

RADIAL SECTOR BOND LOG WITH GAMMA RAY

Well	VARRA 20-32
Field	WATTENBERG
County	WELD

State COLORADO

Company **KERR-MCGEE OIL & GAS**

We'll VARRA 20-32

Field WATTENBERG

County **WELD** State **COLORADO**

Location: API #: 0512330928

411' FSL & 477' FEL SESE
1270' FSL & 1236' FEL SESE
SEC 32 TWP 3N RGE 67W

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Permanent Datum	GL	Elevation	4835
Log Measured From	KB		
Drilling Measured From	KB		

Elevation	
K.B.	4850
D.F.	4849
G.L.	4835

Date of Service	01-JULY-2014
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Run Number

Depth Logger

Top Log Interval

Open Hole Size

Type Fluid

Fluid Level

Fluid Density

Max. Recorded Temperature

Max: Wellhead 1133

Estimated Comment Turn

Unit Number

Wireline Size

Location

Recorded By

Witnessed By

15 JULY 2005

Tubing Reco

Surface Casi

Production C

Liner Record

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

THANK YOU FOR USING PIONEER Energy SERVICES

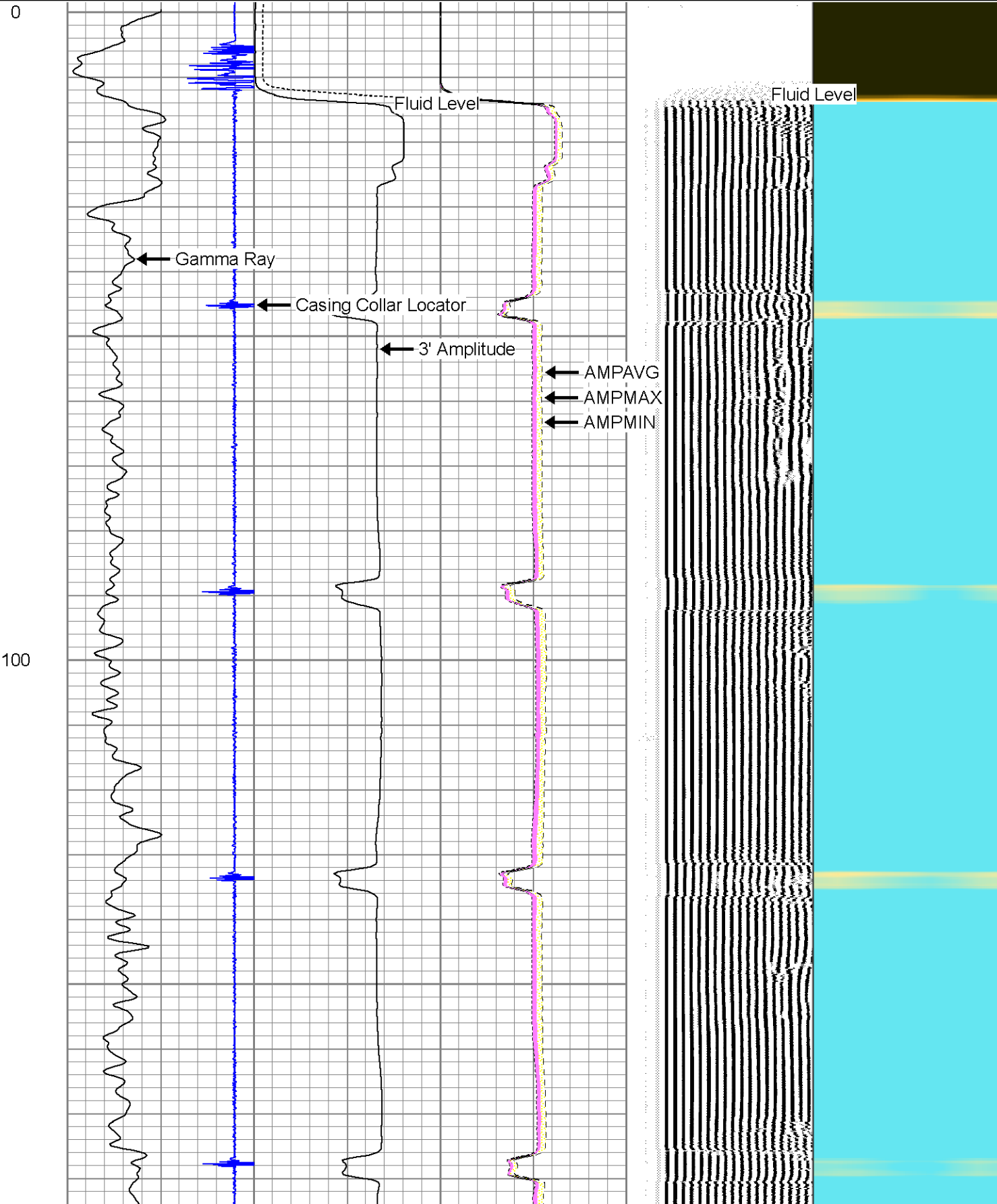
Your Pioneer Energy Services Crew

Tool Data - Services

Serial Number

Engineer:
Operator:
Operator:
Operator:

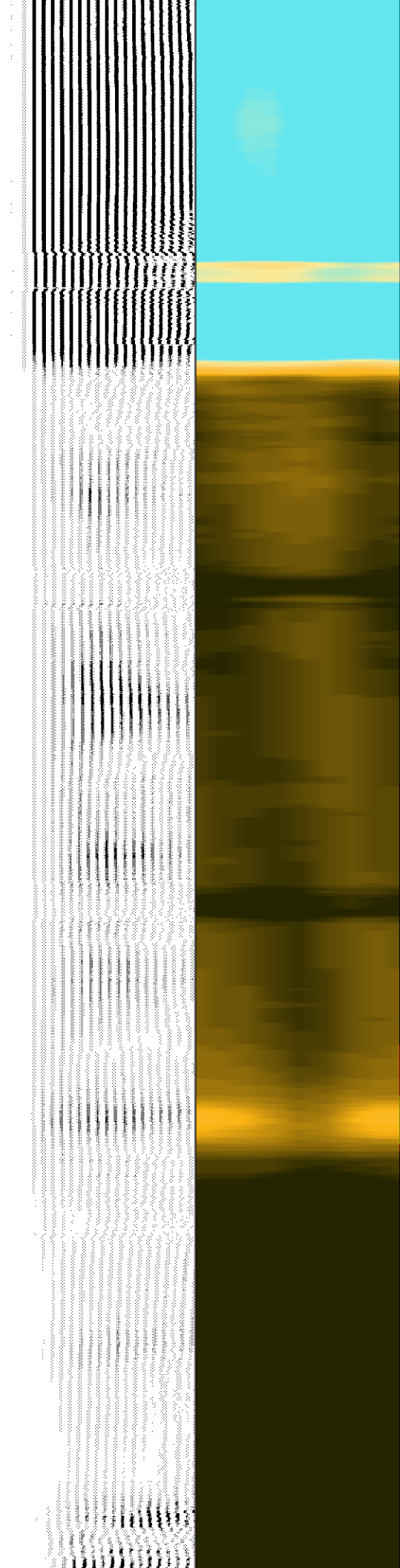
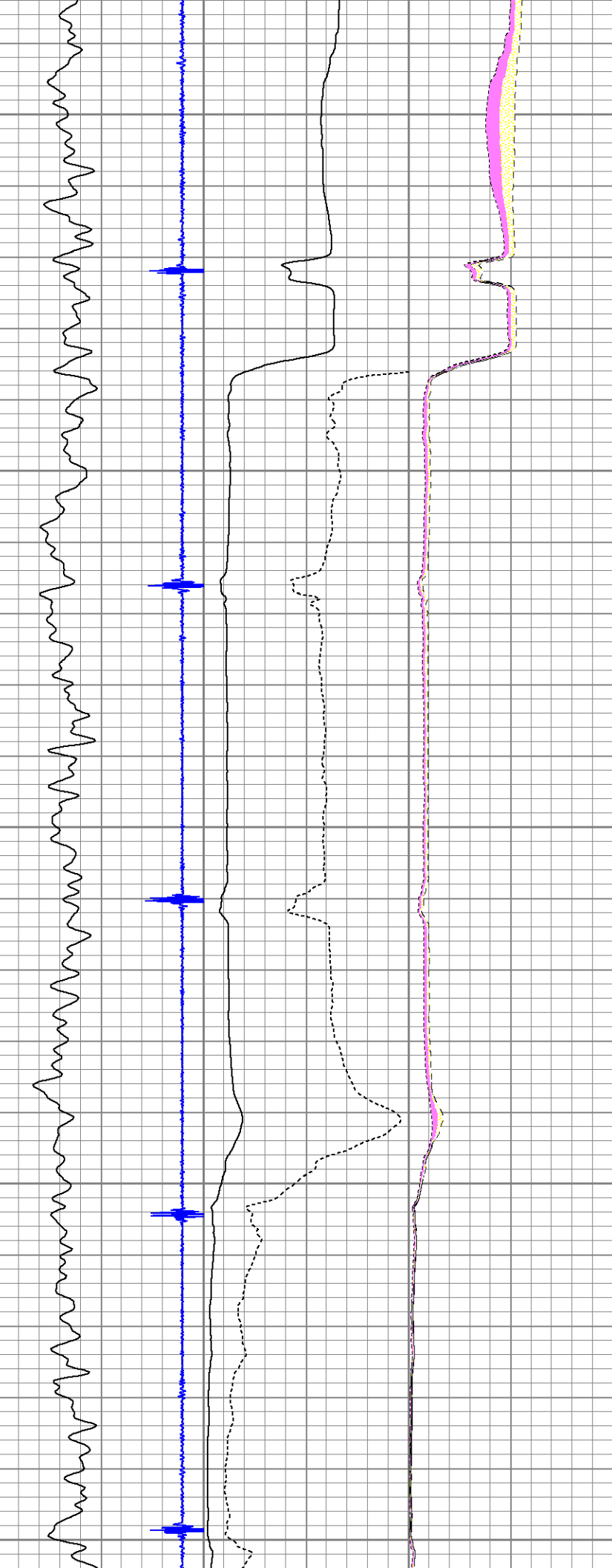
-9	CCL	1	3' Amplitude	0	AMPAVG	150	200	VDL	1200	1	SECTOR MAP	8
	Gamma Ray	0	(mV)	100	0	AMPMAX	150			10		60
0	(GAPI)	200	0	AMPx5 (mV)	20	0	AMPMIN	150				



200

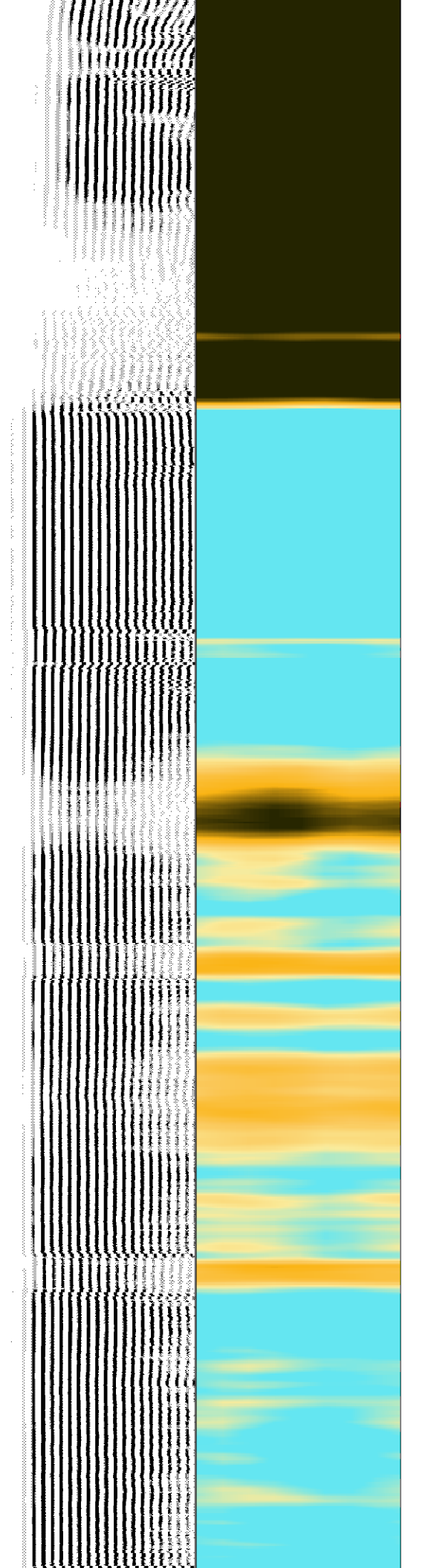
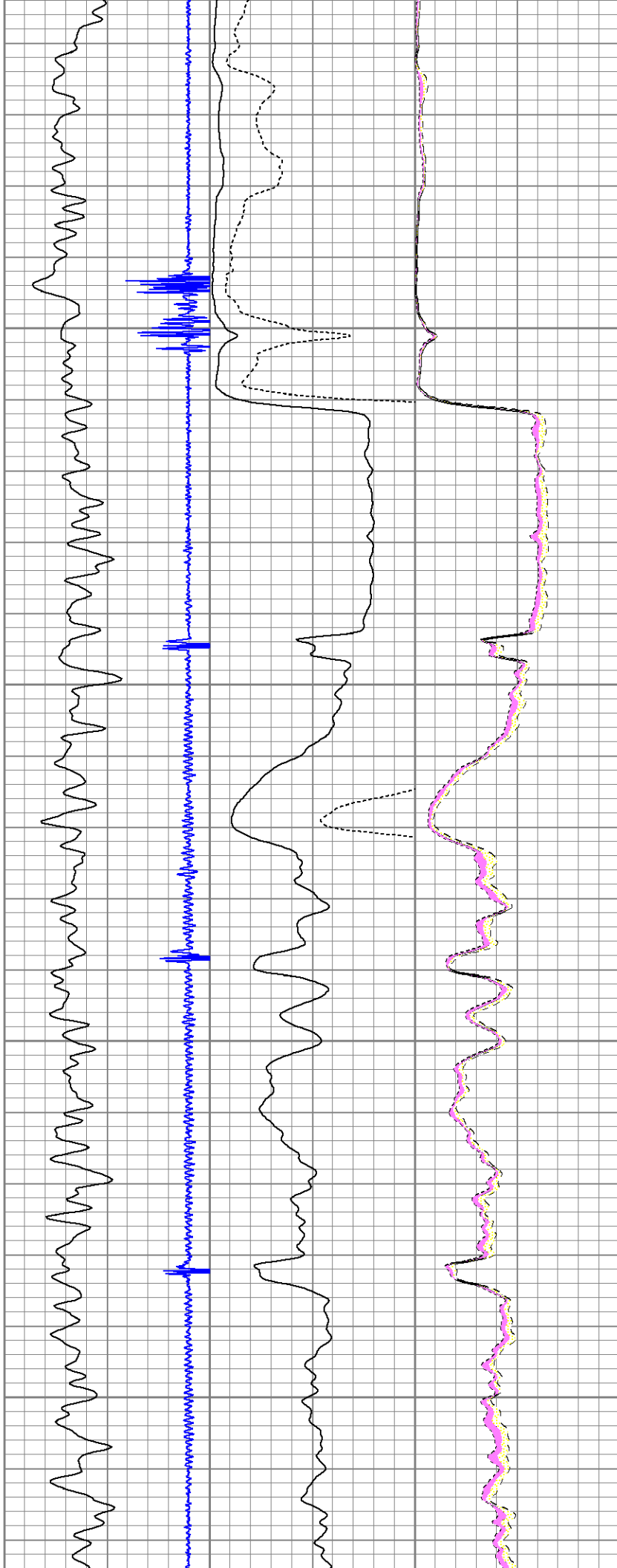
300

400



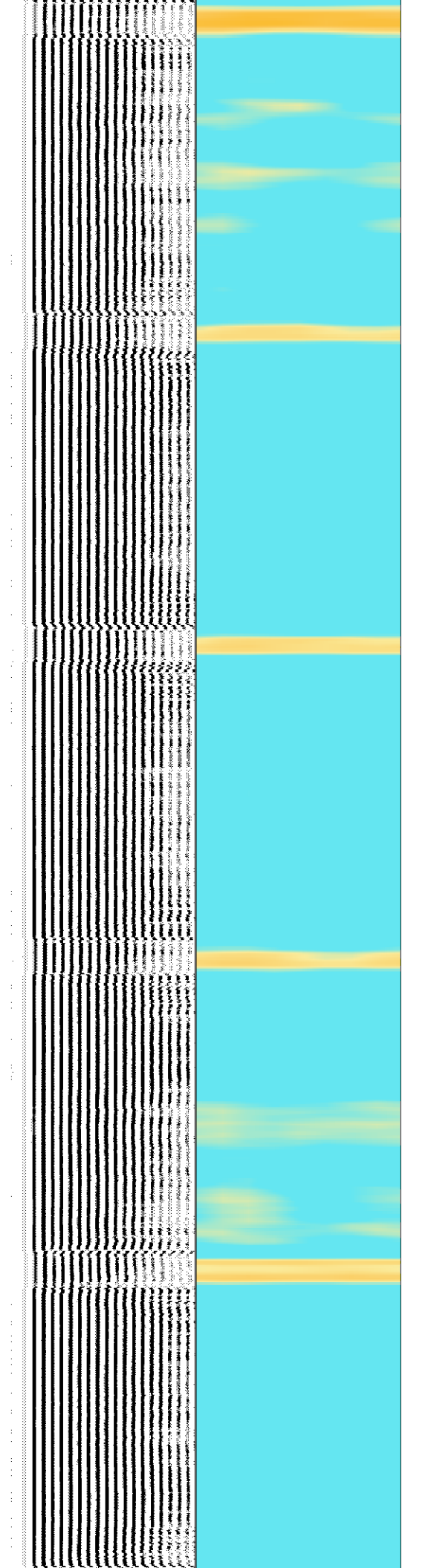
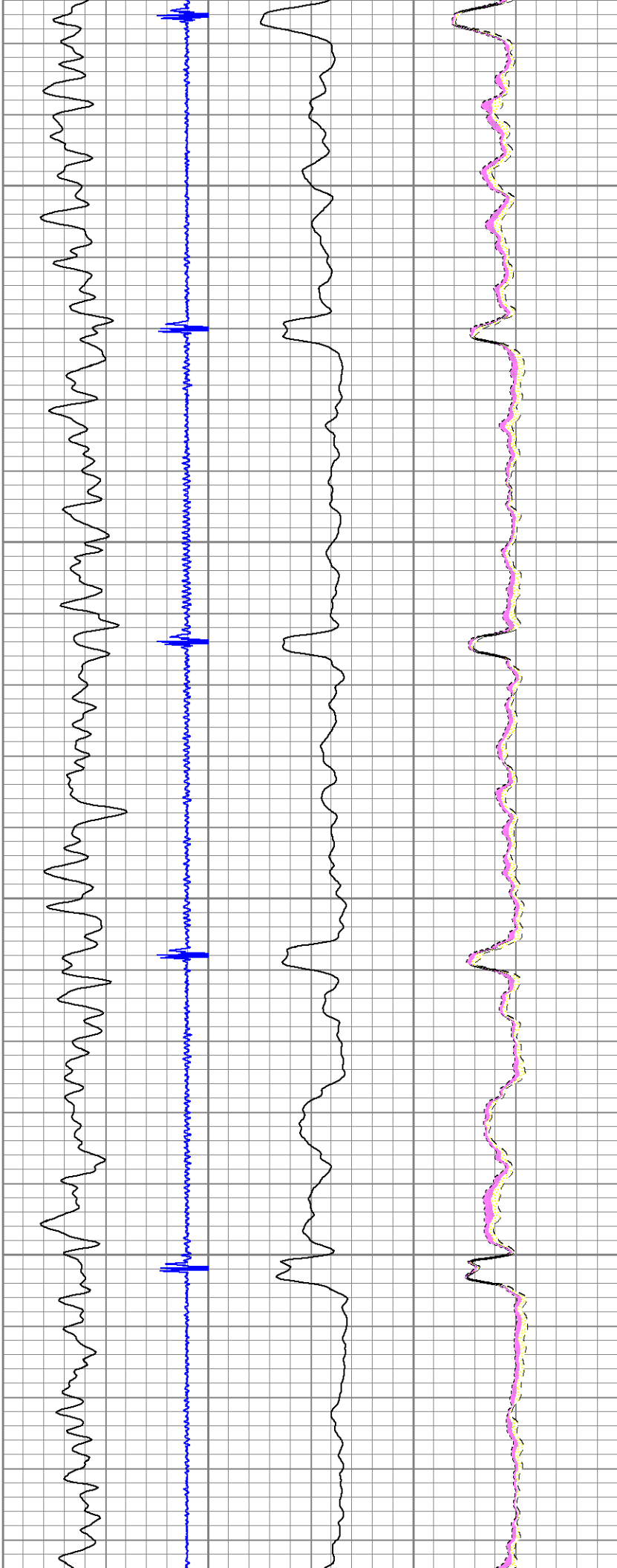
500

600



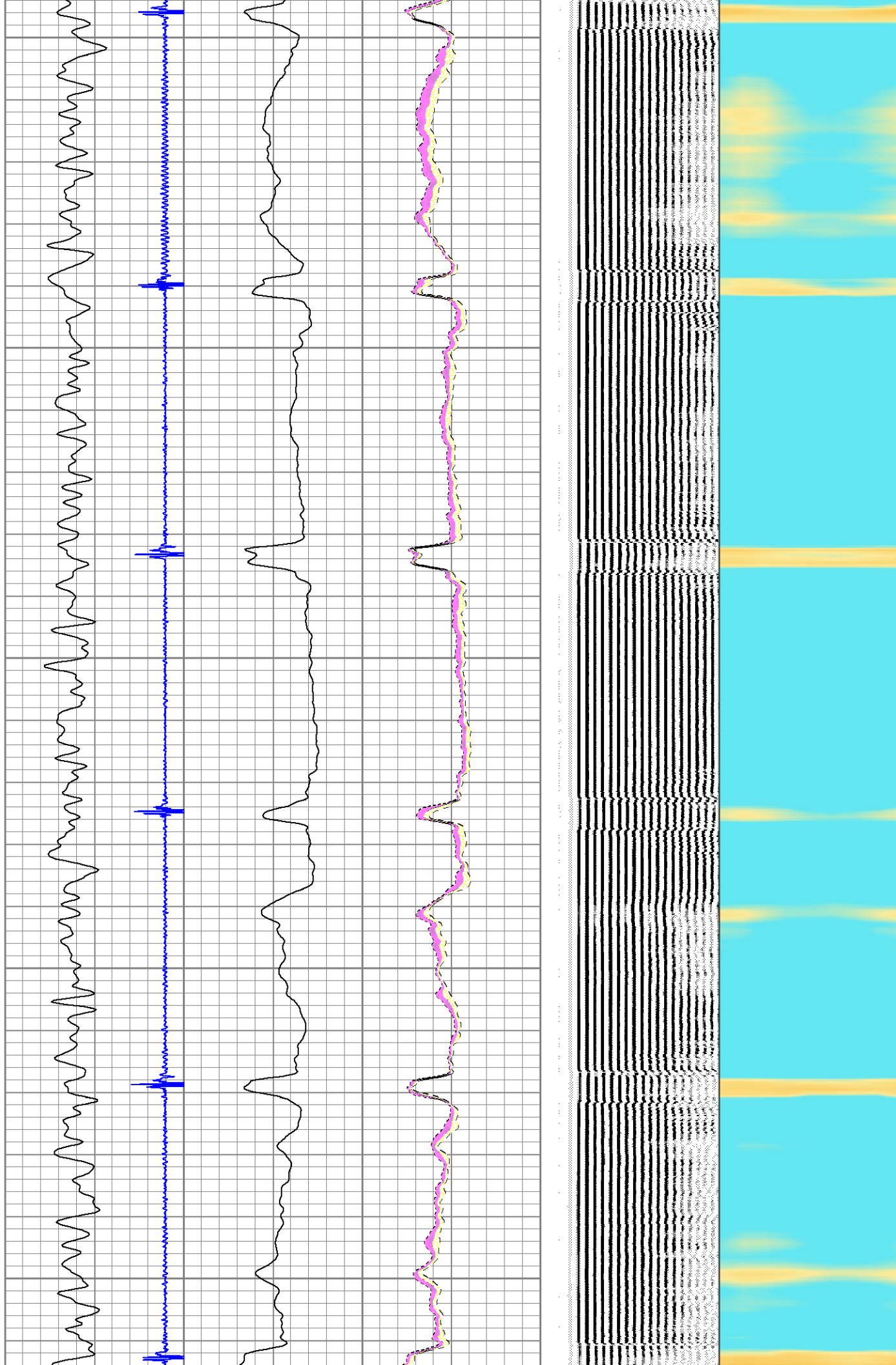
700

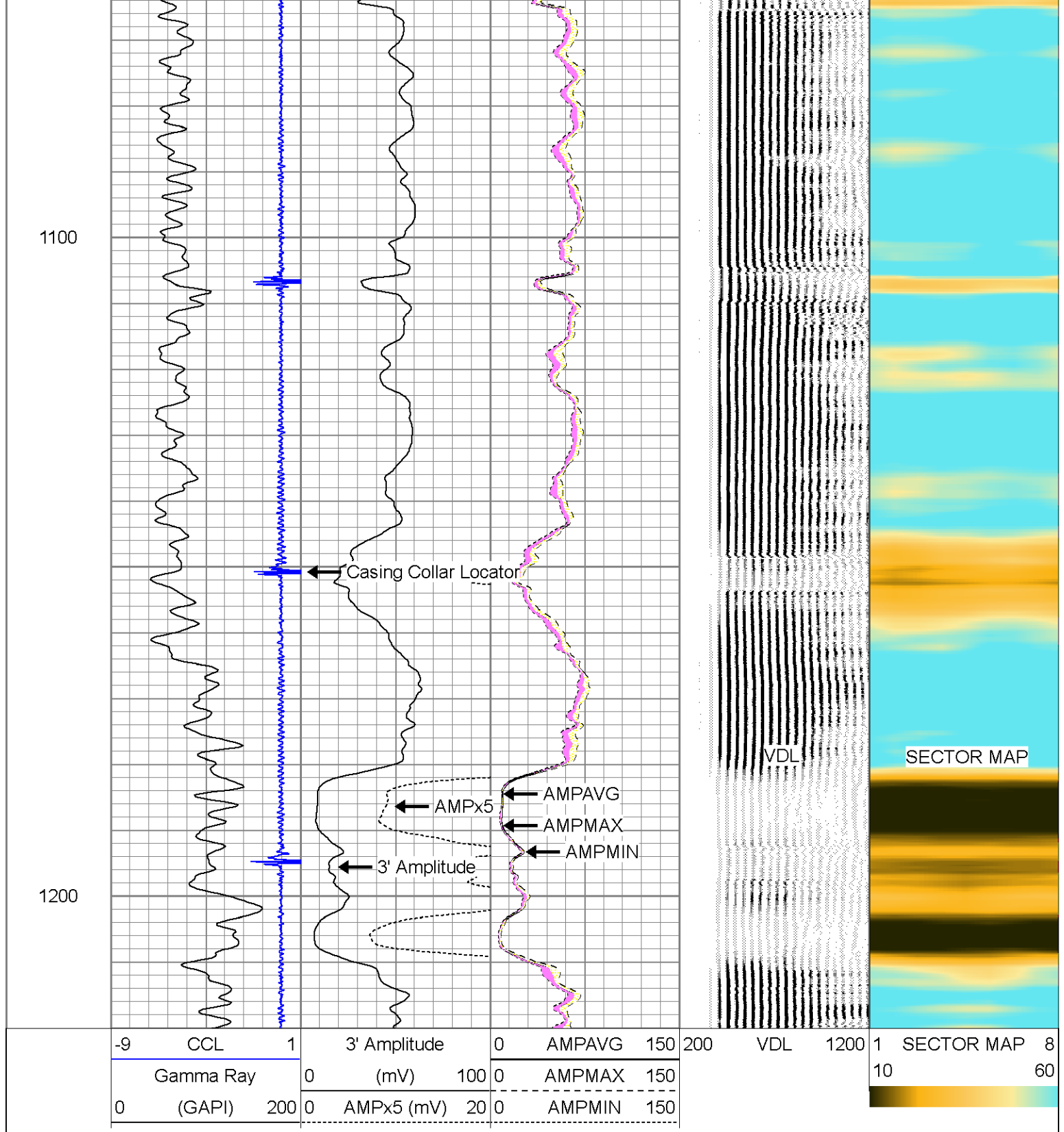
800



900

1000





Calibration Report

Database File: varra_20-32.db
 Dataset Pathname: pass1
 Dataset Creation: Tue Jul 01 07:35:58 2014 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number: 111212
 Tool Model: Probe
 Performed: Sat Apr 26 08:27:22 2014

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:	4.500 in
Calibration Depth:	5583.036 ft

Master Calibration, performed Mon Jun 30 15:36:00 2014:

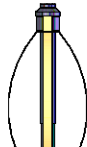
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.013	1.957	1.000	81.196	41.263	0.448
CAL	0.013	0.568				
5'	0.013	1.954	1.000	81.196	41.325	0.457
SUM						
S1	0.013	1.973	0.000	95.000	48.470	-0.645
S2	0.013	2.015	0.000	95.000	47.473	-0.640
S3	0.013	1.970	0.000	95.000	48.553	-0.640
S4	0.014	1.898	0.000	95.000	50.414	-0.688
S5	0.013	1.873	0.000	95.000	51.074	-0.661
S6	0.014	1.880	0.000	95.000	50.890	-0.695
S7	0.013	1.947	0.000	95.000	49.126	-0.653
S8	0.013	2.005	0.000	95.000	47.702	-0.639

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	0.013	0.568	1.000	0.000

Air Zero Calibration, performed Mon Dec 09 06:54:41 2013:

	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	

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			PTS275	2.83	2.75	

