Pioneer Energy Services

RADIAL CEMENT BOND GAMMA RAY CCL LOG

Company	PDC
Well	SORIN 2U-443
Field	WATTENGBERG
County	WELD
State	COLORADO

Company PDC
Well SORIN 2U-443
Field WATTENGBERG
County WELD State COLORADO

Location: API # : 05-123-37311

Other Services

SEC TWP RGE

Permanent Datum	G.L.	Elevation	4671'
Log Measured From	K.B. 13' A.G.L.		
Drilling Measured From	KB		

Elevation
K.B. 4684'
D.F.
G.L. 4671'

Date	20-NOVEMBER-2014
Run Number	ONE
Depth Driller	N/A
Depth Logger	6390'
Bottom Logged Interval	6390'
Top Log Interval	SURFACE
Open Hole Size	8.75"
Type Fluid	WATER
Density / Viscosity	N/A
Max. Recorded Temp.	N/A
Estimated Cement Top	
Time Well Ready	7:00
Time Logger on Bottom	10:30
Equipment Number	P-109
Location	FORT MORGAN
Recorded By	HARPER
Witnessed By	

Borehole Record			Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String				
Liner				

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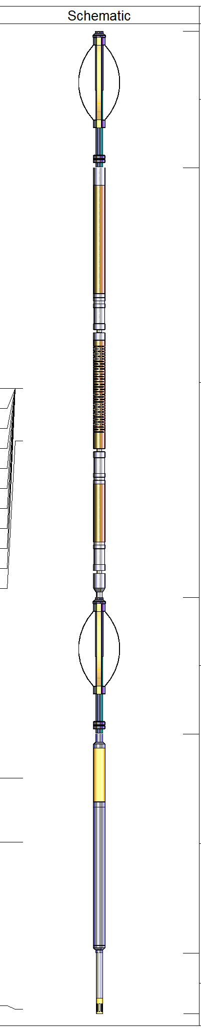
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments



Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
		PTS275	2.83	2.75	
WVF3FT	12.96	RBT-Probe (Base) Probe Radii Bond Tool with Digital Telemetry	8.92	2.75	90.00
WVFCAL	12.96				
WVFS1	12.96				
WVFS2	12.96				
WVFS3	12.96				
WVFS4	12.96				
WVFS5	12.96				
WVFS6	12.96				
WVFS7	12.96				
WVFS8	12.96				
WVF5FT	11.88				
		PTS275	2.83	2.75	
CCL	4.88				
GR	3.55	GR_CCL-Probe (111211) Probe Gamma CCL	4.54	2.75	100.00
TEMP	0.08	TEMP-1.375TEMP (0001) Temperature Tool	1.25	1.38	30.00

Dataset:	pdc sorin 2u-443.db: field/well/run1/pass5
Total Length:	20.38 ft
Total Weight:	220.00 lb
O.D.	2.75 in

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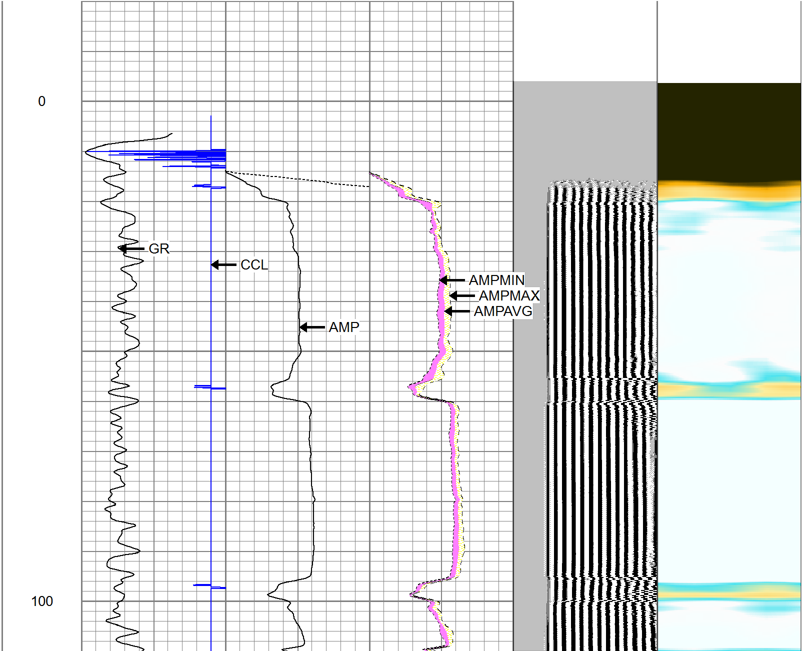
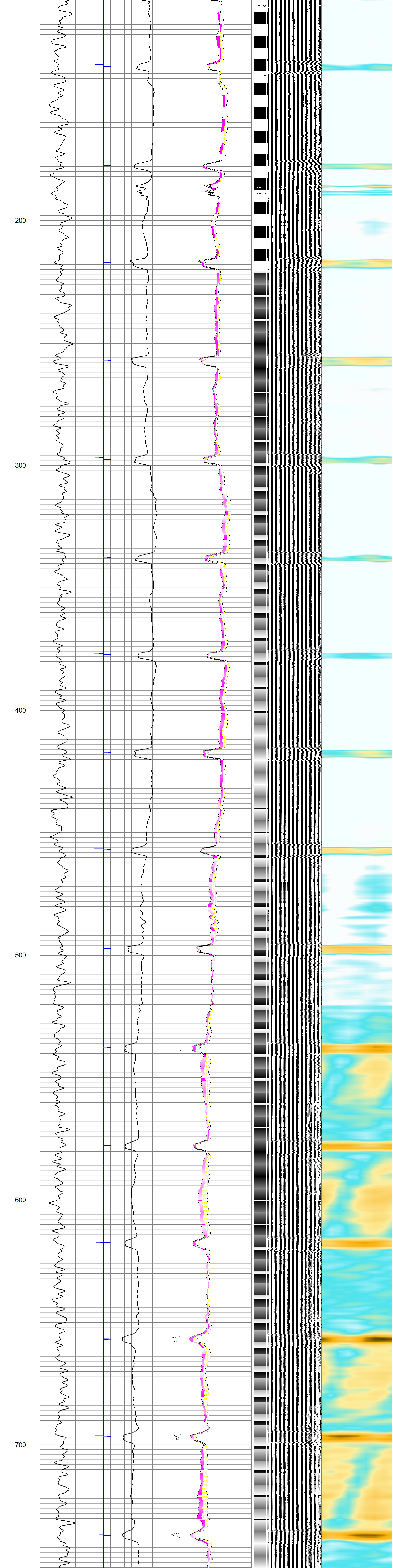
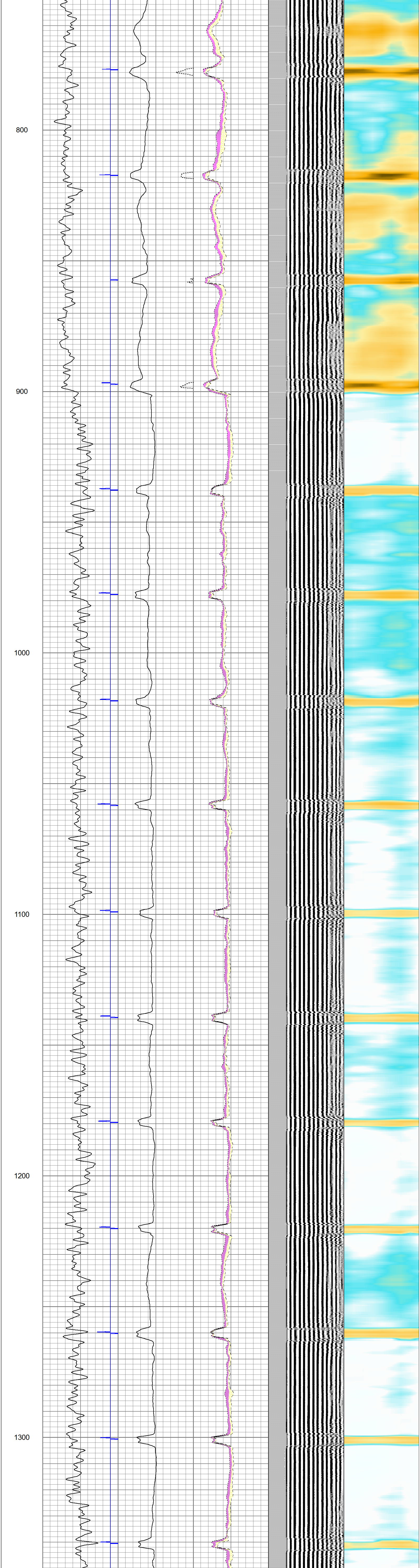
MAIN PASS 0 PSI

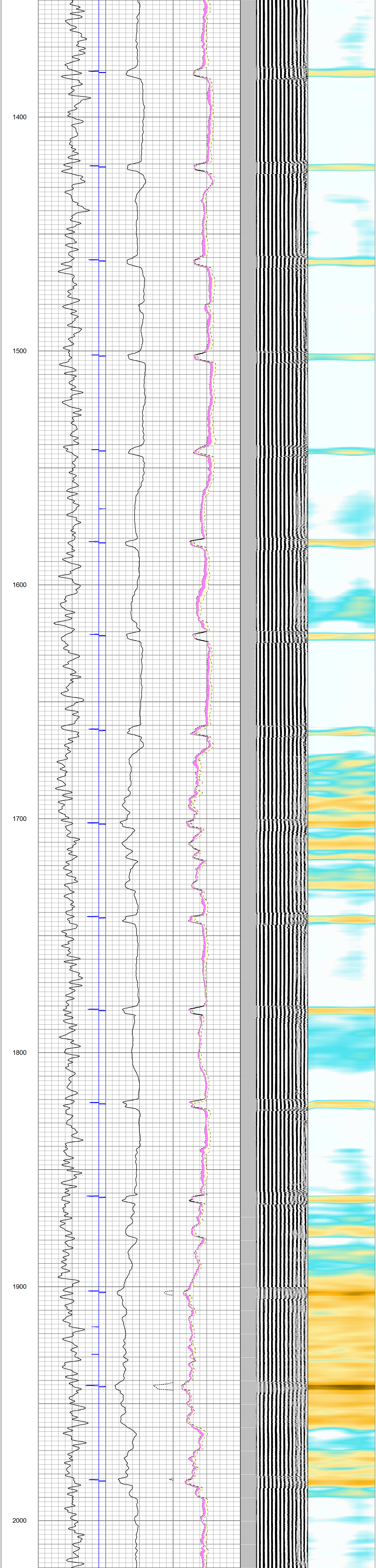
Database File:	pdc sorin 2u-443.db
Dataset Pathname:	pass5
Presentation Format:	scbl02
Dataset Creation:	Thu Nov 20 10:59:50 2014 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240

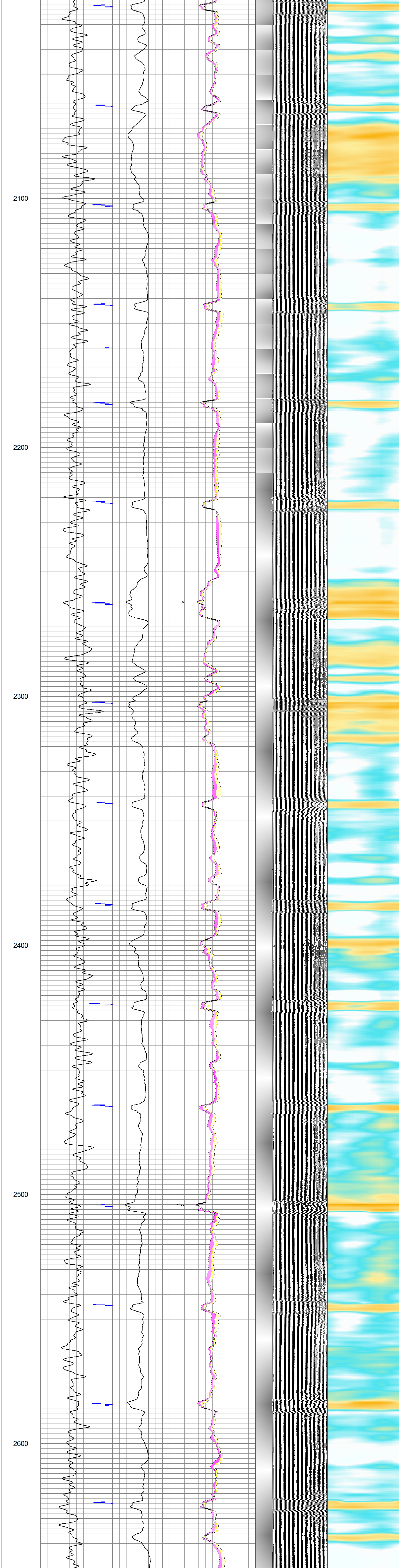
-9 CCL 1	0 AMP (mV) 100	0 AMPAVG 150	200 VDL 1200	1 SECTOR MAP 8
0 GR (GAPI) 200	0 AMPx5 (mV) 20	0 AMPMAX 150		15 80
		0 AMPMIN 150		

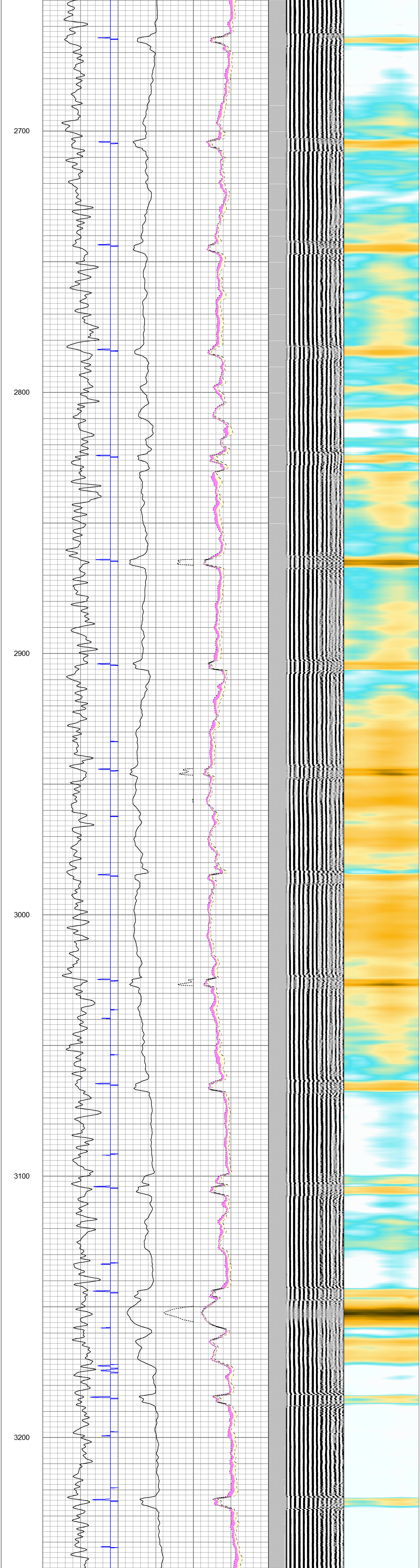


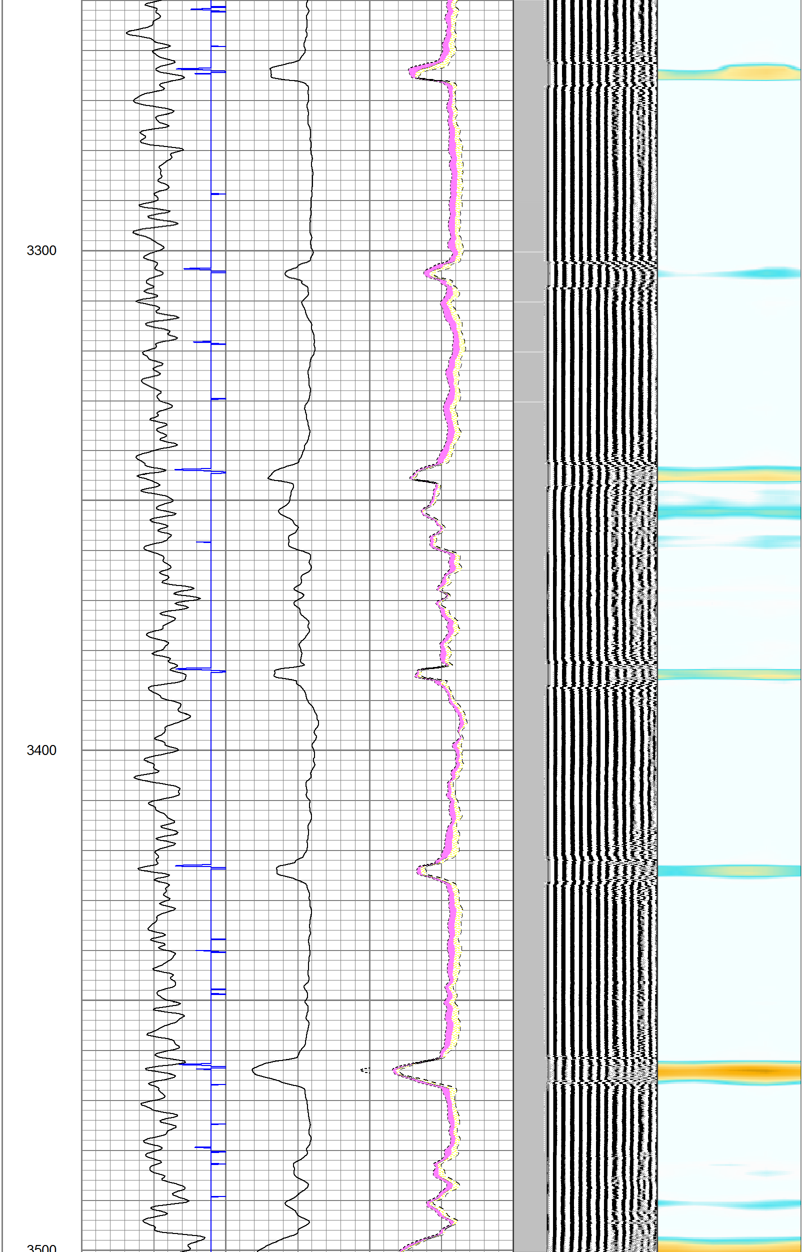


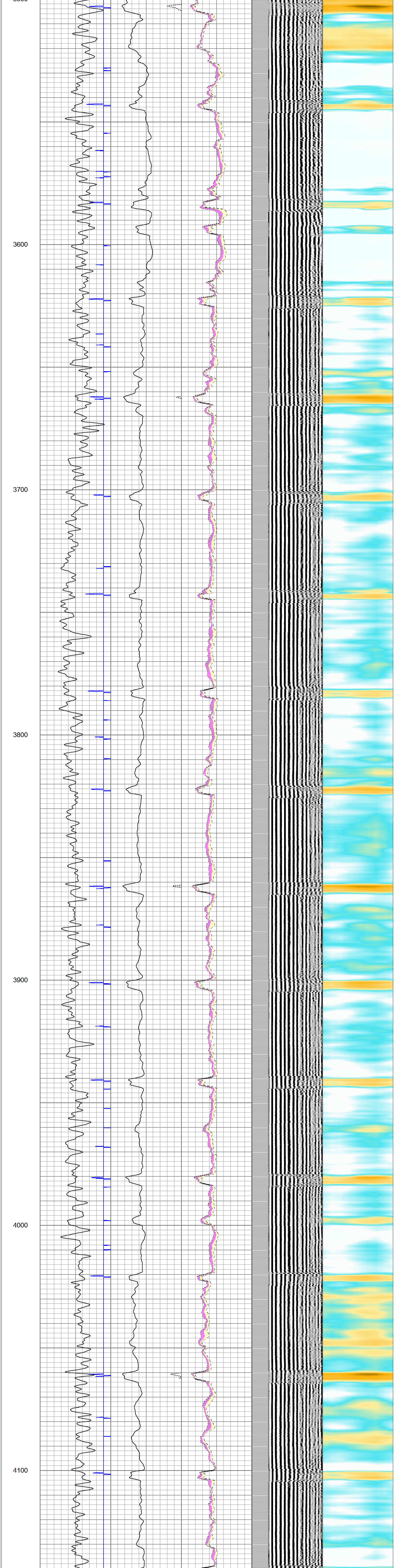


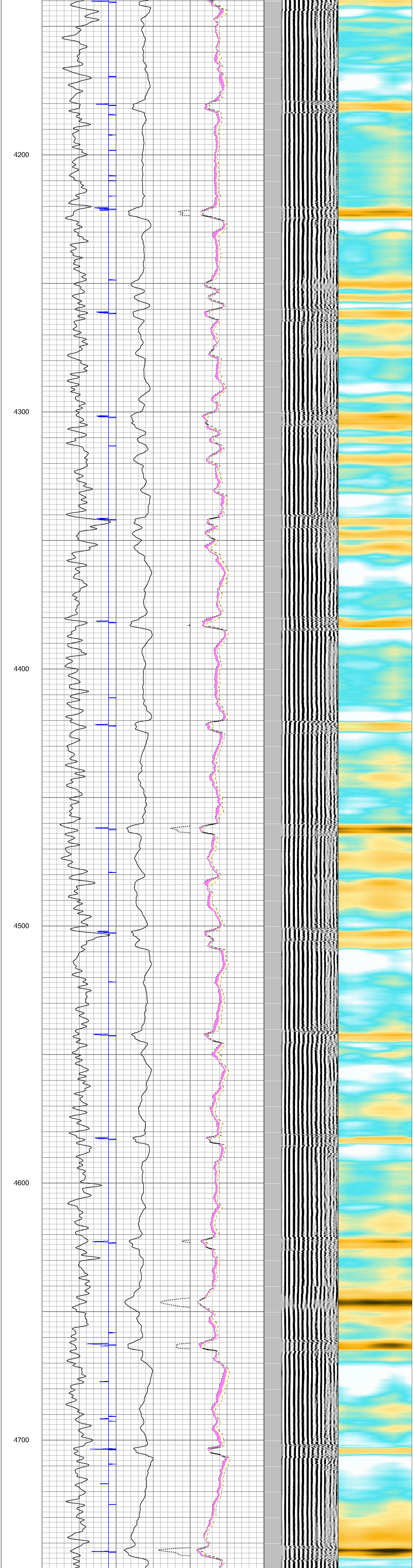


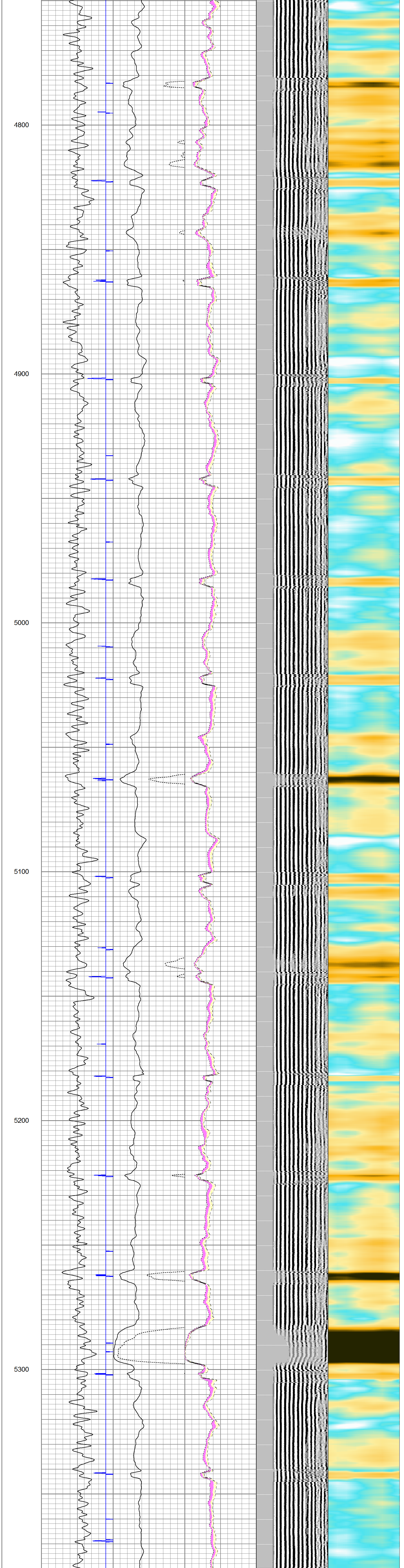


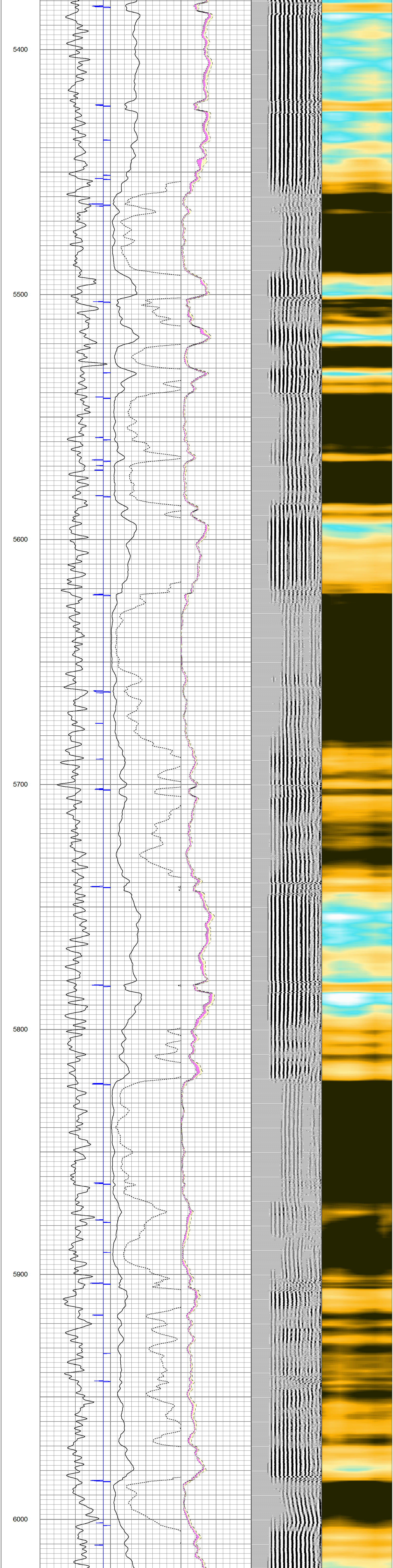


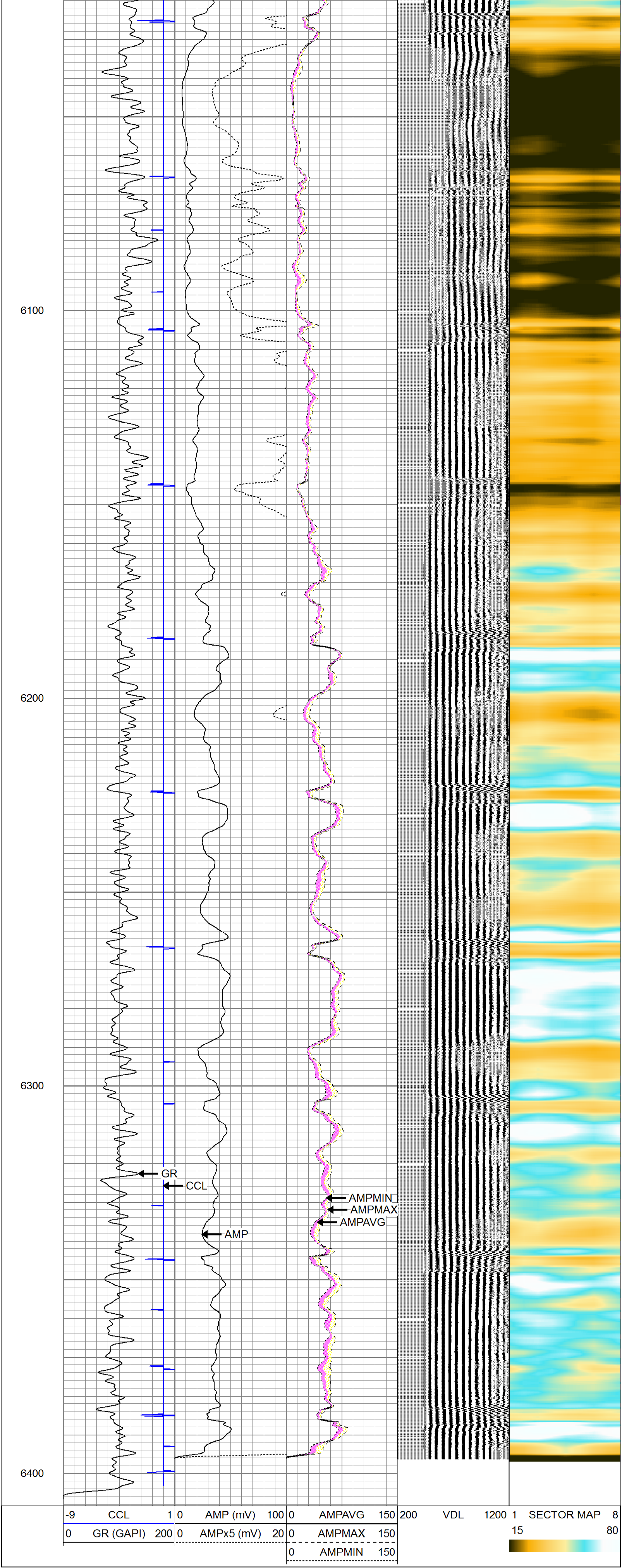












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MAIN PASS 0 PSI

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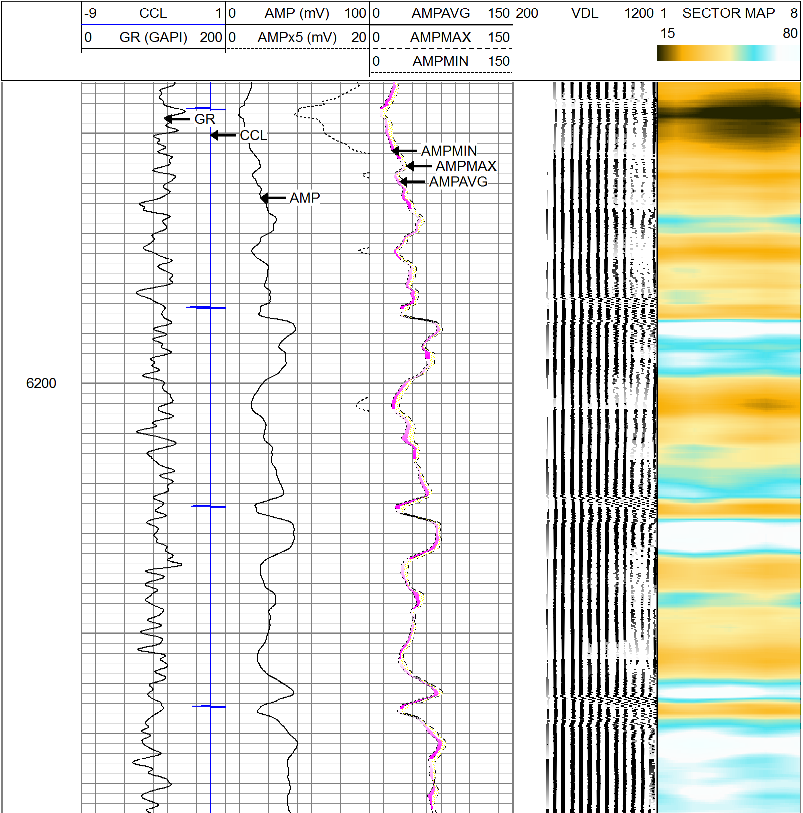
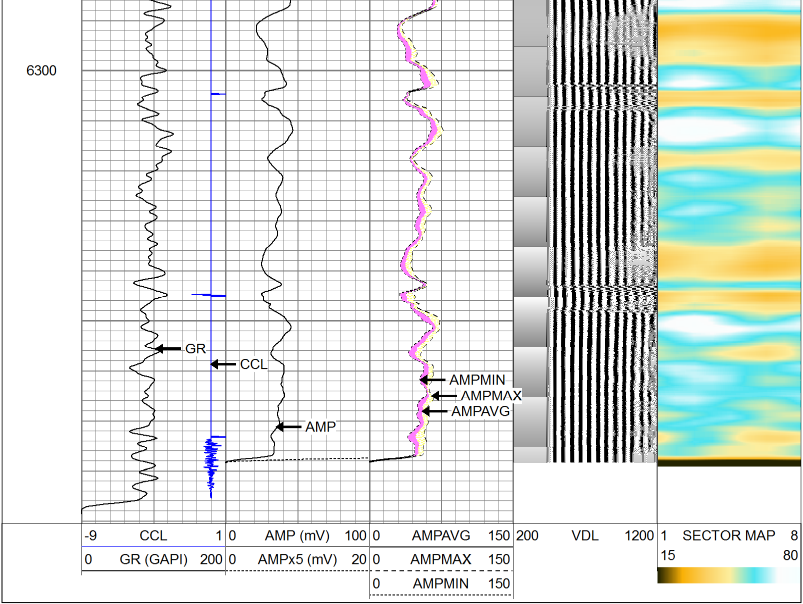
REPEAT PASS 0 PSI

Database File:	pdc sorin 2u-443.db
Dataset Pathname:	pass4
Presentation Format:	scbl02
Dataset Creation:	Thu Nov 20 10:54:53 2014 by Log SCH 120430
Charted by:	Depth in Feet scaled 1:240





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REPEAT PASS 0 PSI

Calibration Report

Database File: pdc sorin 2u-443.db
Dataset Pathname: pass5
Dataset Creation: Thu Nov 20 10:59:50 2014 by Log SCH 120430

Temperature Calibration Report

Serial Number: 0001
Tool Model: 1.375TEMP
Performed: Thu May 01 14:34:28 2014

	Reference	Reading
Low Reference:	32.00 degF	320.00 degF
High Reference:	500.00 degF	5000.00degF

Gain: 0.10
Offset: 0.00
Delta Spacing 2

Gamma Ray Calibration Report

Serial Number: 111211
Tool Model: Probe
Performed: Sun Jun 13 13:33:21 1993

Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: Base
Tool Model: Probe

Calibration Casing Diameter:	7.000	in
Calibration Depth:	2383.392	ft

Master Calibration, performed Thu Nov 20 10:42:17 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.027	0.953	1.000	62.000	65.875	-0.762
CAL	0.022	0.292				
5'	0.032	1.068	1.000	62.000	58.878	-0.881
SUM						
S1	0.023	0.924	0.000	95.000	105.457	-2.437
S2	0.021	0.887	0.000	95.000	109.801	-2.359
S3	0.022	0.899	0.000	95.000	108.407	-2.430
S4	0.029	0.942	0.000	95.000	104.087	-3.023
S5	0.034	0.974	0.000	95.000	101.107	-3.436
S6	0.032	1.014	0.000	95.000	96.747	-3.141
S7	0.028	1.014	0.000	95.000	96.338	-2.693
S8	0.025	0.977	0.000	95.000	99.800	-2.528

Internal Reference Calibration, performed Wed Aug 21 11:08:58 2013:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.022	0.292	1.000	0.000

Air Zero Calibration, performed Thu Nov 20 10:27:06 2014:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000