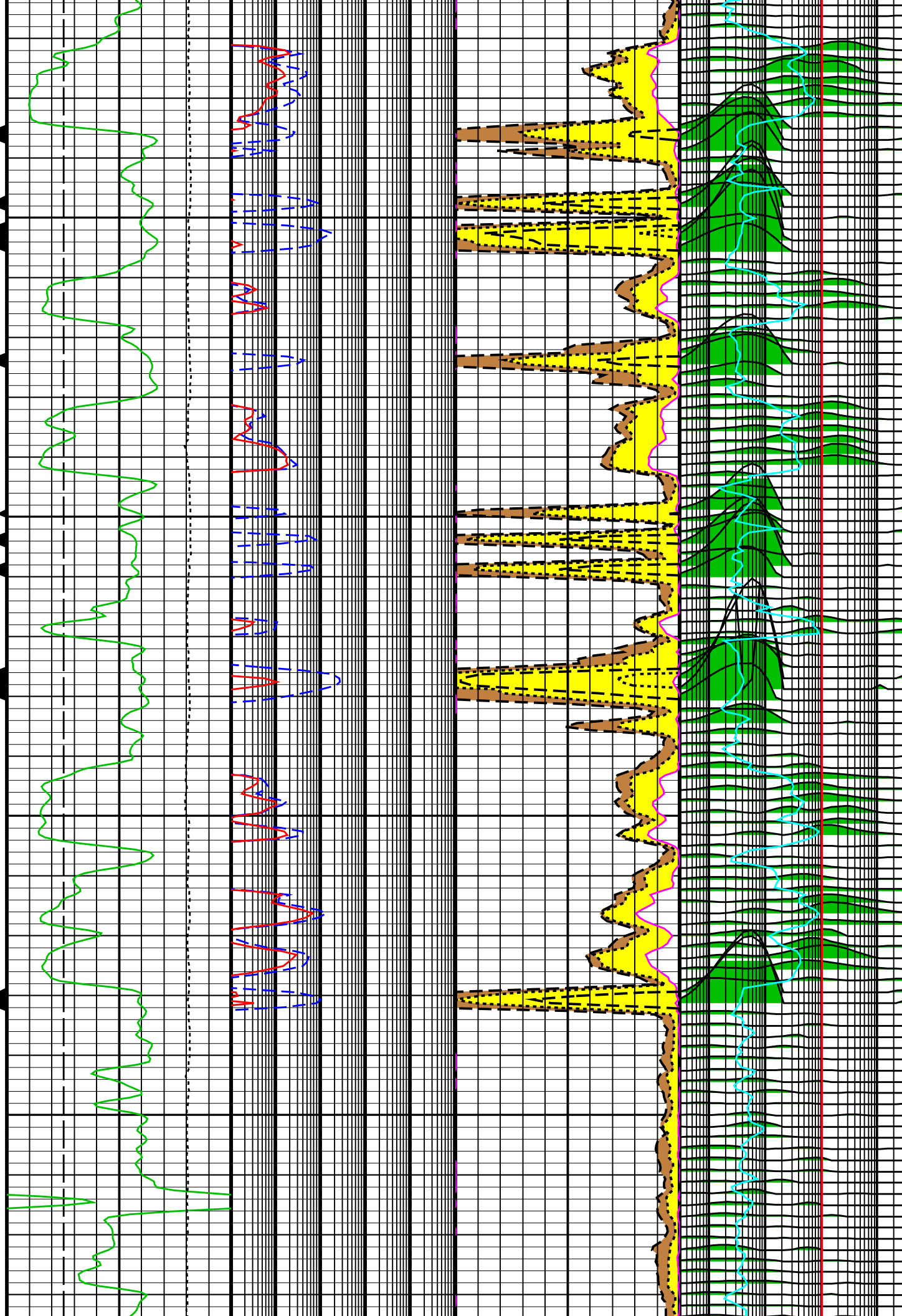
3000

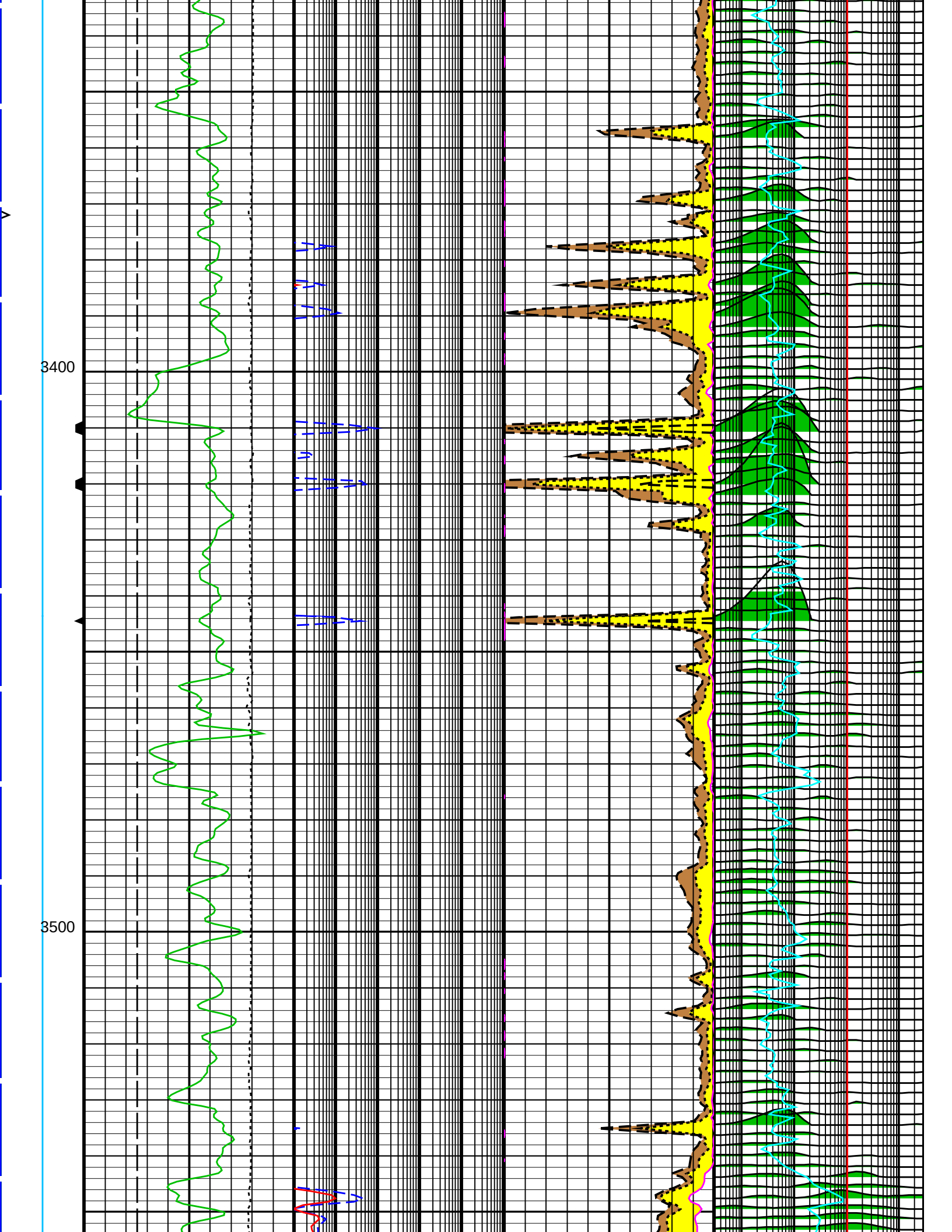
3100



3200

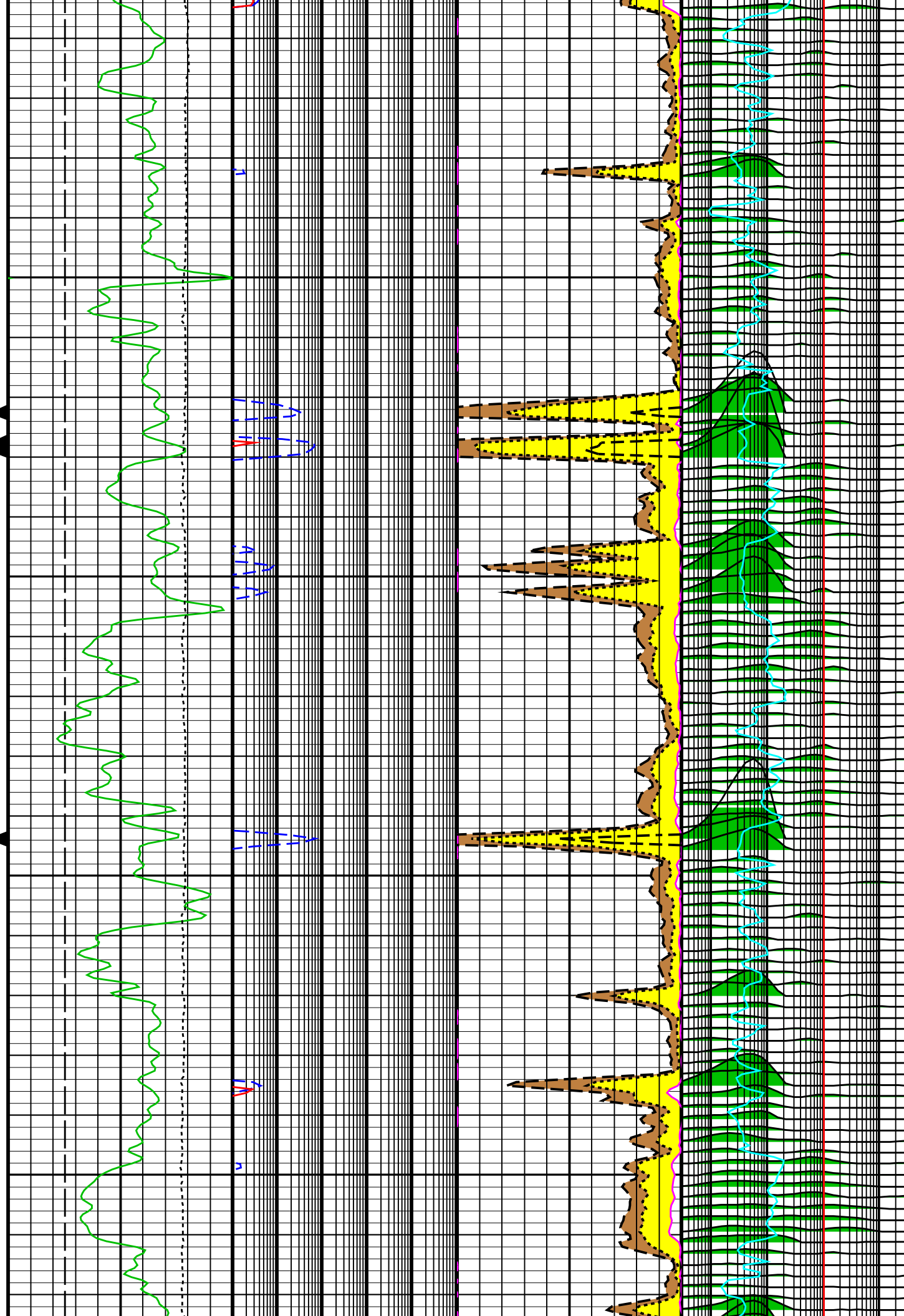
3300





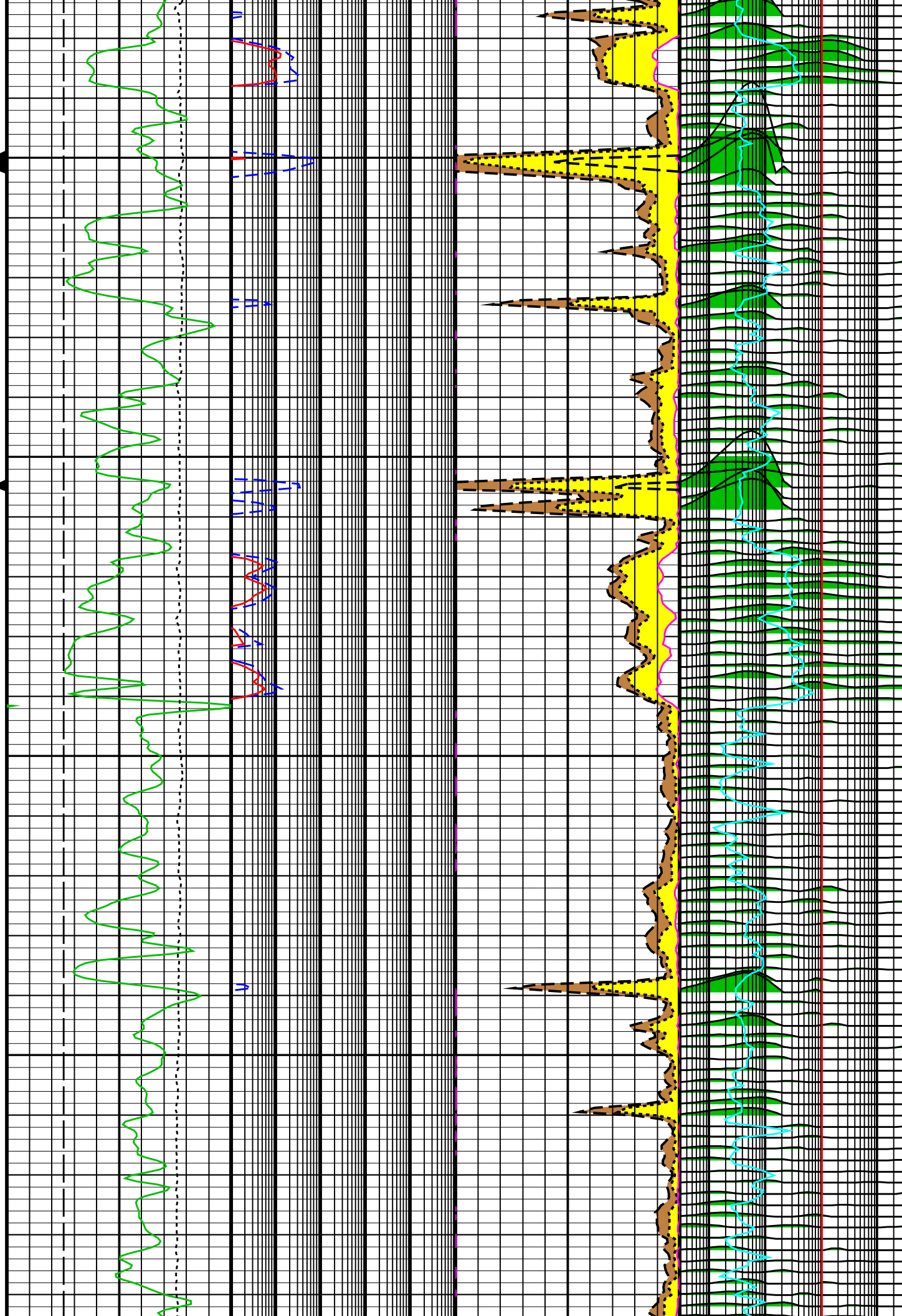
3600

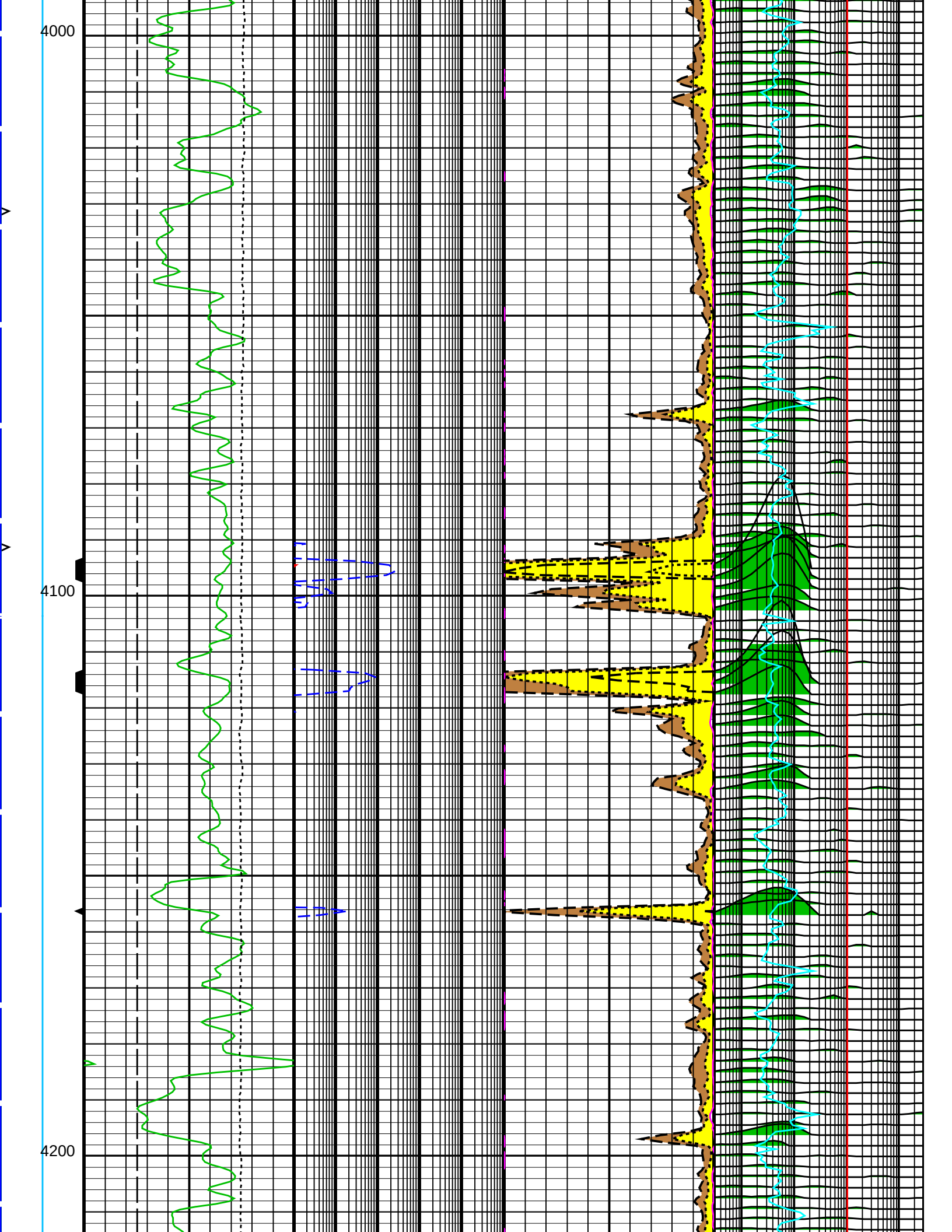
3700

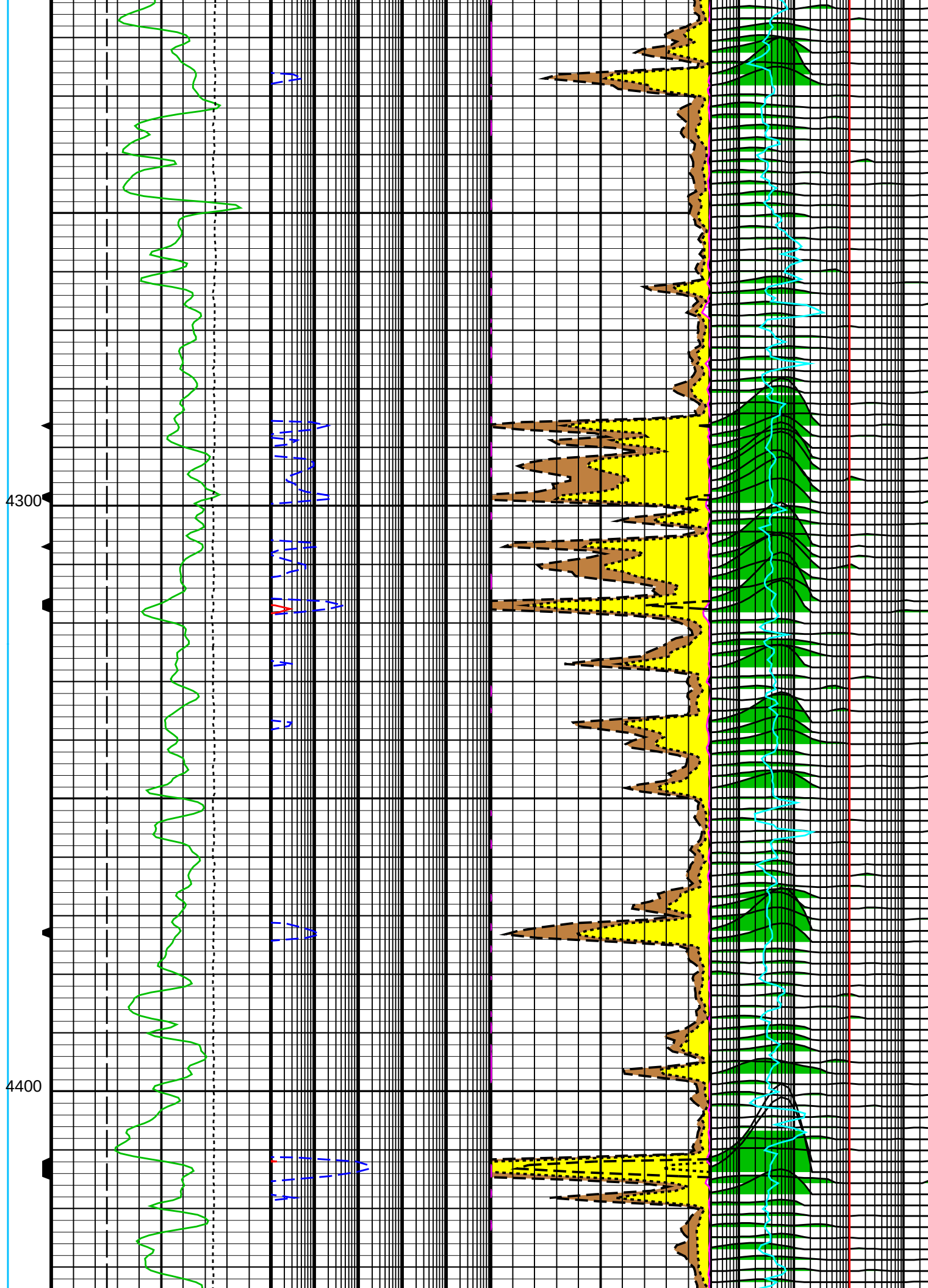


3800

3900

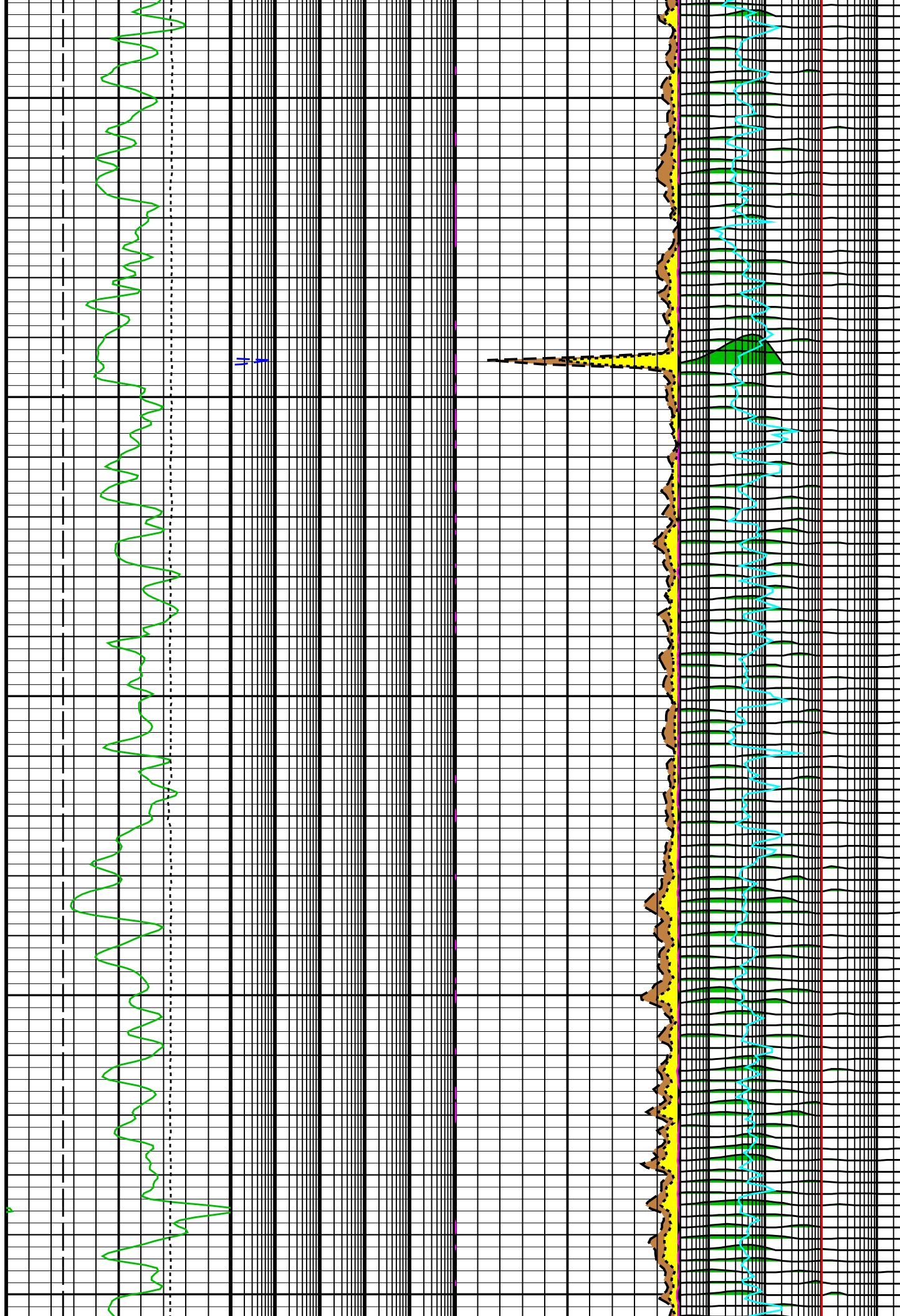






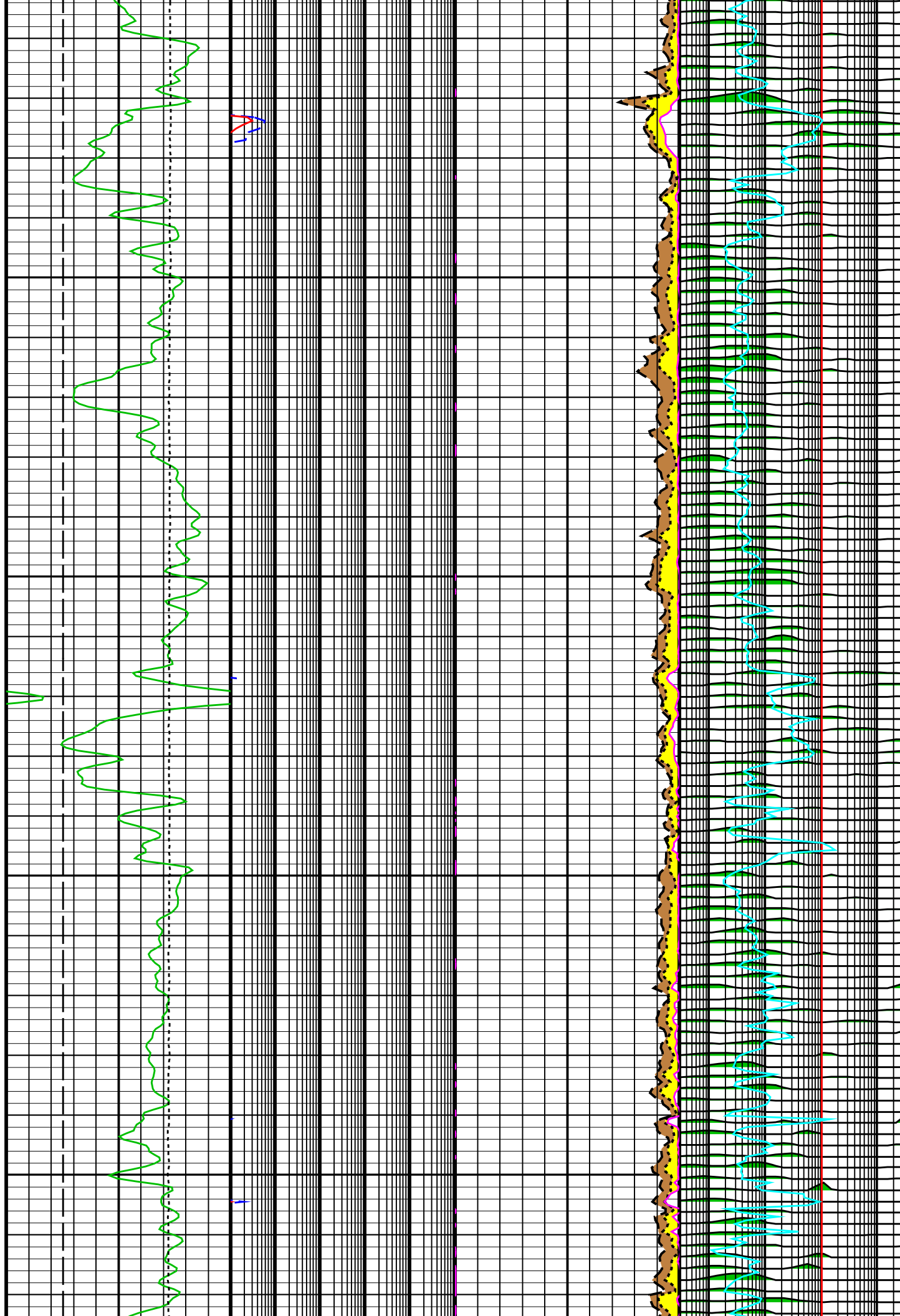
4500

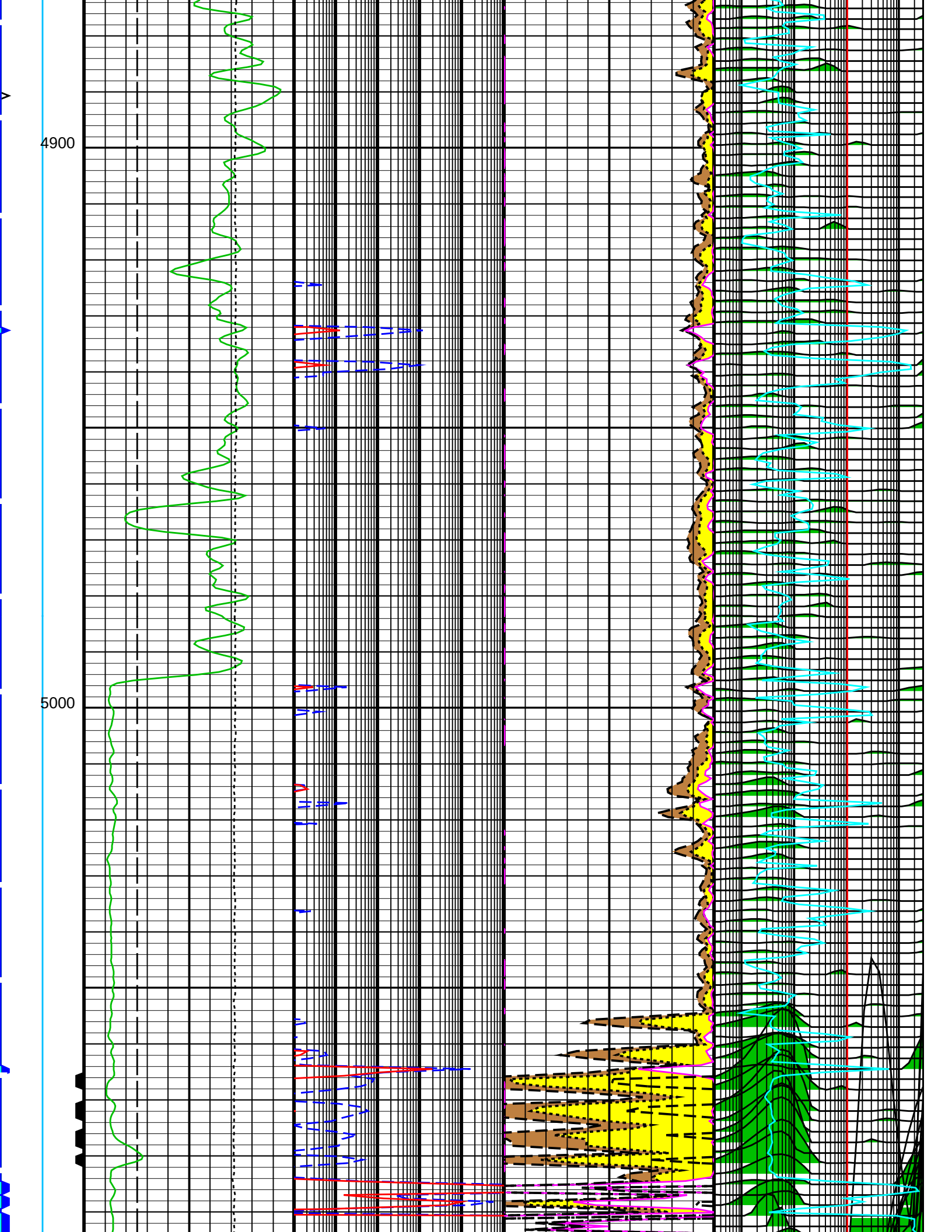
4600

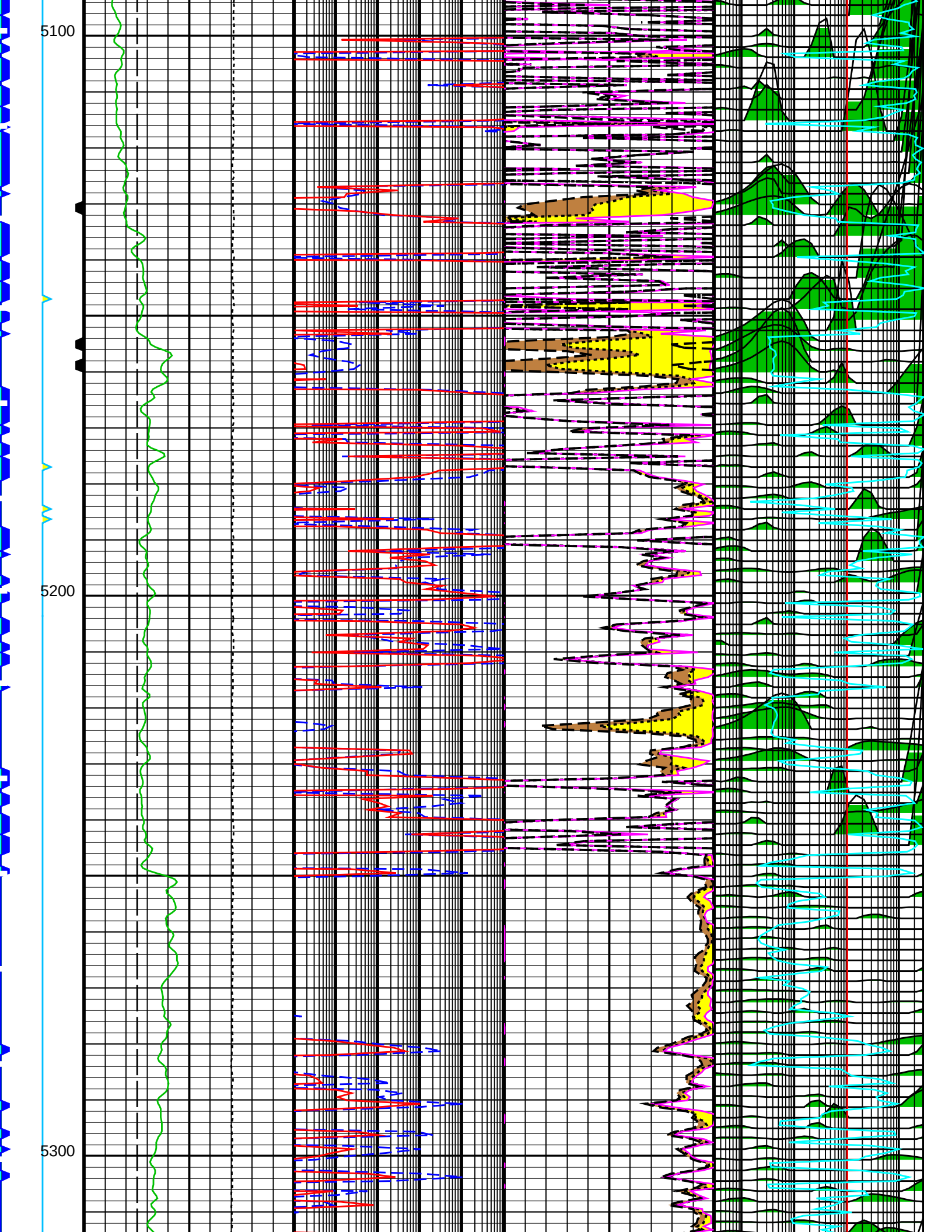


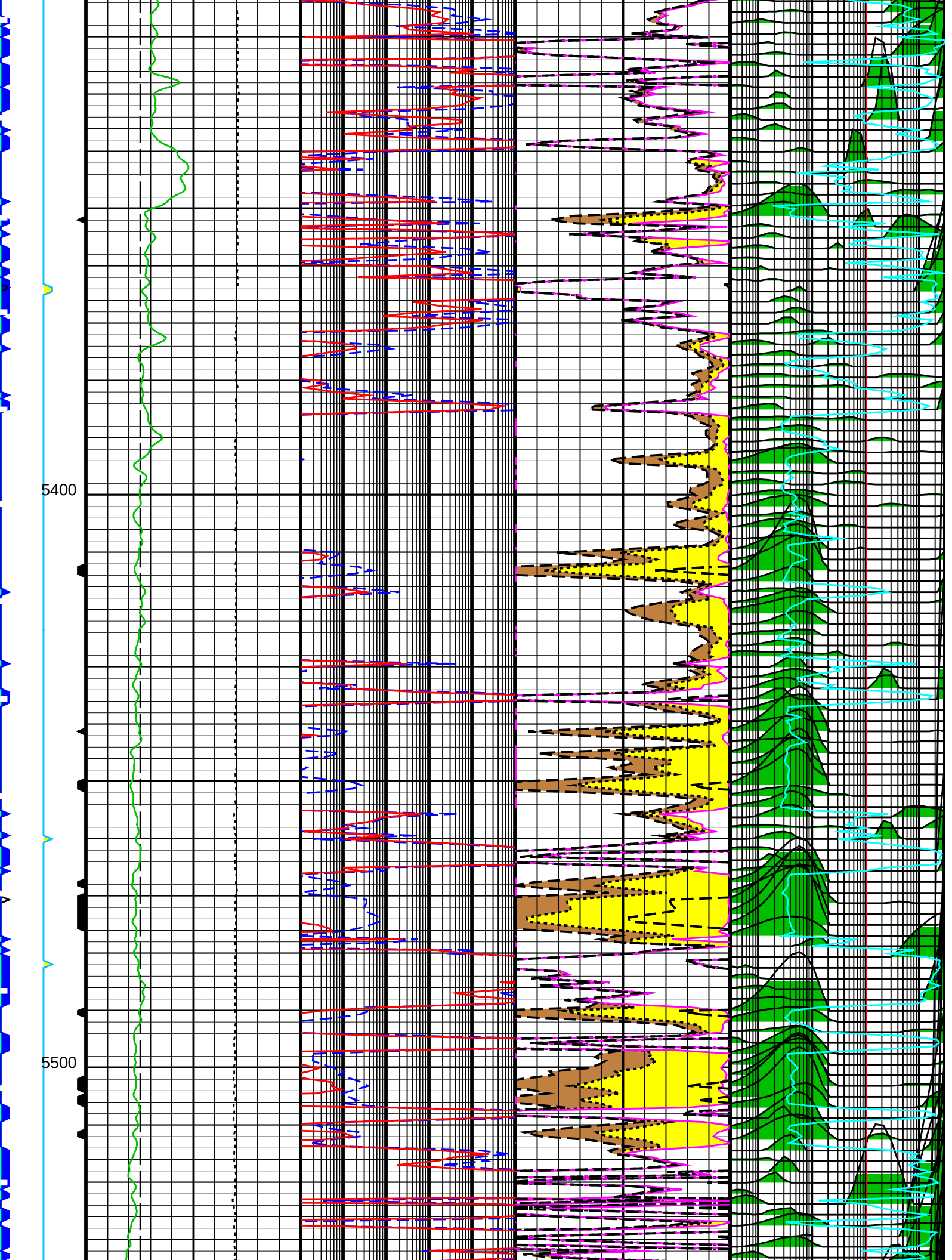
4700

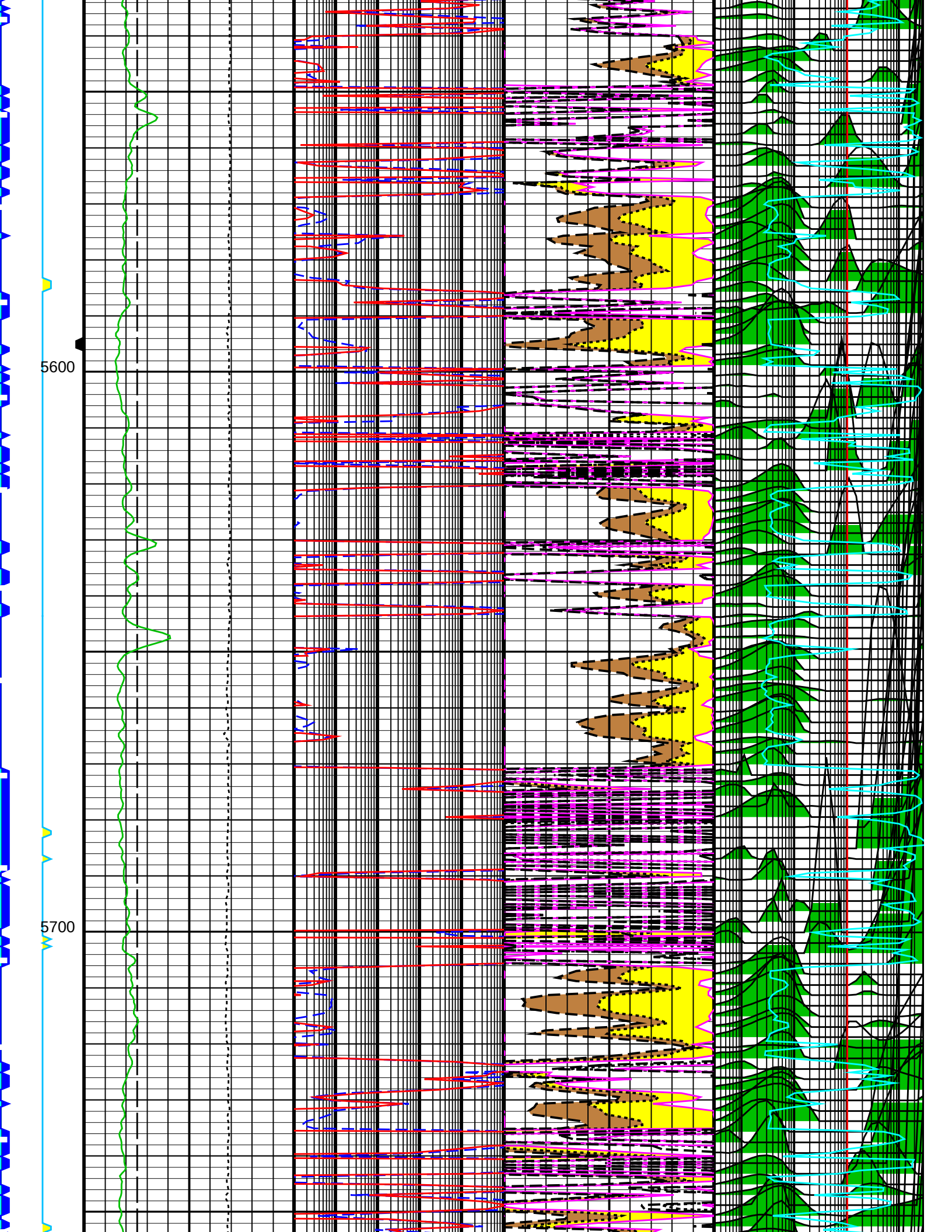
4800

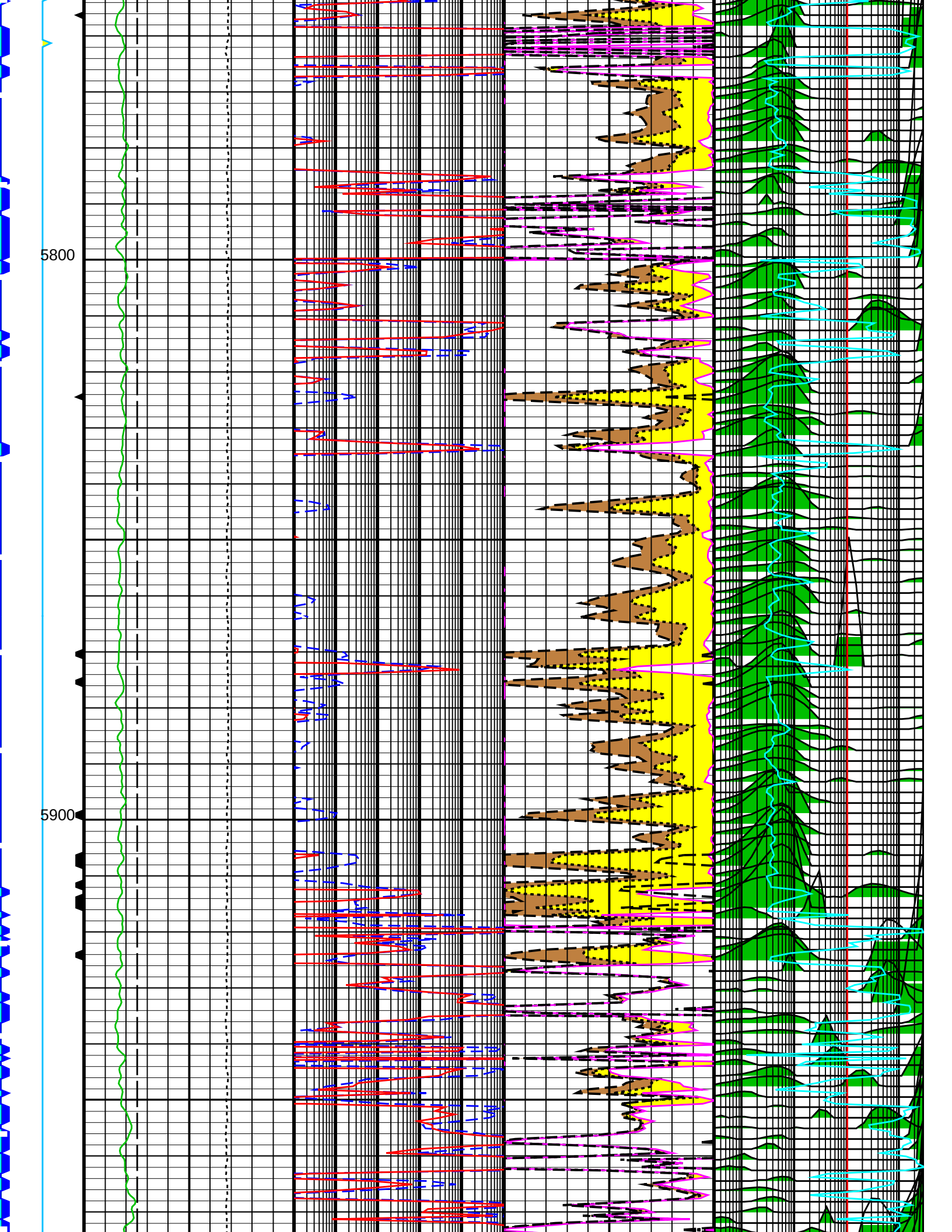


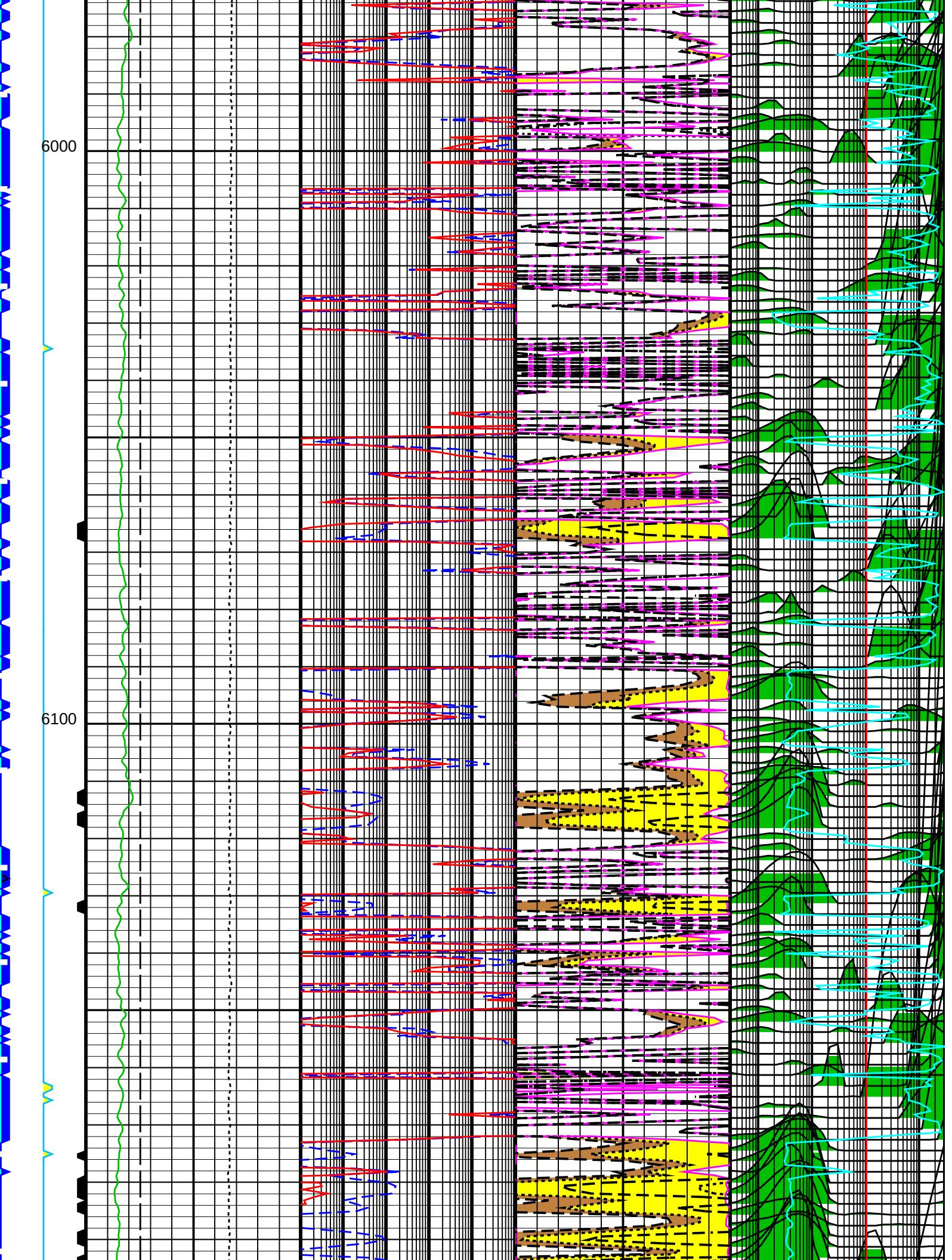


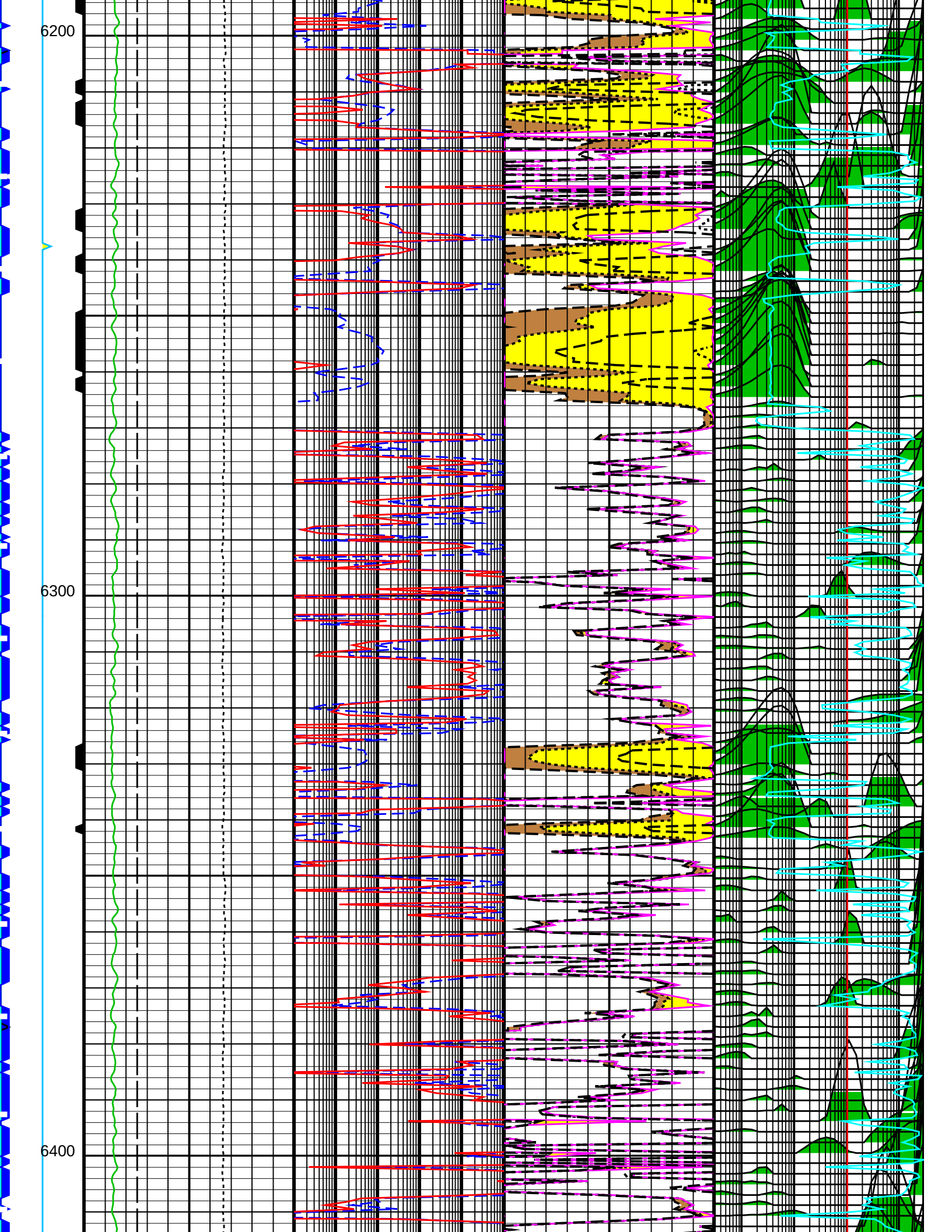


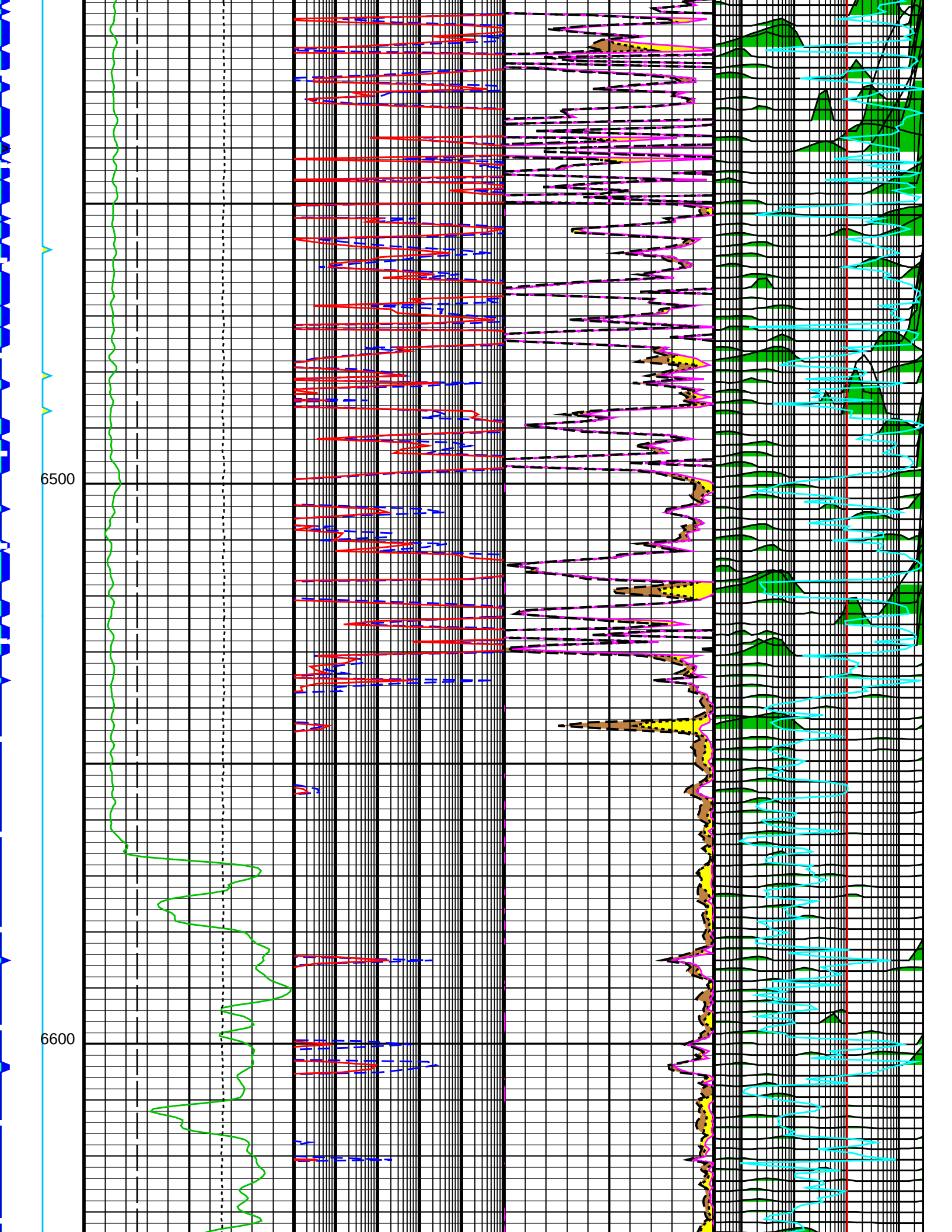


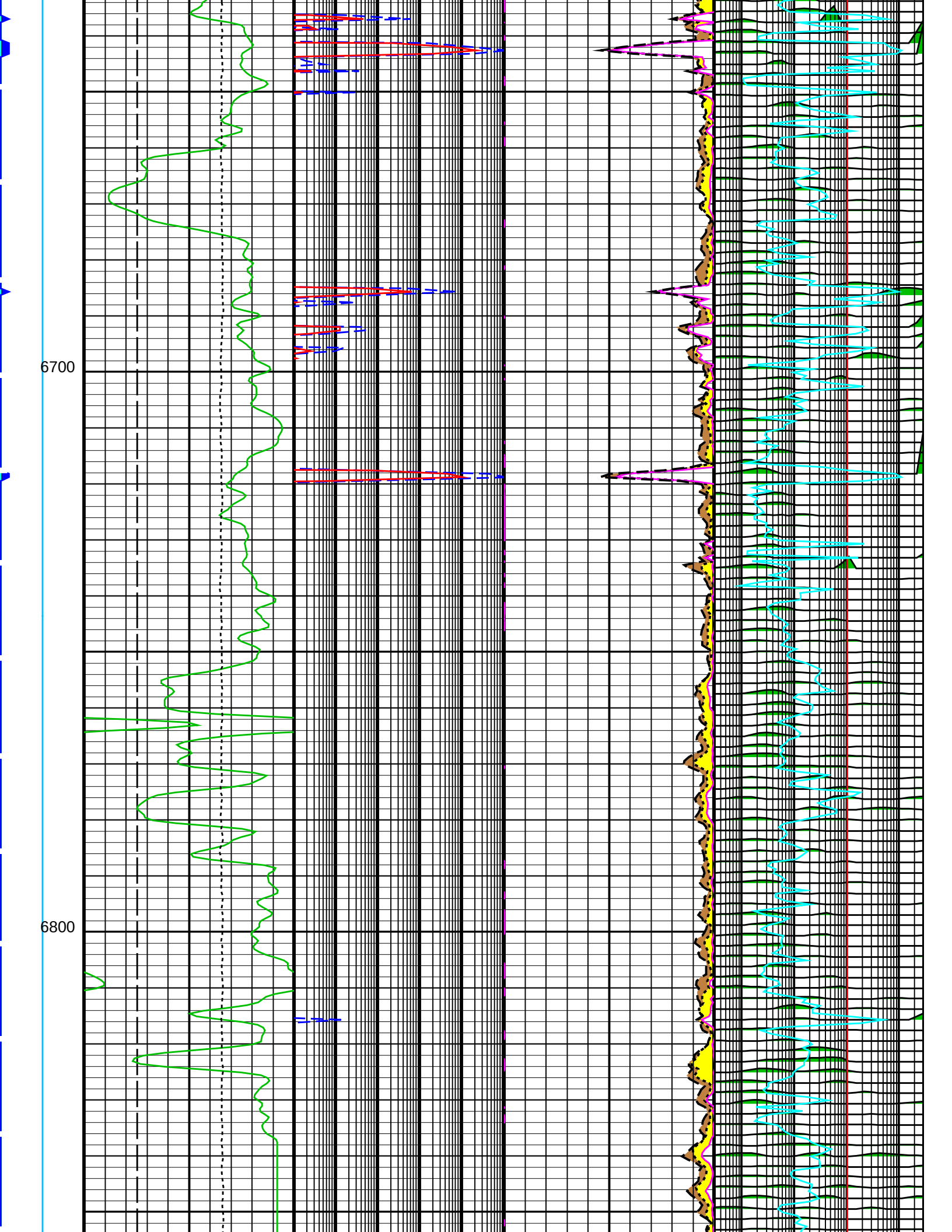












Bad Hole Flag	Bit Size (BS) (IN)		SDR Permeability (KSDR) (MD)		CMR Free Fluid Porosity (CMFF) (V/V)		Bound Fluid Cutoff (T2CUTOFF) (MS)	
	6	16	0.1	10000	0.4	0	0.3	3000
Insuff. WT Flag	Gamma Ray (GR_EDTC) (GAPI)		Timur/Coates Permeability (KTIM) (MD)		CMR 3ms Porosity (CMRP_3MS) (V/V)		T2 Logarithmic Mean (T2LM) (MS)	
	0	200	0.1	10000	0.4	0	0.3	3000
Caution Moderate Noise	Tension (TENS) (LBF)				Total CMR Porosity (TCMR) (V/V)		T2 Distribution (T2_DIST_MW) (US)	
	10000	0			0.4	0	60	89
Noise Out of Tolerance					Capillary Bound Fluid Porosity			
(NO_UPDATE_COUNT)					Small Pore Porosity			
0 (----) 10								
Tuning Mode (TUNING_MODE)								
-1 (----) 3								
Transmitter Disable Flag (TDIS_FLAG)								
0 (----) 5								

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
System and Miscellaneous		
BS	Bit Size	8.500 IN
DO	Depth Offset for Playback	7.0 FT
PP	Playback Processing	NORMAL

Format: CMRT_DEPTH_LOG Vertical Scale: 5" per 100' Graphics File Created: 16-Oct-2011 13:52

OP System Version: 19C0-187

ECS-A	19C0-187	ECC-B	19C0-187
CMRT-B	19C0-187	HNGC-AB	19C0-187
HNGS-BA	19C0-187	EDTC-B	19C0-187

Input DLIS Files

DEFAULT	ECS_CMRT_NGS_041LUP	FN:72	PRODUCER	16-Oct-2011 07:57	6862.5 FT	1268.5 FT
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Output DLIS Files

DEFAULT	ECS_CMRT_NGS_045PUP	FN:76	PRODUCER	16-Oct-2011 13:52
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Company: SANDIA TECHNOLOGIES, LLC

Well: NYSTA TANDEM LOT 1

Output DLIS Files

DEFAULT	ECS CMR NGS 040LUP	FN:71	PRODUCER	16-Oct-2011 07:28	5077.5 FT	4862.5 FT
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CMR DEPTH LOG REPORT

PARAMETER SUMMARY

Tool Type: CMR-Plus	Cart. Number: 152	Sonde Number: 109	
Kit Number: 28	DHC Version : 17.2	DSP Version : 14	SP Version : 10182006
Mode: Carbonate Depth Log – B Mode		LFST Freq(khz) : 2228	LFST Temp(degC) : 34.72

Log Direction: Up	Polarization Correction: On	EPM: Yes	EPM T1/T2: Auto
Despiking: Off	High Res: Off	KBFV: Off	DMRP: Off
Echo Spacing(us):	(200 200)		
Polarization Times(sec) for:	T1=1s: (infinity 0.02)	T1=3s: (4.803 0.02)	T1=5s: (4.756 0.02)
Number of Echoes:	(1800 30)		
Repetition:	(1 10)	Duty Cycle (highest): 0.0282	
Regularization:	Auto		

T2 Min(msec): 0.3	T2 Max(msec): 3000	T2 Cutoff(msec): 100	T1/T2: 2
Number of Components: 30	Downhole Stacking: 3	Uphole Stacking: 1	First Echo Used: No
Multiple T2 Cutoffs(msec):	(0.3 1 3 10 33 100 300 1000 3000)		
Sample Int.(in): 7.5	Req Log Speed (f/h): 1200		

PIP SUMMARY

Time Mark Every 60 S

Transmitter Disable Flag (TDIS_ FLAG)	
0	(----) 5

Tuning Mode (TUNING_ MODE)	-1 (----) 3
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(NO_	
UPDATE_	
COUNT)	
0	(-----10

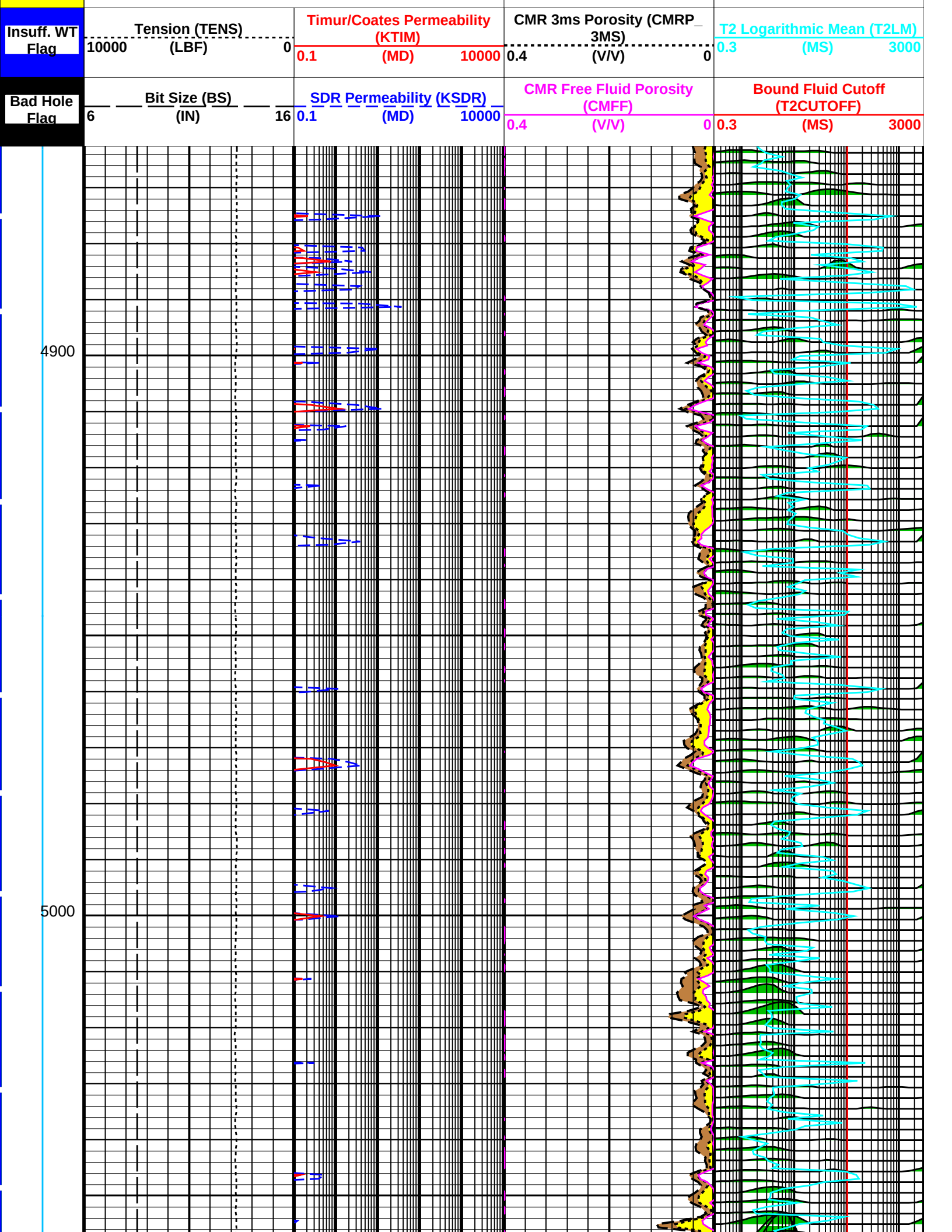
Noise Out of Tolerance

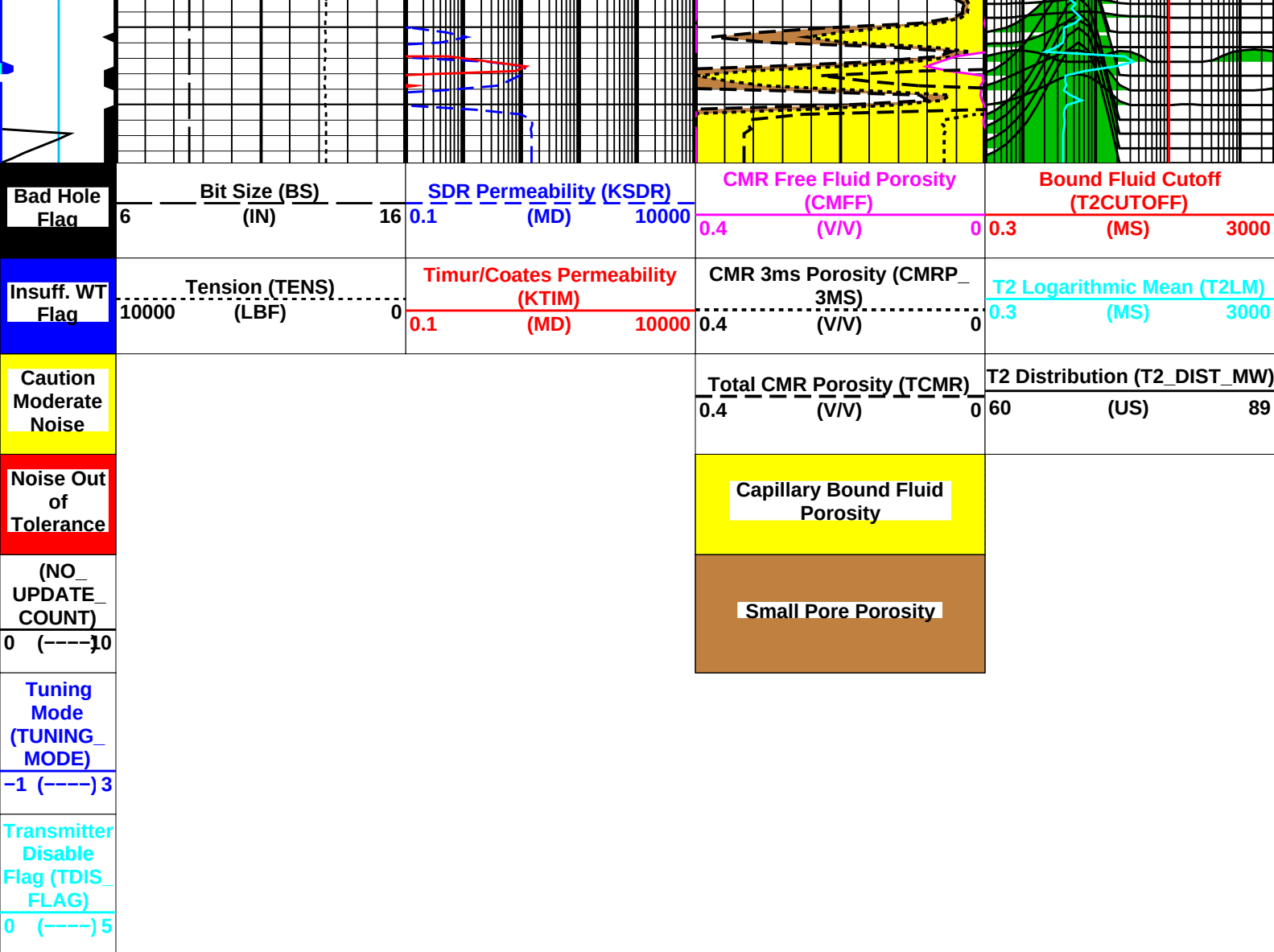
**Caution
Moderate
Noise**

Small Pore Porosity

Capillary Bound Fluid Porosity

<u>Total CMR Porosity (TCMR)</u>	<u>T2 Distribution (T2_DIST_MW)</u>	
0.4 (V/V) 0	60 (US)	89





PIP SUMMARY			
Time Mark Every 60 S			
Parameters			
DLIS Name	Description	Value	
BS	System and Miscellaneous Bit Size	8.500 IN	
Format: CMRT_DEPTH_LOG		Vertical Scale: 5" per 100'	Graphics File Created: 16-Oct-2011 07:28
OP System Version: 19C0-187			
ECS-A	19C0-187	ECC-B	19C0-187
CMRT-B	19C0-187	HNGC-AB	19C0-187
HNGS-BA	19C0-187	EDTC-B	19C0-187
Output DLIS Files			
DEFAULT	ECS_CMRT_NGS_040LUP	FN:71	PRODUCER 16-Oct-2011 07:28



CALIBRATIONS

CMRT LARMOR FREQUENCY SEARCH REPORT – Sun Oct 16 07:27:05 2011

Search Accepted

Search Results:

Larmor Frequency (kHz): **2228**
 Temperature (degc): **34.7**

Search Parameters:

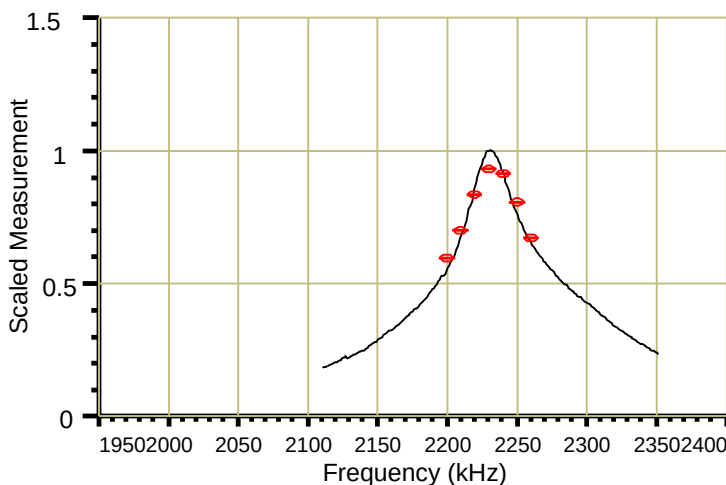
Central Frequency (kHz): 2227
 Central Frequency Selection: Current Freq
 Echo Count Used: 32

Measured Data:

Frequency	Amplitude	RMS Noise	Std Deviation
2197	374.00	3.00	2.5895
2207	438.00	2.17	2.5872
2217	523.00	2.57	2.5755
2227	583.00	2.55	2.5616
2237	572.00	2.47	2.5796
2247	505.00	2.64	2.5915
2257	421.00	2.59	2.5841

Related Data:

Depth(ft): 5072.4
 Average Cable Speed (ft/h): 0.0
 Delta Temperature (degc): 0.0
 Measurement Time (sec): 104.1
 HV Peak Current (mA): 3237.3
 Previous LFST Freq (at Temp): 2227
 Frequency Std Deviation (kHz): 0.10
 Number of Echoes: 300
 Polarization Time (sec): 0.400
 Echo Spacing (usec): 200.0



Freq estimate from Temp (kHz): 2212
 Tune Word Offset: 2
 Sonde Number: 109
 Cartridge Number: 152
 System Gain: 0.813

CMRT TUNE WORD SEARCH REPORT – Sun Oct 16 07:24:33 2011

Search Results:

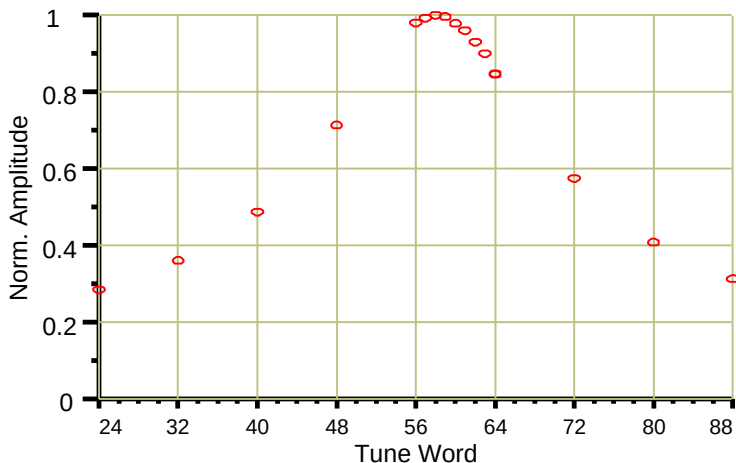
Tune Word: **58**
 Tune Word Offset: **2**
 Maximum Amplitude: 1897.5
 Temperature(degF): 94.3
 Depth (ft): 5072.4

Search Parameters:

Search Frequency (kHz): 2227
 Search Mode: Manual

Related Data:

Master Cal Test Loop Amp: 2097.0
 Current LF Estimate (kHz): 2228
 Sonde Number: 109
 Cartridge Number: 152



Search Results:

Larmor Frequency (kHz): **2228**
Temperature (degc): **34.6**

Search Parameters:

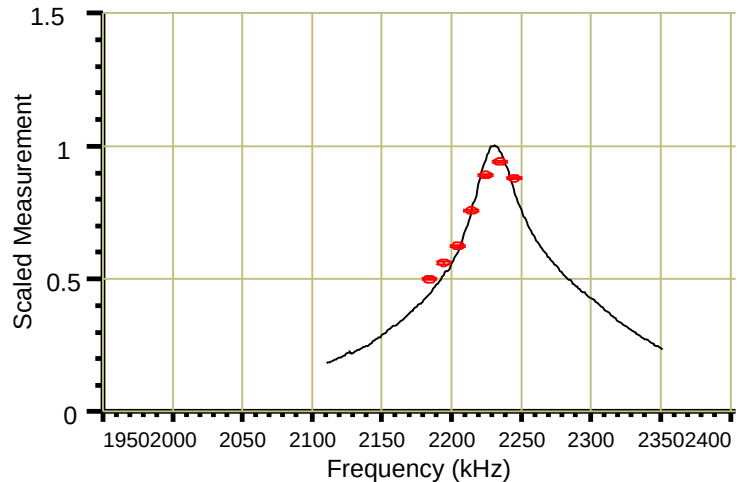
Central Frequency (kHz): 2212
Central Frequency Selection: Current Freq
Echo Count Used: 32

Measured Data:

Frequency	Amplitude	RMS Noise	Std Deviation
2182	314.00	4.45	5.6941
2192	353.00	7.74	5.6918
2202	393.00	5.16	5.6842
2212	477.00	5.18	5.6726
2222	561.00	6.25	5.6357
2232	593.00	4.47	5.6465
2242	553.00	5.75	5.7009

Related Data:

Depth(ft): 5072.4
Average Cable Speed (ft/h): 0.0
Delta Temperature (degc): 0.1
Measurement Time (sec): 35.4
HV Peak Current (mA): 3262.8
Previous LFST Freq (at Temp): 2213
Frequency Std Deviation (kHz): 0.26
Number of Echoes: 300
Polarization Time (sec): 0.400
Echo Spacing (usec): 200.0



Freq estimate from Temp (kHz): 2212
Tune Word Offset: 2
Sonde Number: 109
Cartridge Number: 152
System Gain: 0.835

CMRT LARMOR FREQUENCY SEARCH REPORT – Sun Oct 16 07:22:29 2011**Search Accepted****Search Results:**

Larmor Frequency (kHz): **2213**
Temperature (degc): **34.6**

Search Parameters:

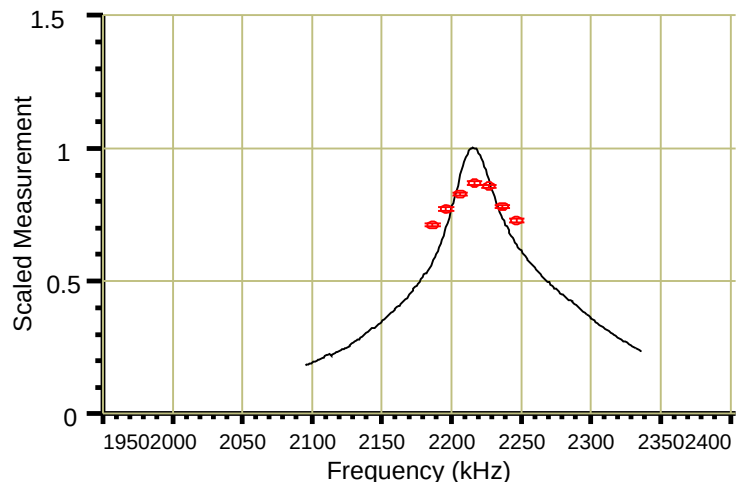
Central Frequency (kHz): 2214
Central Frequency Selection: Current Freq
Echo Count Used: 32

Measured Data:

Frequency	Amplitude	RMS Noise	Std Deviation
2184	202.00	3.10	3.2812
2194	219.00	3.95	3.2640
2204	235.00	3.50	3.2216
2214	247.00	3.26	3.2013
2224	244.00	3.15	3.2363
2234	222.00	2.74	3.2576
2244	207.00	2.86	3.2688

Related Data:

Depth(ft): 5078.1
Average Cable Speed (ft/h): 0.0
Delta Temperature (degc): 0.1
Measurement Time (sec): 79.5
HV Peak Current (mA): 3172.7
Previous LFST Freq (at Temp): 2214
Frequency Std Deviation (kHz): 0.31
Number of Echoes: 300
Polarization Time (sec): 0.400
Echo Spacing (usec): 200.0



Freq estimate from Temp (kHz): 2212
Tune Word Offset: 2
Sonde Number: 109
Cartridge Number: 152
System Gain: 0.841

CMRT TUNE WORD SEARCH REPORT – Sun Oct 16 07:19:35 2011

Search Results:

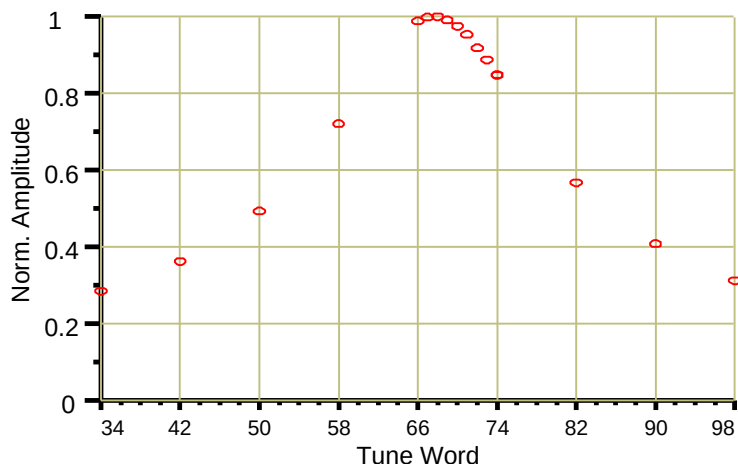
Tune Word: **68**
Tune Word Offset: **2**
Maximum Amplitude: 1969.0
Temperature(degF): 94.1
Depth (ft): 5078.1

Related Data:

Master Cal Test Loop Amp: 2097.0
Current LF Estimate (kHz): 2214
Sonde Number: 109
Cartridge Number: 152

Search Parameters:

Search Frequency (kHz): 2214
Search Mode: Manual



CMRT LARMOR FREQUENCY SEARCH REPORT – Sun Oct 16 07:18:43 2011

Search Accepted

Search Results:

Larmor Frequency (kHz): **2215**
Temperature (degc): **34.4**

Search Parameters:

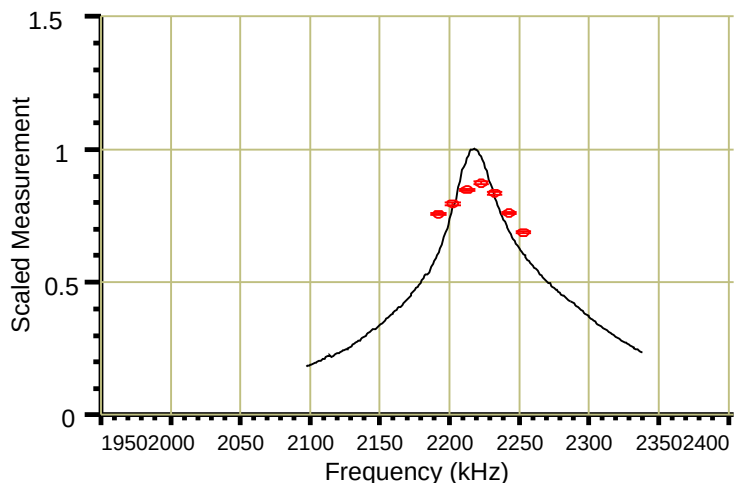
Central Frequency (kHz): 2220
Central Frequency Selection: Manual
Echo Count Used: 32

Measured Data:

Frequency	Amplitude	RMS Noise	Std Deviation
2190	216.00	2.16	2.7252
2200	227.00	2.62	2.6954
2210	242.00	2.31	2.6610
2220	249.00	2.24	2.6649
2230	238.00	3.15	2.6958
2240	217.00	2.51	2.7078
2250	196.00	3.55	2.7089

Related Data:

Depth(ft): 5078.1
Average Cable Speed (ft/h): 0.0
Delta Temperature (degc): 0.2
Measurement Time (sec): 98.0
HV Peak Current (mA): 3237.3
Previous LFST Freq (at Temp): 2212
Frequency Std Deviation (kHz): 0.31
Number of Echoes: 300
Polarization Time (sec): 0.400
Echo Spacing (usec): 200.0



Freq estimate from Temp (kHz): 2212
Tune Word Offset: 2
Sonde Number: 109
Cartridge Number: 152
System Gain: 0.839

CMRT LARMOR FREQUENCY SEARCH REPORT – Sun Oct 16 07:16:28 2011

Search Accepted

Search Results:

Larmor Frequency (kHz): **2213**
 Temperature (degc): **34.3**

Measured Data:

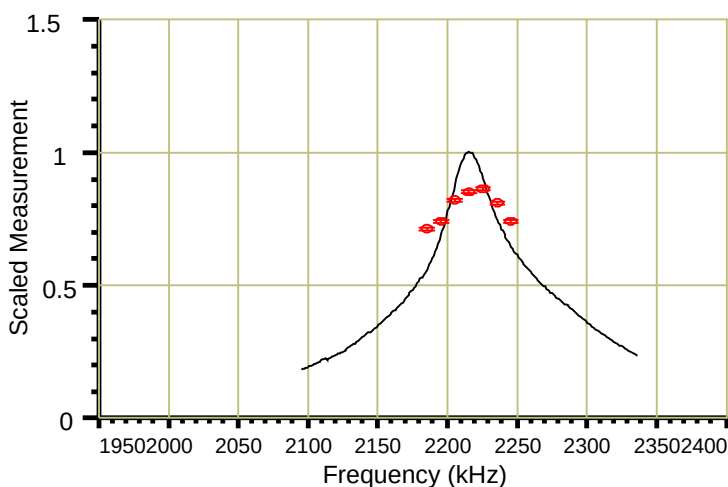
Frequency	Amplitude	RMS Noise	Std Deviation
2183	203.00	2.33	2.7200
2193	211.00	2.91	2.6990
2203	234.00	2.83	2.6719
2213	243.00	2.83	2.6468
2223	246.00	2.46	2.6766
2233	231.00	2.53	2.7029
2243	211.00	2.85	2.7080

Related Data:

Depth(ft): 5078.1
 Average Cable Speed (ft/h): 0.0
 Delta Temperature (degc): 0.2
 Measurement Time (sec): 93.3
 HV Peak Current (mA): 3249.0
 Previous LFST Freq (at Temp): 2209
 Frequency Std Deviation (kHz): 0.26
 Number of Echoes: 300
 Polarization Time (sec): 0.400
 Echo Spacing (usec): 200.0

Search Parameters:

Central Frequency (kHz): 2213
 Central Frequency Selection: Manual
 Echo Count Used: 32



Freq estimate from Temp (kHz): 2213
 Tune Word Offset: 2
 Sonde Number: 109
 Cartridge Number: 152
 System Gain: 0.850

CMRT LARMOR FREQUENCY SEARCH REPORT – Sun Oct 16 07:14:22 2011

Search Accepted**Search Results:**

Larmor Frequency (kHz): **2210**
 Temperature (degc): **34.1**

Measured Data:

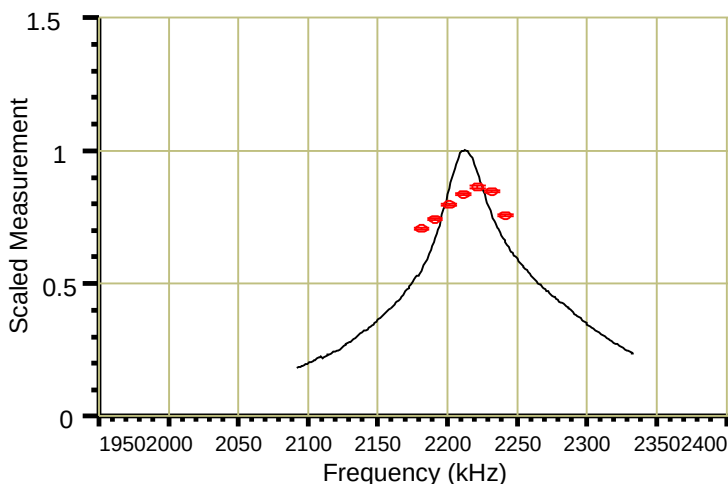
Frequency	Amplitude	RMS Noise	Std Deviation
2179	203.00	2.38	1.9951
2189	213.00	1.81	1.9820
2199	229.00	2.09	1.9590
2209	240.00	1.53	1.9383
2219	248.00	1.92	1.9591
2229	243.00	1.80	1.9859
2239	217.00	2.14	1.9868

Related Data:

Depth(ft): 5078.1
 Average Cable Speed (ft/h): 0.0
 Delta Temperature (degc): -0.1
 Measurement Time (sec): 153.9
 HV Peak Current (mA): 3198.1
 Previous LFST Freq (at Temp): 2209
 Frequency Std Deviation (kHz): 0.17
 Number of Echoes: 300
 Polarization Time (sec): 0.400

Search Parameters:

Central Frequency (kHz): 2209
 Central Frequency Selection: From Last LFST
 Echo Count Used: 32



Freq estimate from Temp (kHz): 2213
 Tune Word Offset: 2
 Sonde Number: 109
 Cartridge Number: 152

CMRT LARMOR FREQUENCY SEARCH REPORT – Sun Oct 16 07:11:26 2011

Search Accepted

Search Results:

Larmor Frequency (kHz): **2209**
Temperature (degc): **34.0**

Measured Data:

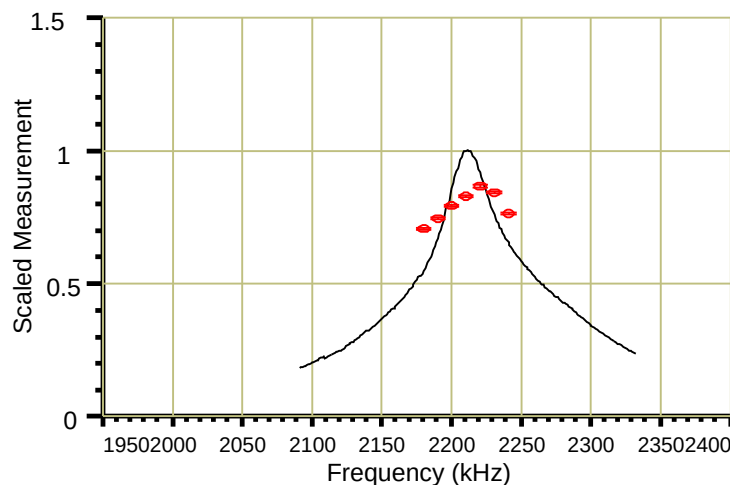
Frequency	Amplitude	RMS Noise	Std Deviation
2178	203.00	2.49	2.3115
2188	214.00	2.15	2.2971
2198	228.00	2.11	2.2691
2208	238.00	2.28	2.2446
2218	249.00	2.51	2.2706
2228	242.00	2.26	2.3001
2238	219.00	2.13	2.3035

Related Data:

Depth(ft): 5078.1
Average Cable Speed (ft/h): 0.0
Delta Temperature (degc): 0.1
Measurement Time (sec): 137.2
HV Peak Current (mA): 3266.7
Previous LFST Freq (at Temp): 2208
Frequency Std Deviation (kHz): 0.20
Number of Echoes: 300
Polarization Time (sec): 0.400
Echo Spacing (usec): 200.0

Search Parameters:

Central Frequency (kHz): 2208
Central Frequency Selection: From Last LFST
Echo Count Used: 32



Freq estimate from Temp (kHz): 2213
Tune Word Offset: 2
Sonde Number: 109
Cartridge Number: 152
System Gain: 0.858

CMRT TUNE WORD SEARCH REPORT – Sun Oct 16 07:08:04 2011

Search Results:

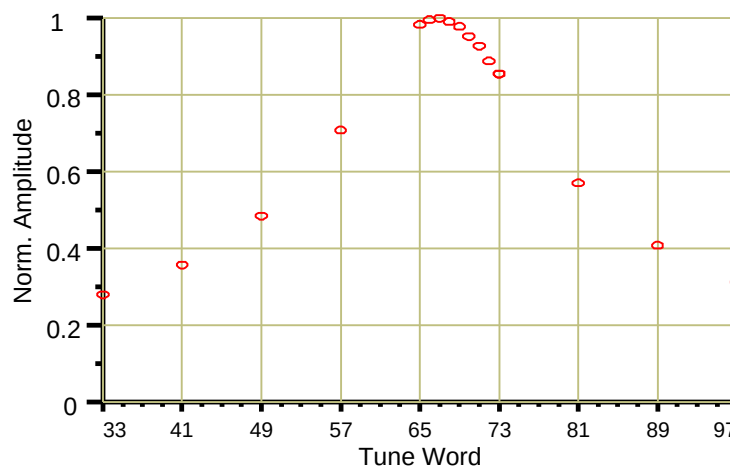
Tune Word: **67**
Tune Word Offset: **2**
Maximum Amplitude: 1975.3
Temperature(degF): 93.0
Depth (ft): 5078.1

Related Data:

Master Cal Test Loop Amp: 2097.0
Current LF Estimate (kHz): 2208
Sonde Number: 109
Cartridge Number: 152

Search Parameters:

Search Frequency (kHz): 2215
Search Mode: Manual



Calibration and Check Summary							
Measurement	Nominal	Master	Before	After	Change	Limit	Units
Combinable Magnetic Resonance Tool – B Master Calibration – Calibration Fixture Measurement							
Master: 14-Oct-2011 16:50							
Cal. Fixture Temperature MCAL	27.00	20.78	--	--	--	--	%
LOOP Measurement MCAL	2300	2097	--	--	--	--	
B0 from Tool Frequency MCAL	52.00	52.16	--	--	--	--	%
Cal. Fixture Amplitude MCAL	37.50	31.01	--	--	--	--	%
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Before: 14-Oct-2011 16:57							
Na 511 Peak Loc	40.00	N/A	39.71	N/A	N/A	1.000	
Na 511 Peak Res	15.50	N/A	15.31	N/A	N/A	2.000	%
High Voltage	1150	N/A	1165	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	N/A	143.1	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	N/A	7.773	N/A	N/A	2.000	%
Temperature	59.90	N/A	67.25	N/A	N/A	N/A	DEGF
Na Count Rate	45.00	N/A	39.92	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check							
Before: 14-Oct-2011 16:57							
Na 511 Peak Loc	40.00	N/A	40.66	N/A	N/A	1.000	
Na 511 Peak Res	15.50	N/A	14.62	N/A	N/A	2.000	%
High Voltage	1150	N/A	1228	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	N/A	145.2	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	N/A	8.177	N/A	N/A	2.000	%
Temperature	59.90	N/A	66.52	N/A	N/A	N/A	DEGF
Na Count Rate	45.00	N/A	39.76	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2							
Before: 14-Oct-2011 16:57							
Coincidence Count Rate Ratio	1.000	N/A	1.003	N/A	N/A	0.05000	
Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration							
Before: 15-Oct-2011 18:41							
EDTC Z-Axis Acceleration	32.19	N/A	31.96	N/A	N/A	N/A	F/S2
Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration							
Before: 14-Oct-2011 12:27							
Gamma Ray (Jig – Bkg)	145.5	N/A	145.5	N/A	N/A	13.22	GAPI
Gamma Ray (Calibrated)	160.0	N/A	160.0	N/A	N/A	15.00	GAPI

Elemental Capture Cartridge – B / Equipment Identification			
Primary Equipment:			
ECC Cartridge	ECC – B		
Auxiliary Equipment:			
ECC Housing	ECH – A		

Combinable Magnetic Resonance Tool – B / Equipment Identification			
Primary Equipment:			
CMR Cartridge	CMRC – B	152	
CMR-B Sonde	CMRS – BA	109	
Auxiliary Equipment:			
CMR Housing	CMRH – AA		

Combinable Magnetic Resonance Tool – B Master Calibration											
Calibration Fixture Measurement											
Phase	Cal. Fixture Temperature MCAL %		Value	Phase	LOOP Measurement MCAL		Value	Phase	B0 from Tool Frequency MCAL %		Value
Master			20.78	Master			2097	Master			52.16
10.0027.0044.00 (Minimum)(Nominal)(Maximum)				150023003200 (Minimum)(Nominal)(Maximum)				50.0052.0055.00 (Minimum)(Nominal)(Maximum)			
Phase	Cal. Fixture Amplitude MCAL %		Value								
Master			31.01								

Master: 14-Oct-2011 16:50

Hostile Natural Gamma Ray Cartridge – B / Equipment Identification

Primary Equipment:
HNGC Cartridge

HNGC – AB 35

Auxiliary Equipment:
HNGC Housing

HNGH - A 26

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:
HNGS Sonde

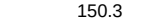
HNGS – BA 95

Auxiliary Equipment:
HNGS Sonde Housing
Gamma Source Radioactive

HNSH – BA	98
GSR – U	1284

Hostile Natural Gamma Ray Sonde Wellsite Calibration

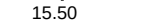
Detector 1 Check

Status: 1 Check														
Phase	Na 511 Peak Loc			Value	Phase	Na 511 Peak Res %			Value	Phase	High Voltage V			Value
Before				39.71	Before				15.31	Before				1165
	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 DEGF			Value
Before				143.1	Before				7.773	Before				67.25
	135.0 (Minimum)	142.6 (Nominal)	150.3 (Maximum)		7.000 (Minimum)	8.500 (Nominal)	11.00 (Maximum)			-20.00 (Minimum)	59.90 (Nominal)	140.0 (Maximum)		
Phase	Na Count Rate CPS			Value										
Before				39.92										
	10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)											

Before: 14-Oct-2011 16:57

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Detector 2 Check														
Phase		Na 511 Peak Loc		Value	Phase		Na 511 Peak Res %		Value	Phase		High Voltage V		Value
Before				40.66	Before				14.62	Before				1228
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 DEGF		Value
Before				145.2	Before				8.177	Before				66.52
135.0 (Minimum)		142.6 (Nominal)		150.3 (Maximum)	7.000 (Minimum)		8.500 (Nominal)		11.00 (Maximum)	-20.00 (Minimum)		59.90 (Nominal)		140.0 (Maximum)
Phase		Na Count Rate CPS		Value										
Before				39.76										
10.00 (Minimum)		45.00 (Nominal)		100.0 (Maximum)										

Before: 14-Oct-2011 16:57

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Ratio Of Detector 1 To Detector 2

Phase	Coincidence Count Rate Ratio	Value
Before		1.003
	0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)	

Before: 14-Oct-2011 16:57

Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:
EDTC Gamma Ray Detector
Enhanced DTS Cartridge

EDTG - A/B
EDTC - B

Auxiliary Equipment:
EDTC Housing

EDTH - B

8298

Enhanced DTS Cartridge Wellsite Calibration		
EDTC Accelerometer Calibration		
Phase	EDTC Z-Axis Acceleration F/S2	Value
Before		31.96
	31.53 (Minimum)	32.19 (Nominal)
		32.84 (Maximum)
Before: 15-Oct-2011 18:41		

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			51.68	Before			145.5	Before			160.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		132.2 (Minimum)	145.5 (Nominal)	158.7 (Maximum)		145.0 (Minimum)	160.0 (Nominal)	175.0 (Maximum)
Before: 14-Oct-2011 12:27											

Company: **SANDIA TECHNOLOGIES, LLC**

Schlumberger

Well: **NYSTA TANDEM LOT 1**

Field: **WILDCAT**

County: **ROCKLAND**

State: **NEW YORK**

Combinable Magnetic Resonance
Gamma Ray