



**PIONEER**  
 Energy Services

**RADIAL**  
**SECTOR BOND LOG**  
**WITH GAMMA RAY**

Company **KERR-MCGEE OIL & GAS ONSHORE LP**  
 Well **NESG 39-23**  
 Field **WATTENBERG**  
 County **WELD** State **COLORADO**

Location: API # : 0512324979  
 Other Services

Permanent Datum GL Elevation 4950  
 Log Measured From KB  
 Drilling Measured From KB  
 SEC 24 TWP 3N RGE 68W  
 Elevation 4970  
 D.F. 4769  
 G.L. 4950

Date of Service	29-APR-2014				
Run Number	ONE				
Depth Driller or PBTD	7590				
Depth Logger	1562				
Bottom Log Interval	1562				
Top Log Interval	SURFACE				
Open Hole Size	7-7/8"				
Type Fluid	WATER				
Fluid Level	FULL				
Fluid Density	8.33 PPG				
Max. Recorded Temperature	NOT RECORDED				
Max. Wellhead Pressure	0				
Wellhead Connection	5K FLANGE				
Estimated Cement Top	SURFACE				
Unit Number	75				
Wireline Size	9-32"				
Location	FORT MORGAN				
Recorded By	LEROY HOBBS				
Witnessed By	MIKE KOCH				
	Size	Wt/Ft	Top	Bottom	
Tubing Record					
Surface Casing	8.63"	24.00	SURFACE	913	
Production Casing	4-1/2"	11.6	SURFACE	7402	
Liner Record					

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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.

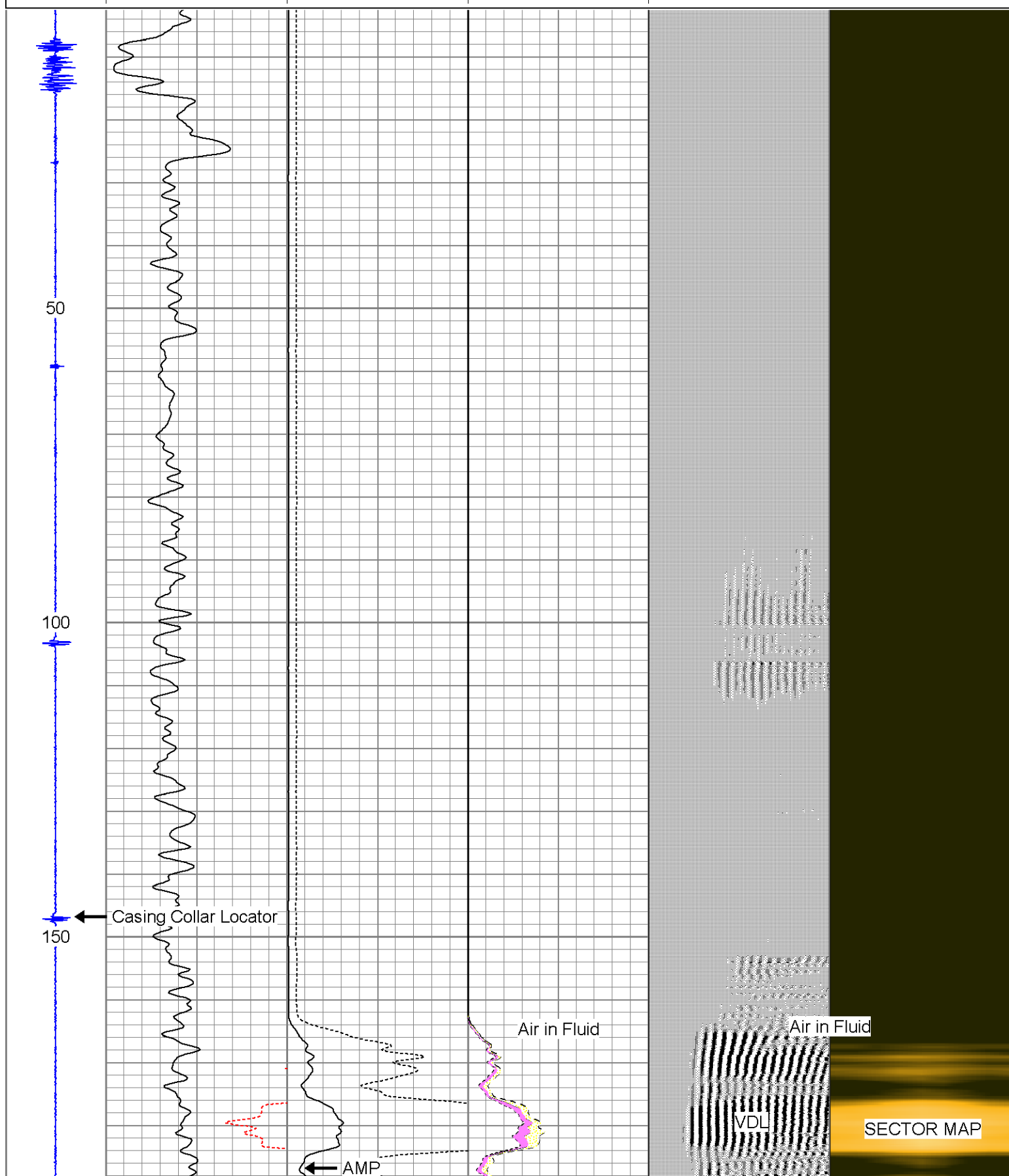
Comments  
 N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

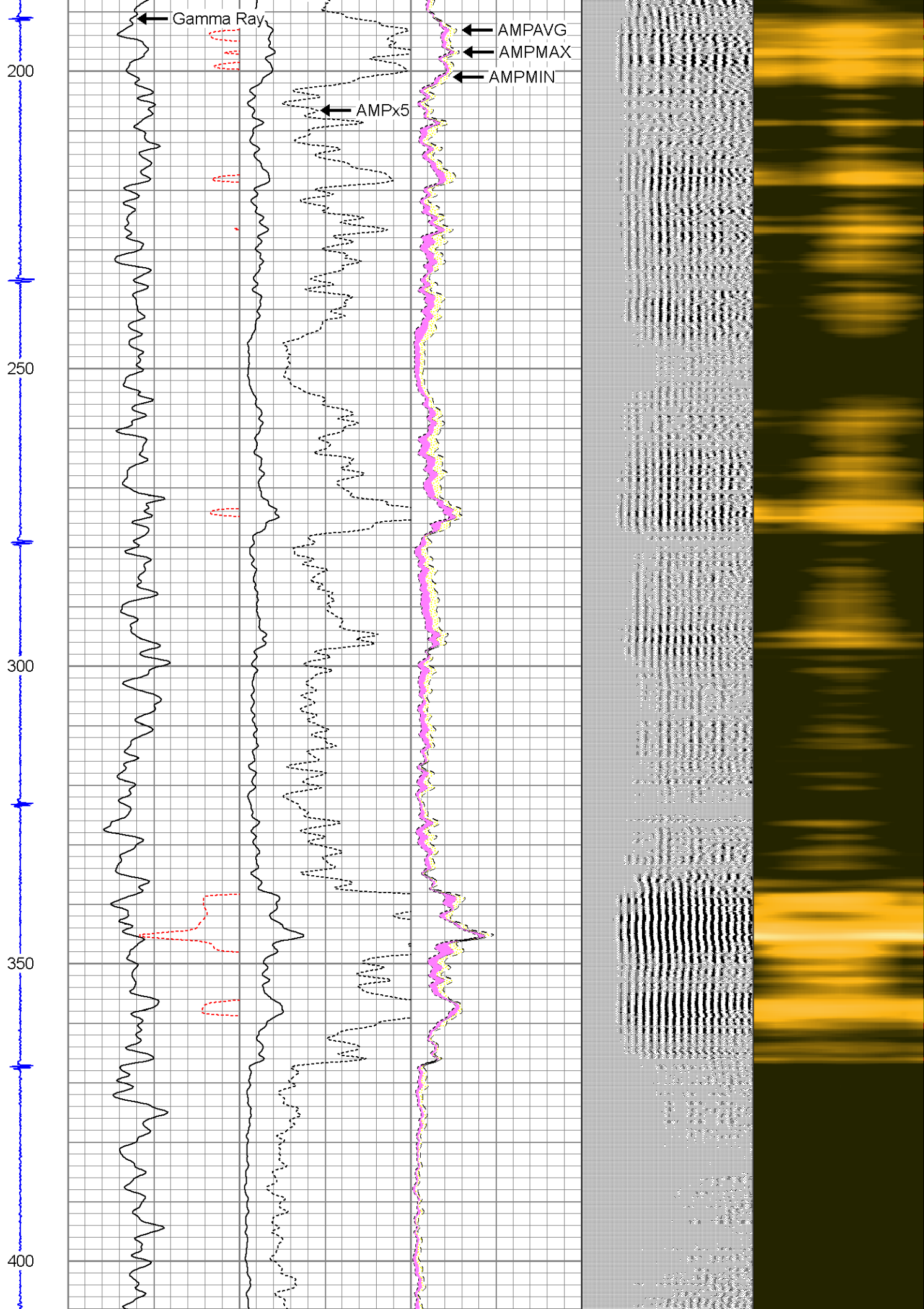
THANK YOU FOR USING PIONEER Energy SERVICES

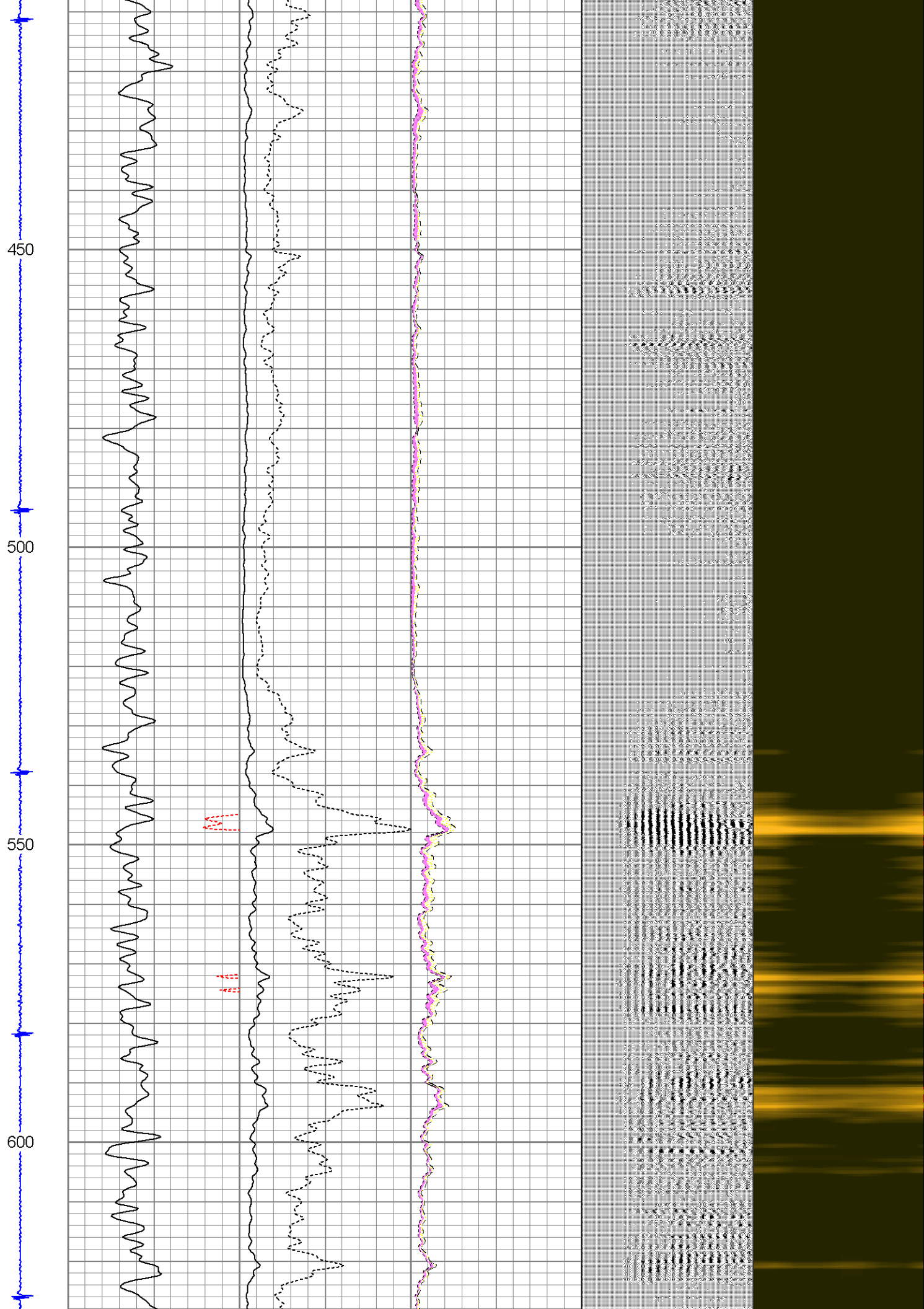
Your Pioneer Energy Services Crew Engineer: HOBBS Operator: SDPILLMAN Operator: PAPE Operator:	Tool Data - Services RBL GR_CCL	Serial Number
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Database File: nesg\_39-23.db  
Dataset Pathname: pass1  
Presentation Format: scbl02  
Dataset Creation: Tue Apr 29 09:06:52 2014 by Log 7.0 B1  
Charted by: Depth in Feet scaled 1:240

-8	CCL	8	0	GR (GAPI)	200	0	AMP (mV)	100	0	AMPAVG	100	200	VDL	1200	1	SECTOR MAP	8
				TT3FT		0	AMPx5 (mV)	20	0	AMPMAX	100				10		60
				262 (usec)	362				0	AMPMIN	100						





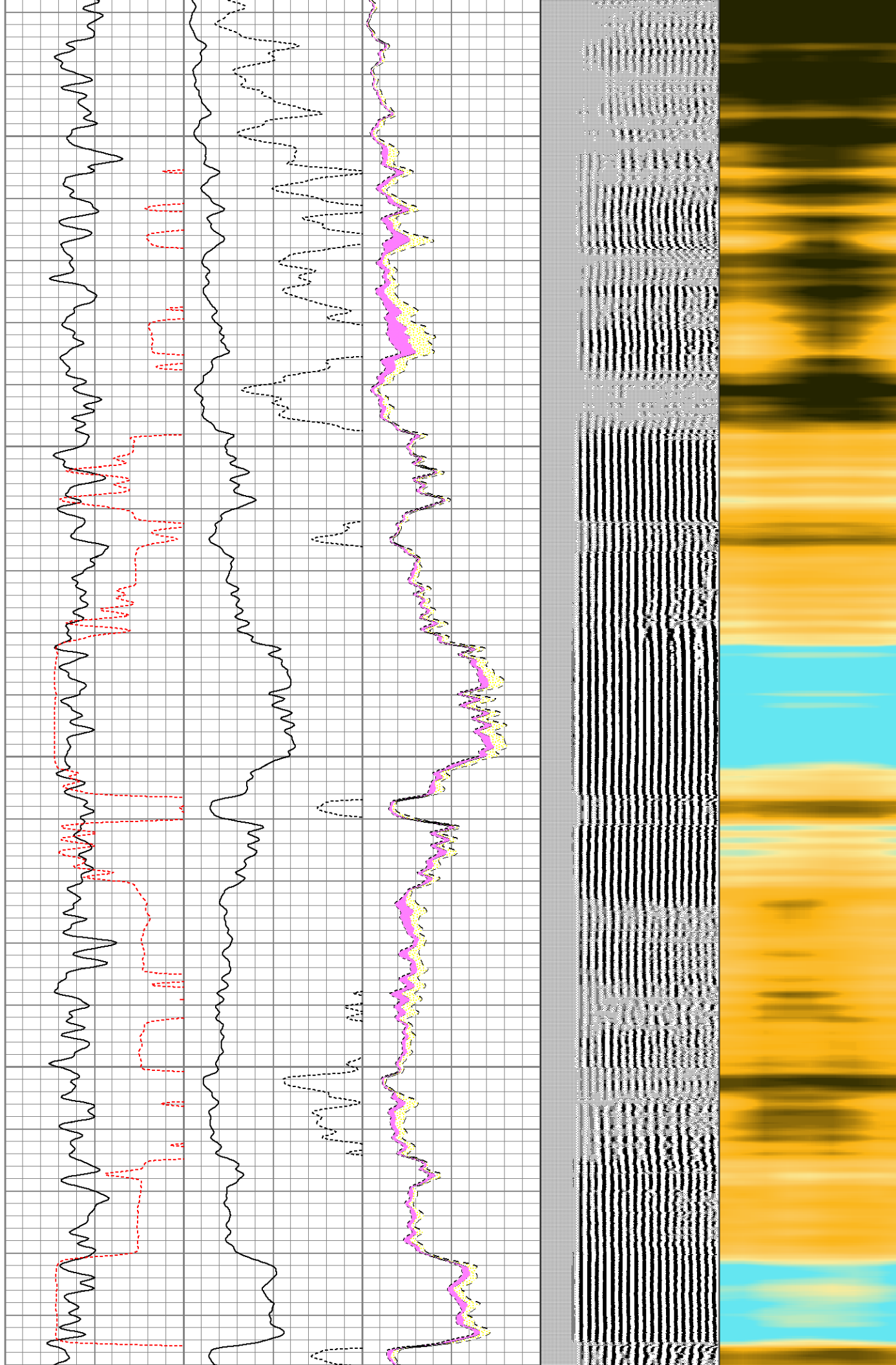


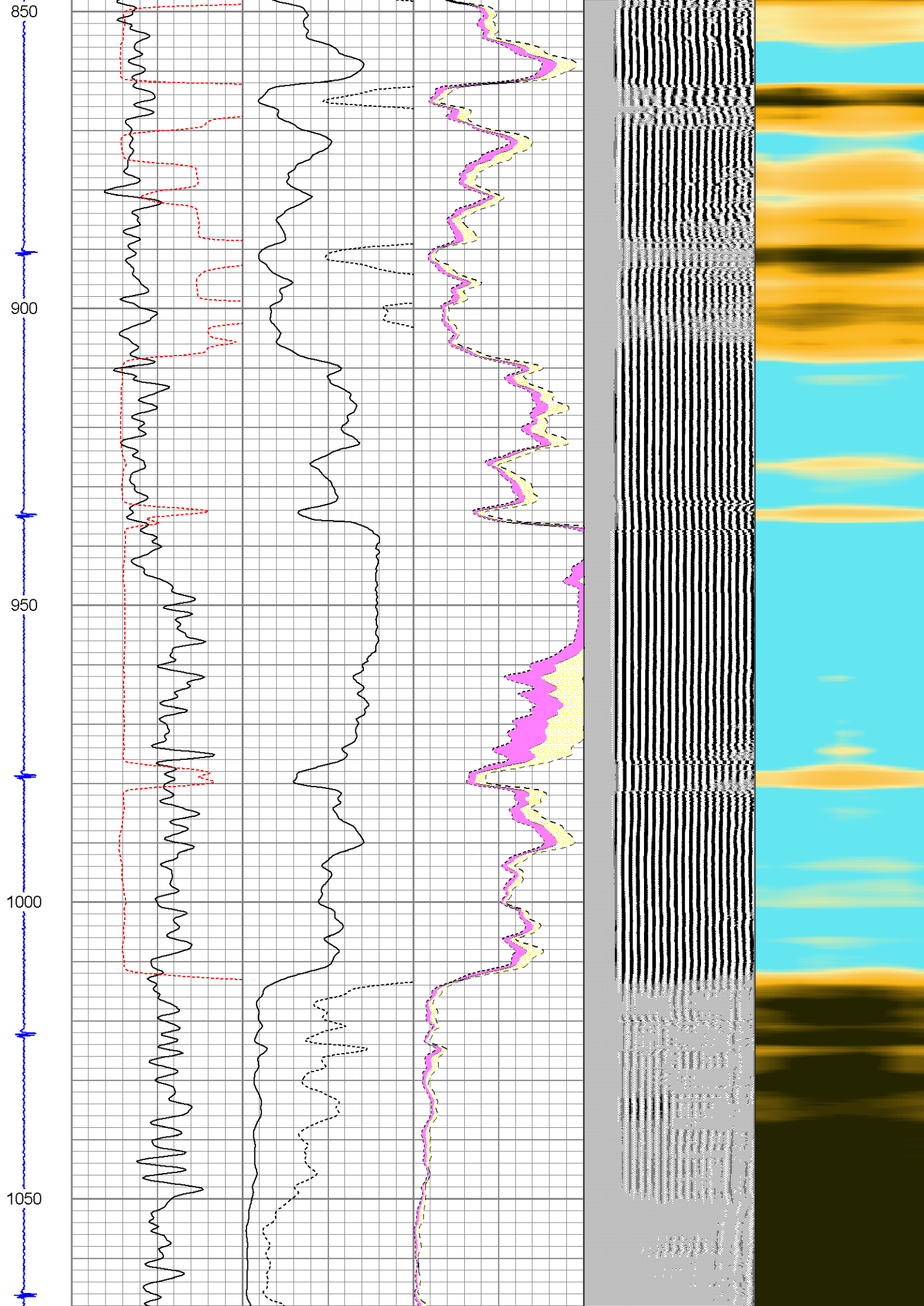
650

700

750

800



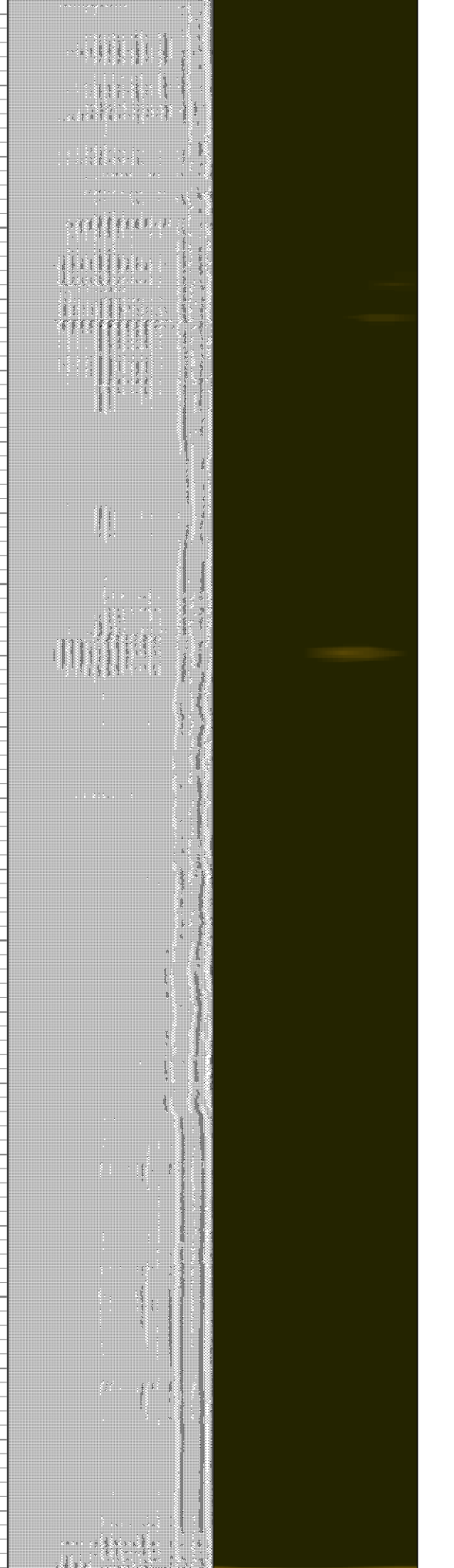
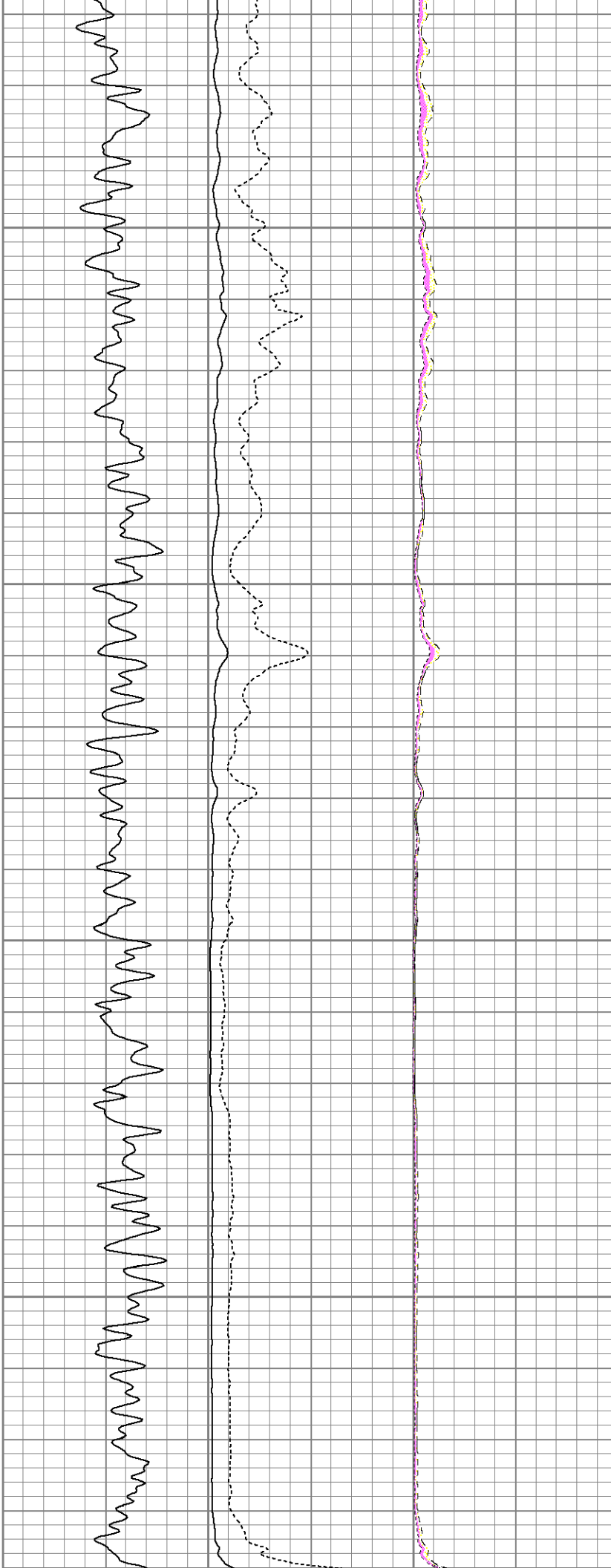


1100

1150

1200

1250



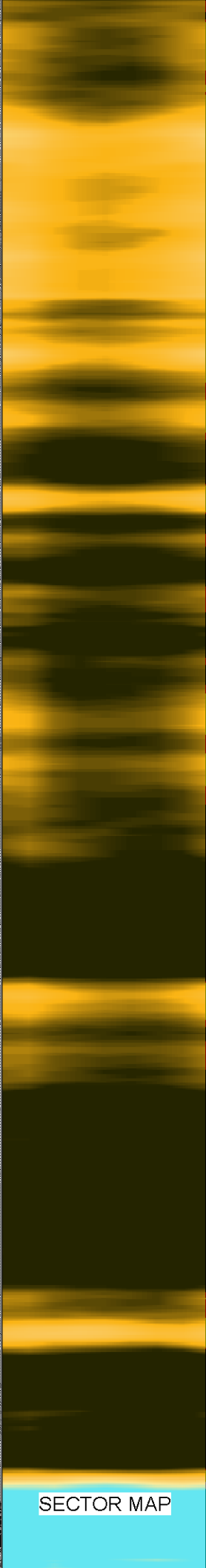
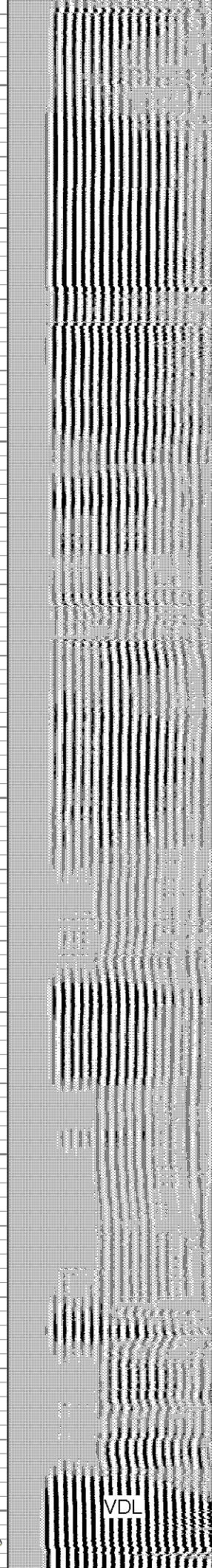
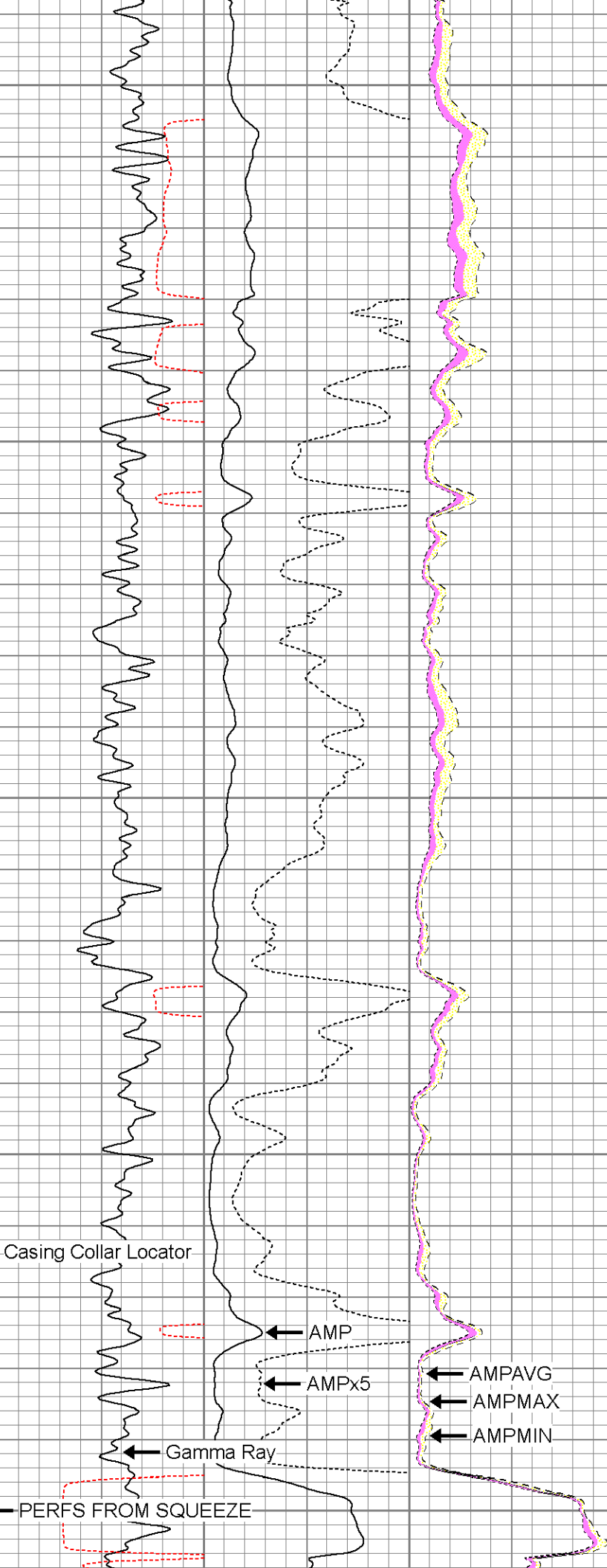
1300

1350

1400

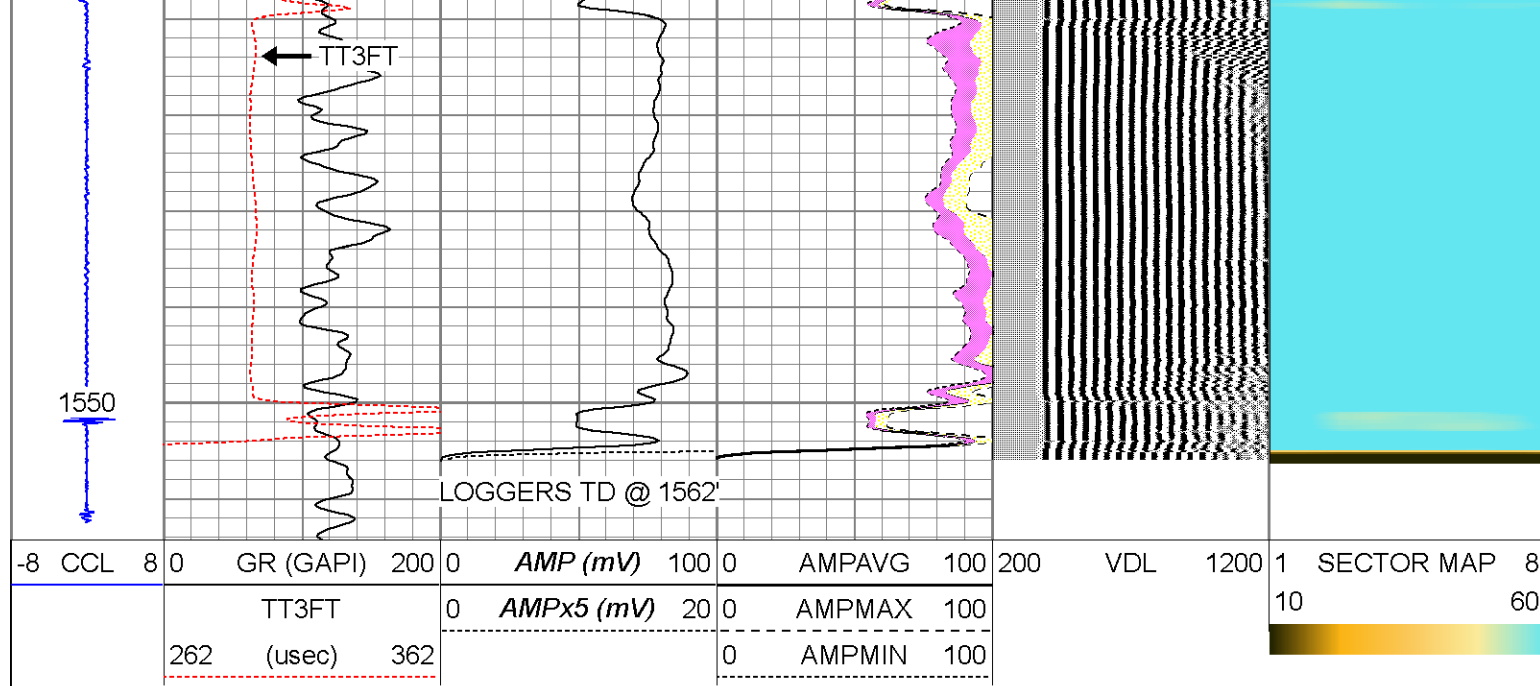
1450

1500



VDL

SECTOR MAP



### Calibration Report

Database File: nesg\_39-23.db  
 Dataset Pathname: pass1  
 Dataset Creation: Tue Apr 29 09:06:52 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: 1509.314 ft

Master Calibration, performed Tue Apr 29 09:05:13 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.013	1.827	1.000	81.196	44.208	0.429
CAL	0.012	0.527				
5'	0.013	1.983	1.000	81.196	40.712	0.484
SUM						
S1	0.013	1.602	0.000	95.000	59.758	-0.756
S2	0.013	1.676	0.000	95.000	57.135	-0.739
S3	0.013	1.910	0.000	95.000	50.070	-0.636
S4	0.013	2.062	0.000	95.000	46.373	-0.600
S5	0.013	2.086	0.000	95.000	45.823	-0.587
S6	0.013	2.020	0.000	95.000	47.337	-0.614
S7	0.013	1.878	0.000	95.000	50.928	-0.651

S8      0.013      1.711      0.000      95.000      55.929      -0.713

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	0.012	0.527	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	
WVF3FT	14.44		RBT-Probe (Base)	8.92	2.75	90.00
WVFCAL	14.44		Probe Radii Bond Tool with Digital Telemetry			
WVFS1	14.44					
WVFS2	14.44					
WVFS3	14.44					
WVFS4	14.44					
WVFS5	14.44					
WVFS6	14.44					
WVFS7	14.44					
WVFS8	14.44					
WVF5FT	13.35					

