



PATRIOT
WELL SOLUTIONS

**SECTOR BOND,
GAMMA RAY,
CCL LOG**

Company Kerr McGee Oil & Gas Onshore LP
Well Cooley 23-16
Field Wattenberg
County Weld
State Colorado

Country Weld
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Country Weld

Location: API #: 05-123-32277
SHL: 958' FSL & 1157' FWL
BHL: 1320' FSL & 2578' FWL
SEC 16 TWP 2N RGE 68W

Permanent Datum Elevation
Log Measured From
Drilling Measured From

Other Services
Squeeze Gun
Elevation
K.B. 4899'
D.F. 4898'
G.L. 4885'

Date 6-OCT-2021

Run Number ONE
Depth Driller 8220'
Depth Logger 1080'
Bottom Logged Interval 1080'
Top Log Interval SURFACE
Open Hole Size N/A
Type Fluid H2O
Density / Viscosity N/A
Max. Recorded Temp. N/A
Estimated Cement Top N/A
Time Well Ready N/A
Time Logger on Bottom N/A
Equipment Number 1007
Location BRIGHTON
Recorded By C. SHEPPARD
Witnessed By K. WIESER


Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record				Size	Wgt/Ft	Top	Bottom
Surface String		8-5/8"		24#		SURFACE	942'
Prot. String		4-1/2"		11.6#		SURFACE	8210'
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

LOG CORRELATED TO K.B.

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Cable_Head-1_7/16 Titan 1 7/16" Cable Head	1.02	1.44	3.31

			Centralizers-8071-275-200 Tekco 2 3/4" Adjustable Centralizer	2.73	2.75	25.00
WVFCAL	18.73					
WVFS8	16.31					
WVFS7	16.31		SCBLTEKSECT-275 No Temp (111) TekCo 2 3/4" 400 Deg F Sector Tool with No Temperature	9.13	2.75	102.00
WVFS6	16.31					
WVFS5	16.31					
WVFS4	16.31					
WVFS3	16.31					
WVFS2	16.31					
WVFS1	16.31					
WVF3FT	15.56					
WVF5FT	14.56					
WVFSYNC	11.23					
			Centralizers-8071-275-200 Tekco 2 3/4" Adjustable Centralizer	2.73	2.75	25.00
CCL	7.35		CCL-275tekco (111) Tekco 2 3/4" 450 Deg. F Rare Earth Magnets	1.83	2.75	33.00
			GR-Tek-Co 2 3/4 (0111) Tekco 2 3/4" 400 Deg. F Logging Gamma Ray	3.67	2.75	40.00
GR	4.04					
			Centralizers-8071-275-200 Tekco 2 3/4" Adjustable Centralizer	2.73	2.75	25.00
			Bull_Plug-1_7/16_GO Titan 1 7/16" Female Bull Plug	0.27	1.44	1.00

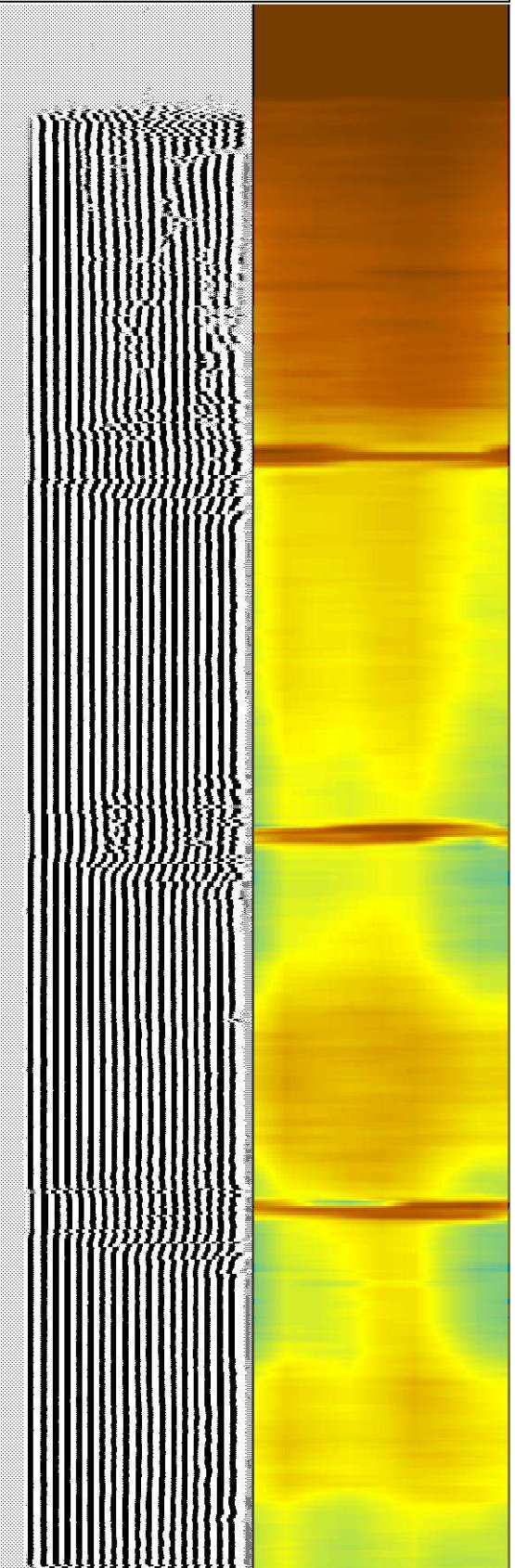
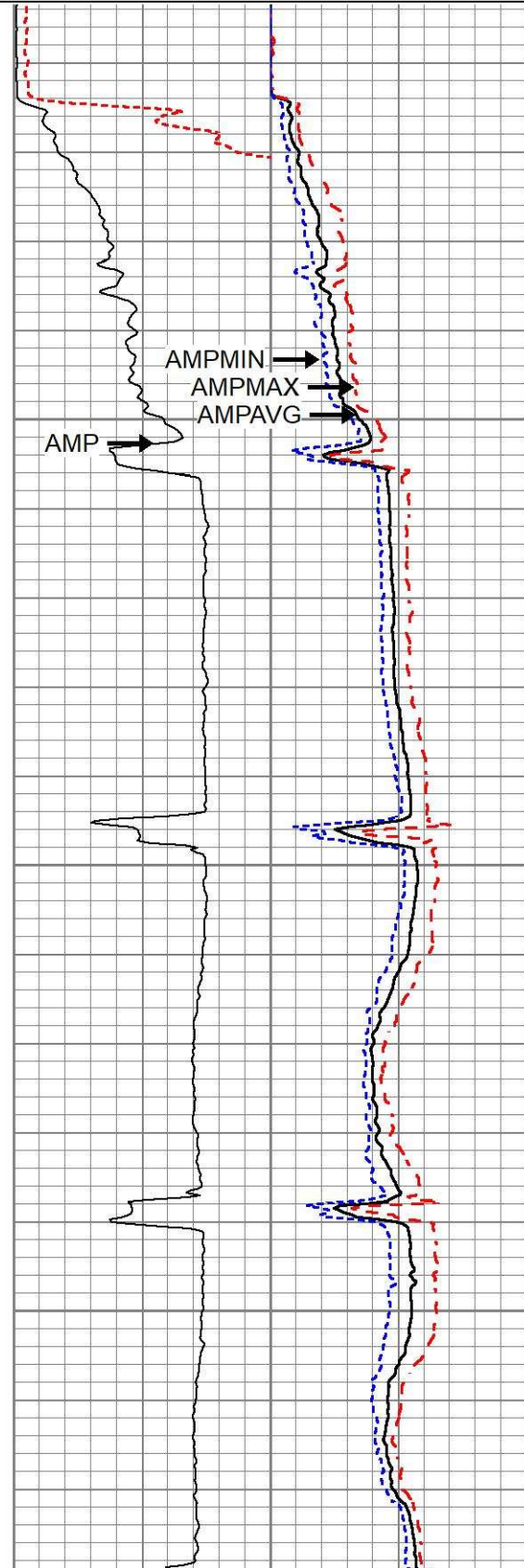
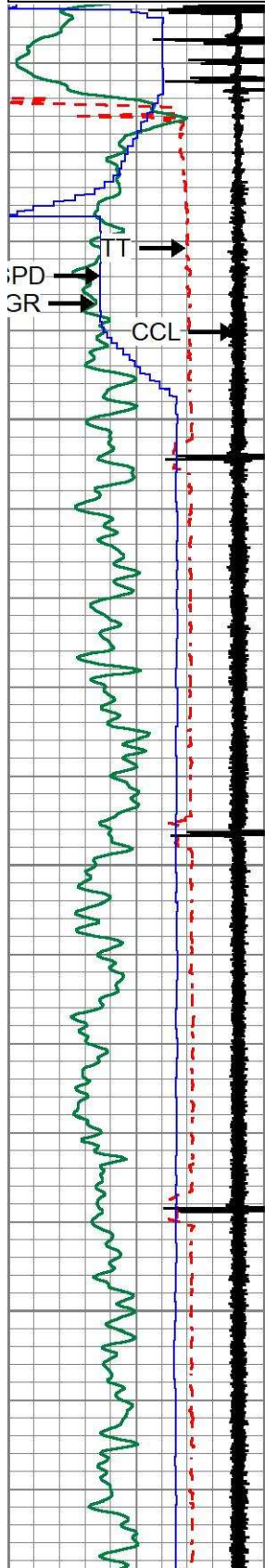
Dataset: cooley 23-16 (2).db: field/well/run1/pass4
 Total length: 24.10 ft
 Total weight: 254.31 lb
 O.D.: 2.75 in

Database File cooley 23-16 (2).db
 Dataset Pathname pass4
 Presentation Format 1patriotradii
 Dataset Creation Wed Oct 06 08:41:20 2021
 Charted by Depth in Feet scaled 1:240

283	TT (usec)	183
0	GR (GAPI)	150
9	CCL	-1
0	LSPD (ft/min)-100	

0	AMP (mV)	100	0	AMPAVG	100
0	3FT X 5 (mV)	20	0	AMPMAX	100
0			0	AMPMIN	100

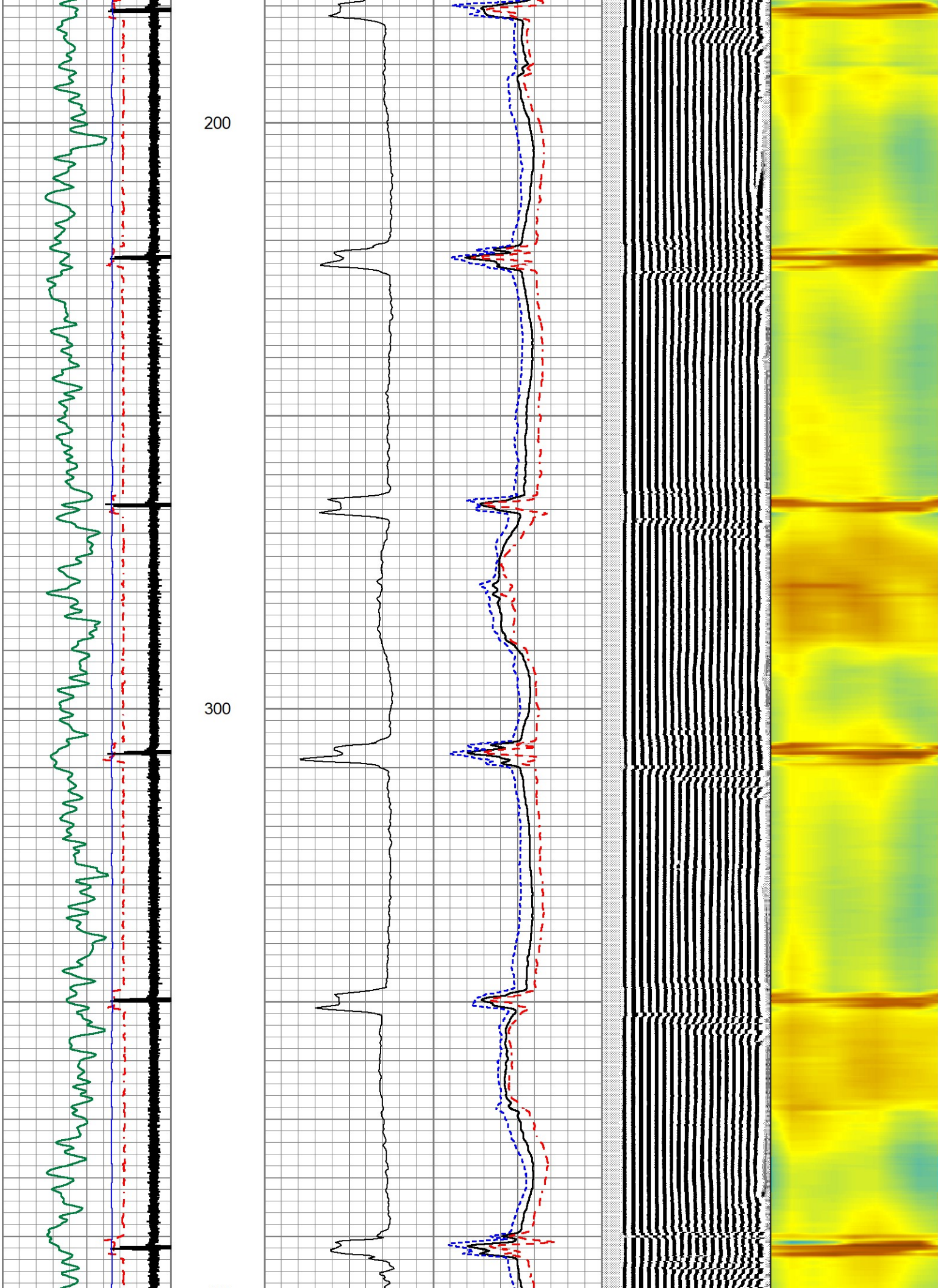
200 VDL (usec) 1200 1 RADIAL MAP 8



100

200

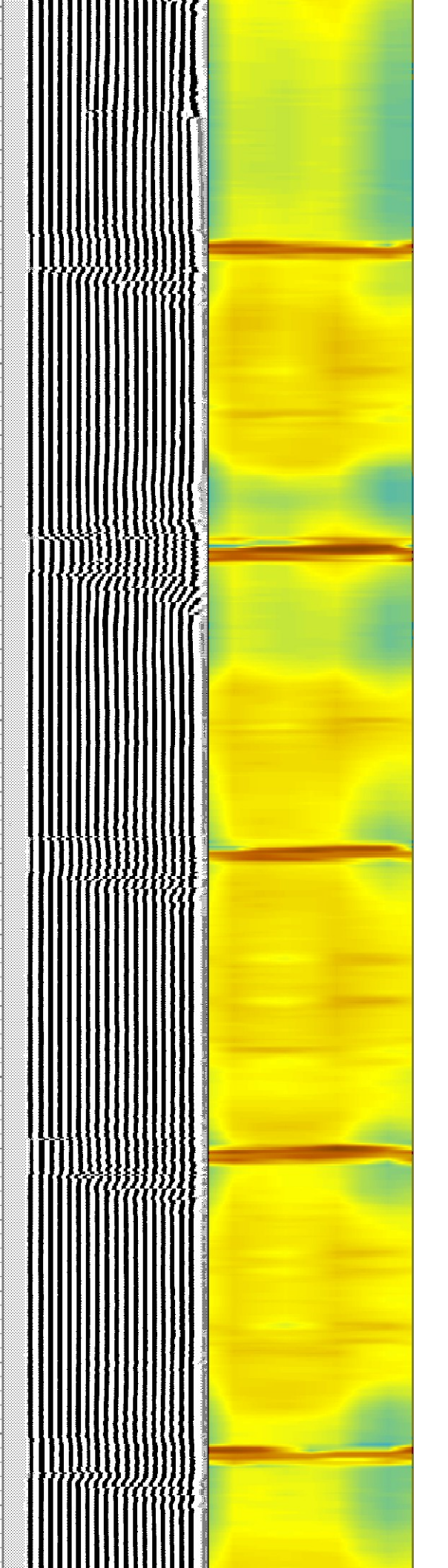
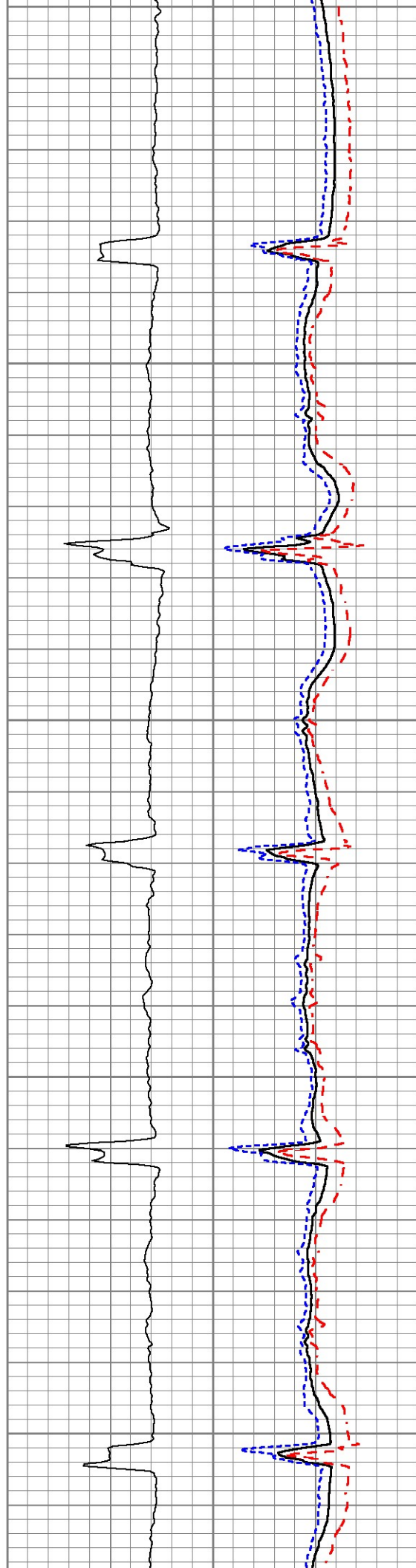
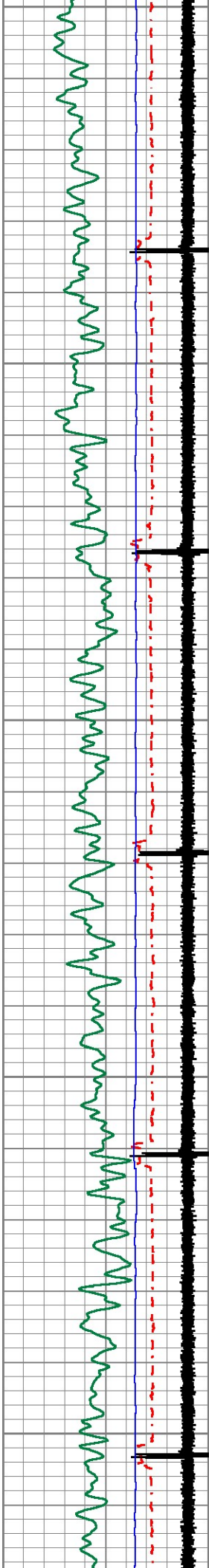
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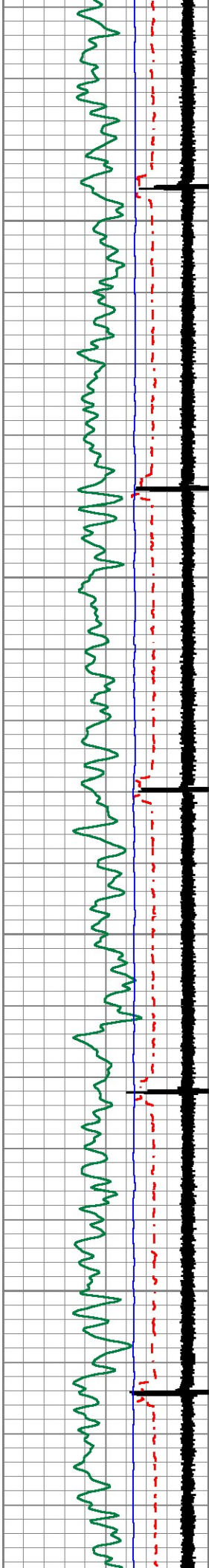


400

500

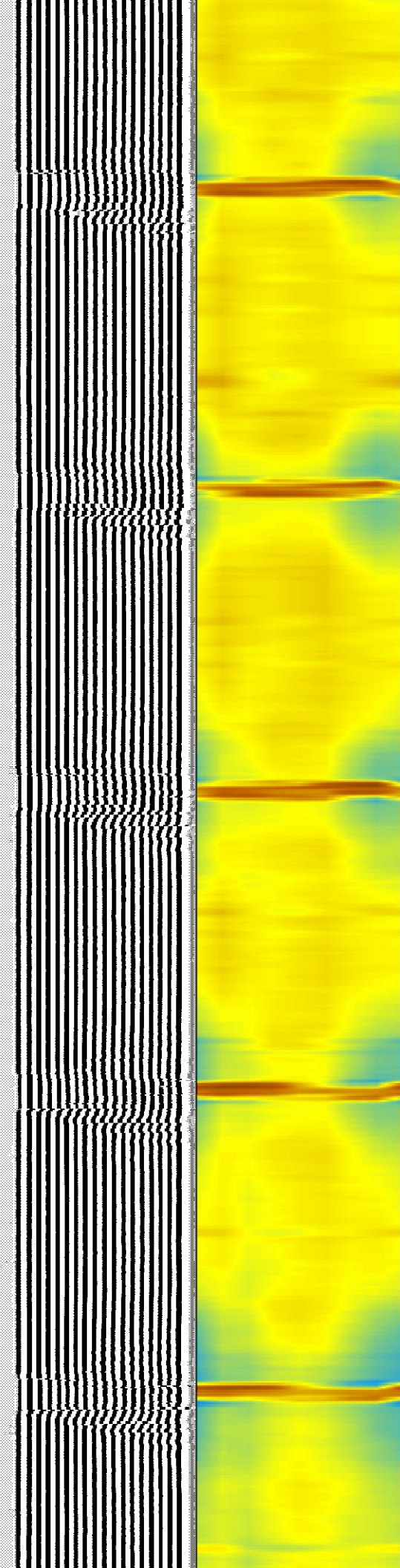
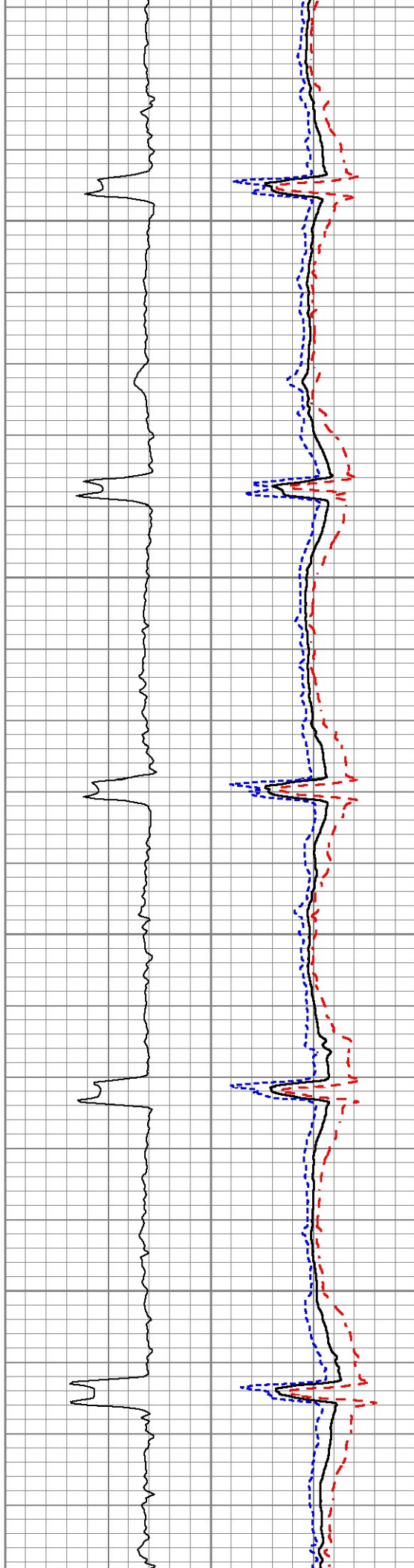
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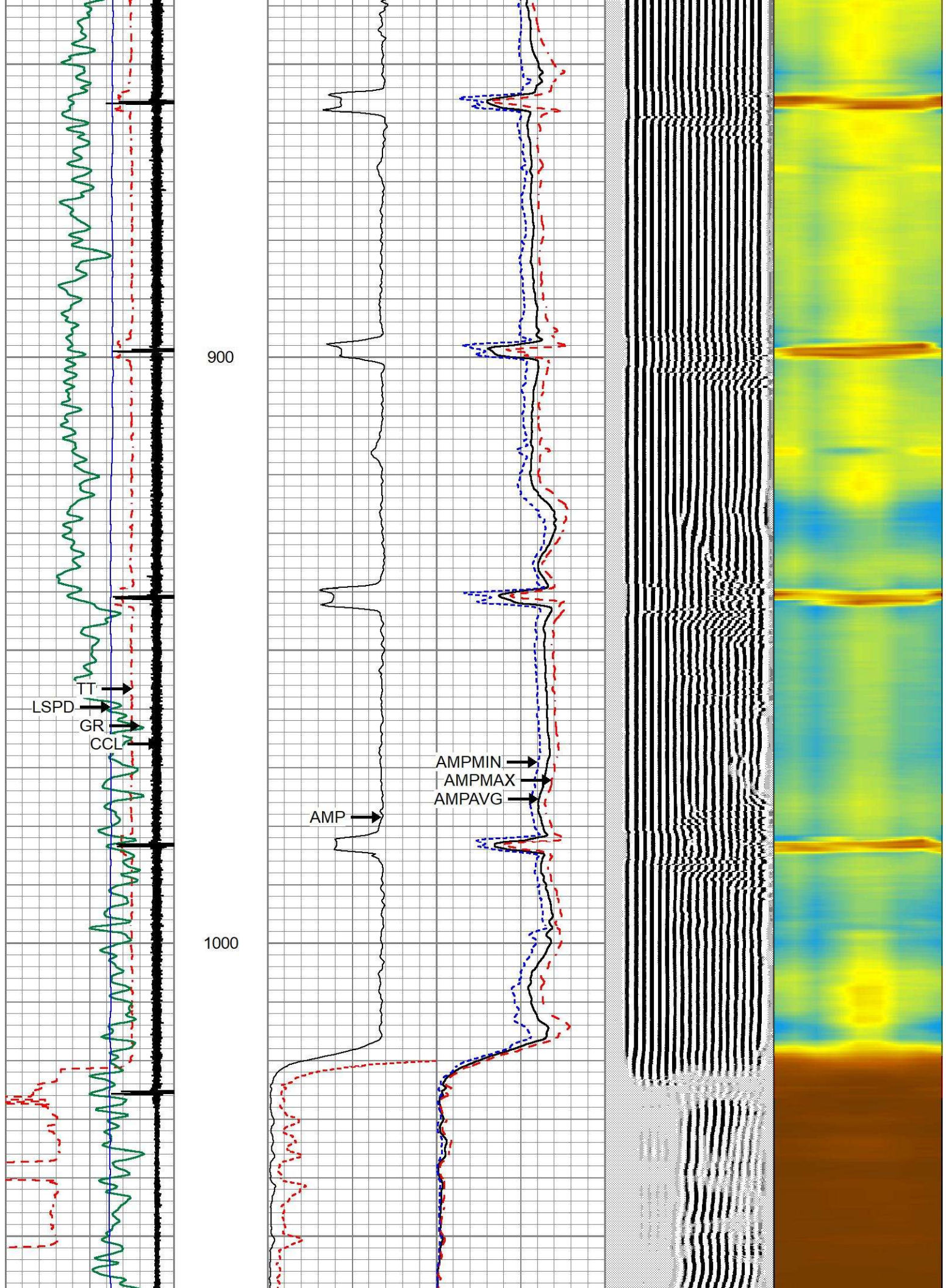


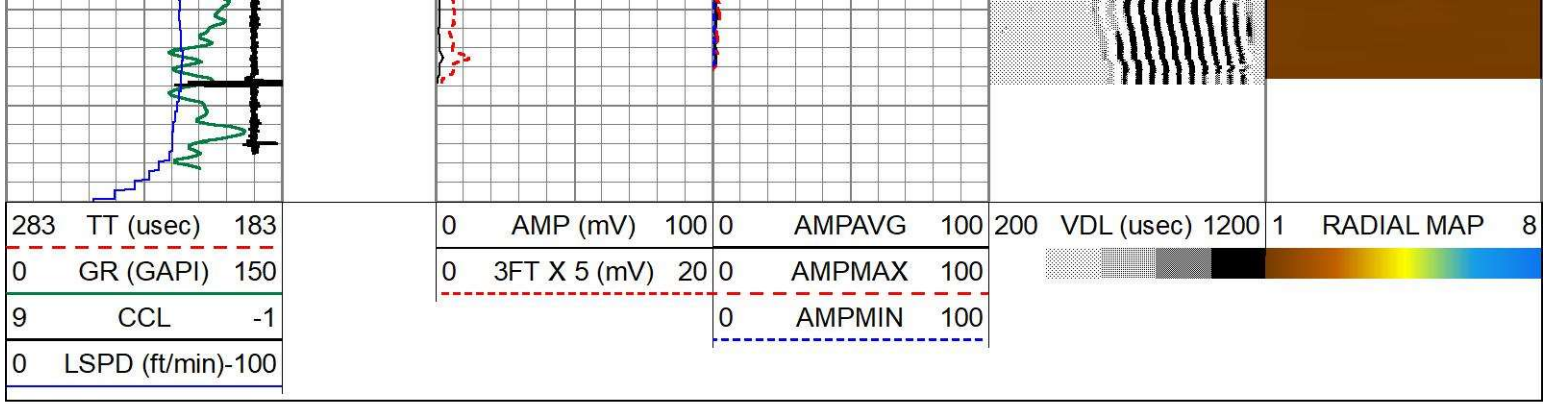


700

800

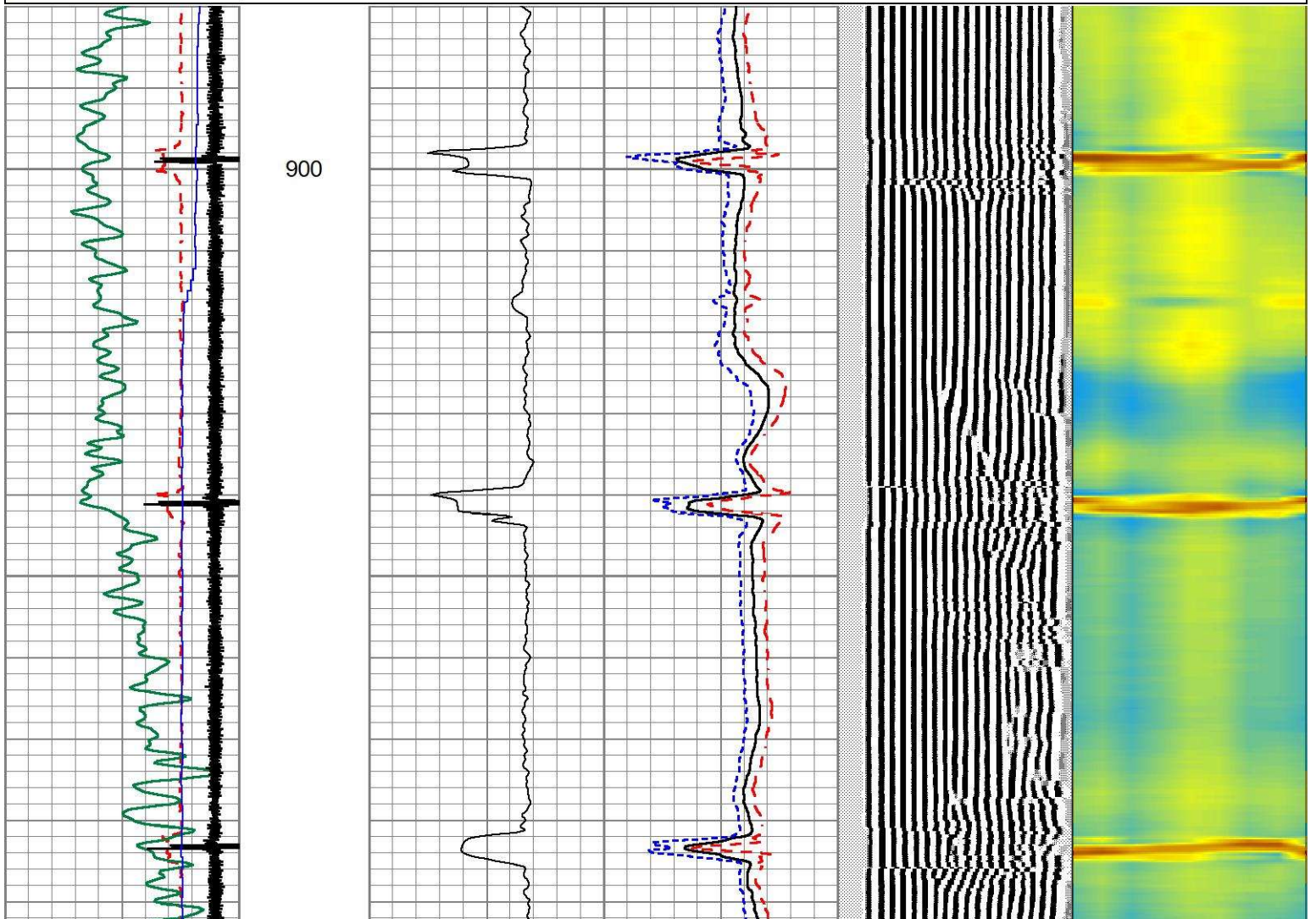
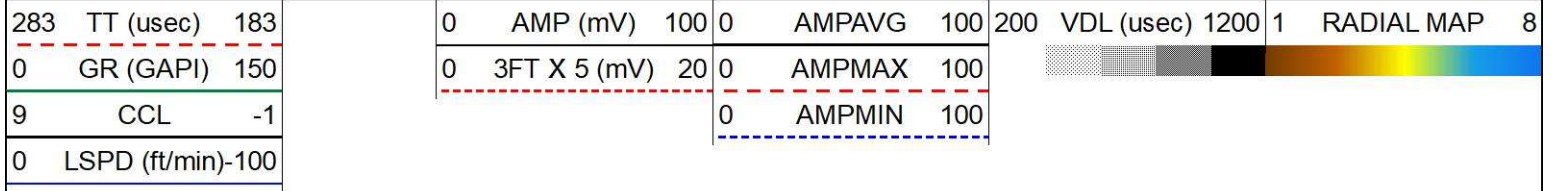


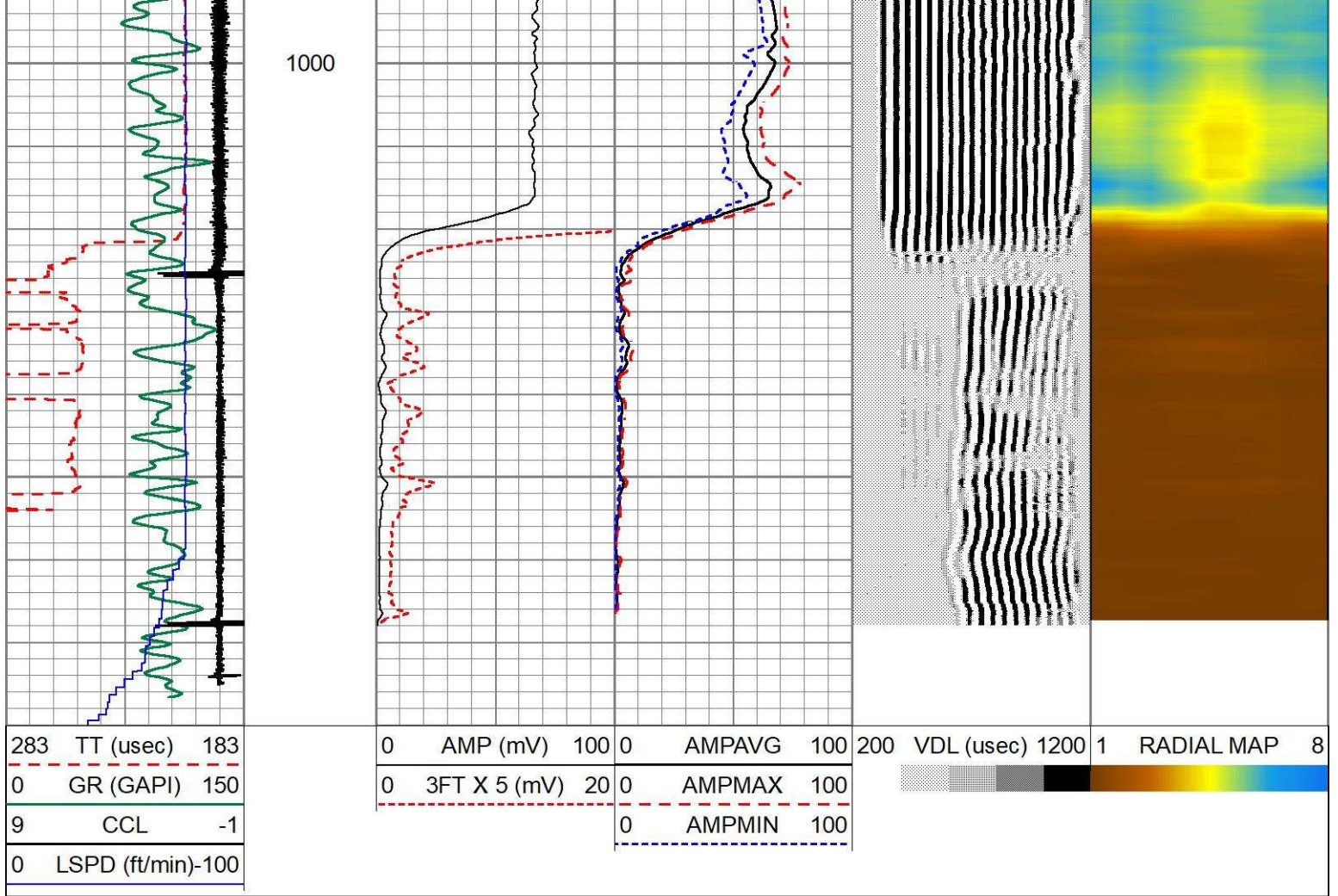




Repeat Pass

Database File: cooley 23-16 (2).db
 Dataset Pathname: pass2
 Presentation Format: 1patriotradii
 Dataset Creation: Wed Oct 06 08:36:49 2021
 Charted by: Depth in Feet scaled 1:240





Calibration Report

Database File: cooley 23-16 (2).db
 Dataset Pathname: pass4
 Dataset Creation: Wed Oct 06 08:41:20 2021

Gamma Ray Calibration Report

Serial Number: 0111
 Tool Model: Tek-Co 2 3/4
 Performed: Thu Apr 18 10:37:49 2013

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: 111
 Tool Model: 275 No Temp

Calibration Casing Diameter: 4.500 in
 Calibration Depth: 1060.208 ft

Master Calibration, performed (Derived):

Raw (v)		Calibrated (mv)		Results	
Zero	Cal	Zero	Cal	Gain	Offset

3'	0.000	1.983	1.000	81.196	40.439	1.000
CAL	0.000	0.403				
5'	-0.028	2.341	1.000	81.196	33.854	1.935
SUM						
S1	0.000	1.905	0.000	81.196	42.621	-0.002
S2	0.000	1.979	0.000	81.196	41.022	-0.001
S3	0.000	1.814	0.000	81.196	44.750	-0.001
S4	0.000	1.808	0.000	81.196	44.910	-0.001
S5	0.000	1.835	0.000	81.196	44.250	-0.002
S6	0.000	1.976	0.000	81.196	41.100	-0.002
S7	0.000	1.960	0.000	81.196	41.418	-0.002
S8	0.000	1.962	0.000	81.196	41.377	-0.002

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.000	0.403	1.000	0.000

Air Zero Calibration, performed Wed Oct 6 08:23:34 2021:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.014		0.000		-0.014	
5'	0.015		0.000		-0.042	
SUM						
S1	0.013		0.000		-0.013	
S2	0.014		0.000		-0.014	
S3	0.019		0.000		-0.019	
S4	0.015		0.000		-0.015	
S5	0.019		0.000		-0.019	
S6	0.015		0.000		-0.015	
S7	0.021		0.000		-0.021	
S8	0.013		0.000		-0.013	



Company	Kerr McGee Oil & Gas Onshore LP		
Well	Cooley 23-16		
Field	Wattenberg		
County	Weld		
State	Colorado	Country	Weld