PATRIOT
WELL SOLUTIONS

RADIAL CEMENT BOND LOG
GAMMA RAY/CCL

Company	HIGHPOINT OPERATING CORP.
Well	PARK 4-63-4-1609D
Field	WATTENBERG
County	WELD
State	COLORADO
Country	USA

Company HIGHPOINT OPERATING CORP.
Well PARK 4-63-4-1609D
Field WATTENBERG
County WELD
State COLORADO Country USA

Location: API # : 05-123-49074
SHL: 1979 FNL 207 FEL
SENE
SEC 4 TWP 4N RGE 63W

Other Services: NONE

Permanent Datum	GL	Elevation	4560'
Log Measured From	GL		
Drilling Measured From	KB		

Elevation
K.B. 4583'
D.F. 4582'
G.L. 4560'

Date	15 MAR 2019		
Run Number	1		
Depth Driller	11468'		
Depth Logger	6720'		
Bottom Logged Interval	6720'		
Top Log Interval	SURFACE		
Open Hole Size	8.75"		
Type Fluid	H2O		
Density / Viscosity	N/A		
Max. Recorded Temp.	N/A		
Estimated Cement Top	SEE LOG		
Time Well Ready	OA		
Time Logger on Bottom	1415		
Equipment Number	1013		
Location	BRIGHTON,CO		
Recorded By	S.STUMP		
Witnessed By	C.NOLAN		

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9.625"	36LB	0'	853'
Prot. String				
Production String	4.5"	11.6LB	6103'	11463'
Liner				

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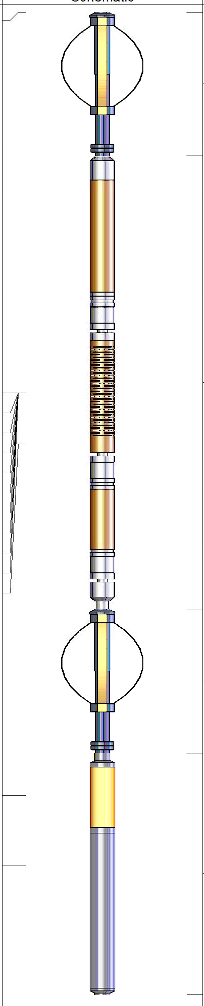
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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

THANK YOU FOR USING PATRIOT WELL SOLUTIONS

0 PSI ON WELL WHILE LOGGING

SO 1013-00319



Sensor	Offset (ft)
ErrCt	19.33
WVFS8	11.83
WVFS7	11.83
WVFS6	11.83
WVFS5	11.83
WVFS4	11.83
WVFS3	11.83
WVFS2	11.83
WVFS1	11.83
WVFCAL	11.83
WVF3FT	11.83
WVF5FT	10.83
CCL	3.92
GR	2.54

Description	Length (ft)	O.D. (in)	Weight (lb
CENT-PTS275	2.83	2.75	
RBT-RBTC3 (FW1704-30) RADIAL BOND TOOL	8.92	2.75	90.00
CENT-PTS275	2.83	2.75	
GR-Probe275dig (071129) Probe Digital Gamma CCL	4.75	2.75	57.00

Dataset: highpoint_park_1609d_rcbl.db: field/well/run1/FINAL
Total length: 19.33 ft
Total weight: 147.00 lb
O.D.: 2.75 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\highpoint_park_1609d_rcbl.db
Dataset field/well/run1/FINAL/_vars_

Top - Bottom

BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft
8.75	210	4.5	0.408	11.6	0	1.5	0.8

PERFS	PPT usec	SRFTEMP degF	TDEPTH ft
0	0	0	0

Variable Description

BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
CASEWGHT : Casing Weight
MAXAMPL : Maximum Amplitude
MINAMPL : Minimum Amplitude
MINATTN : Minimum Attenuation
PERFS : Perforation Flag
PPT : Predicted Pipe Time
SRFTEMP : Surface Temperature
TDEPTH : Total Depth

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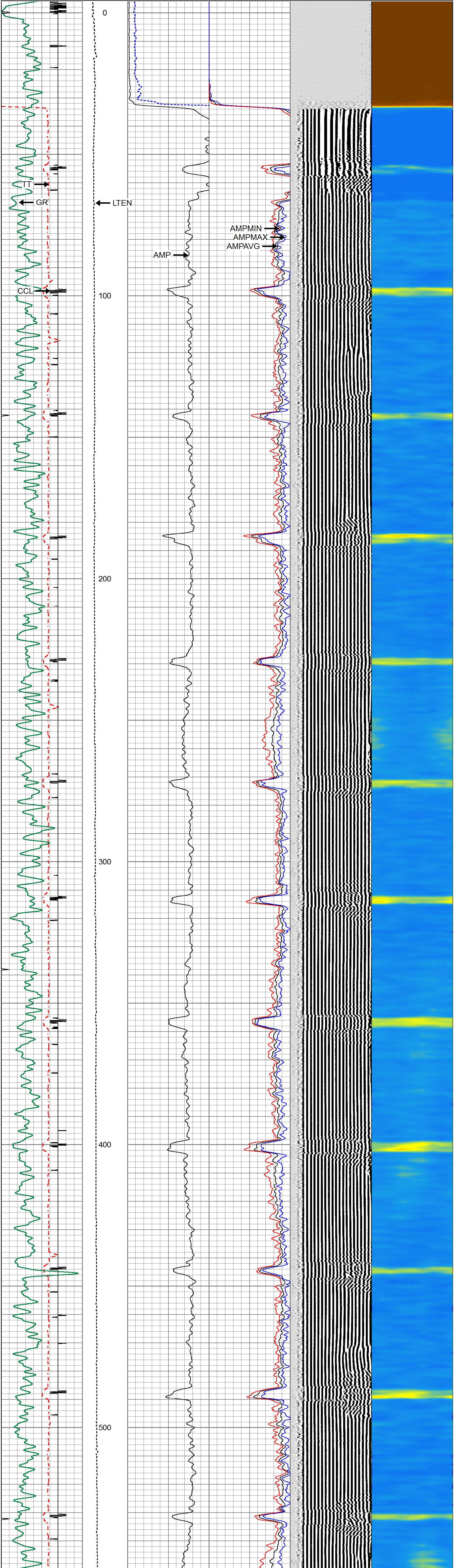
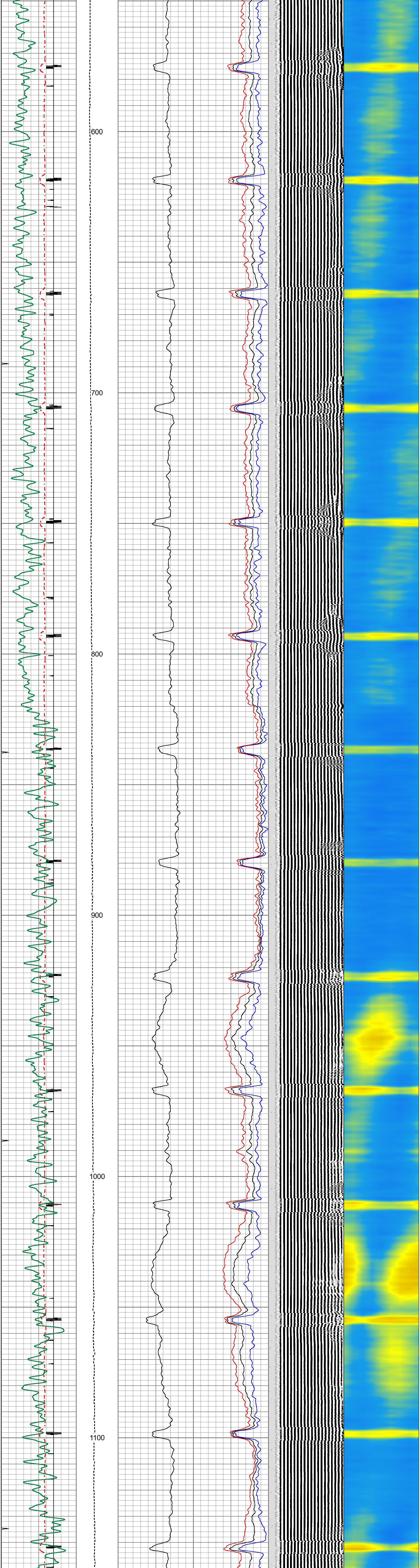
MAIN PASS

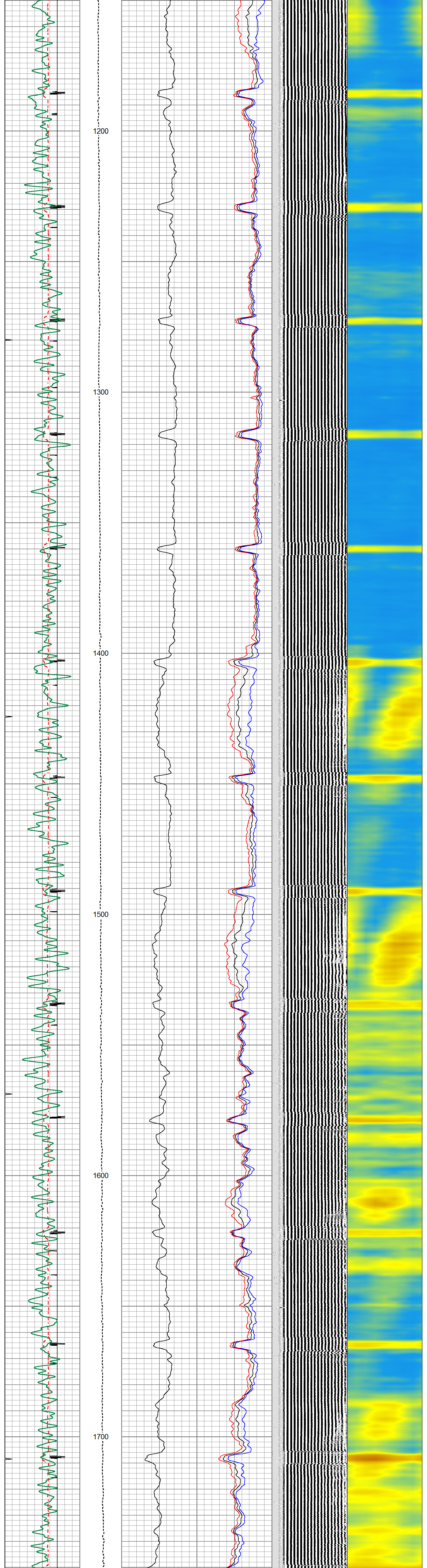
0 PSI ON WELL WHILE LOGGING

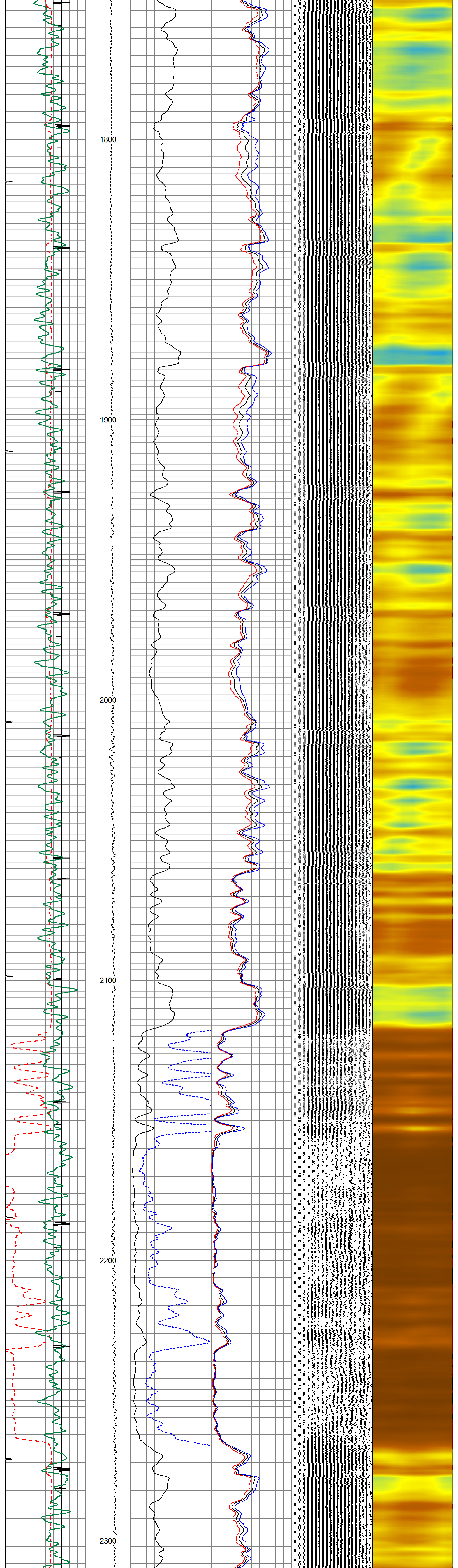
Database File	highpoint_park_1609d_rcbl.db
Dataset Pathname	FINAL
Presentation Format	1patriotradii
Dataset Creation	Fri Mar 15 16:33:48 2019
Charted by	Depth in Feet scaled 1:240

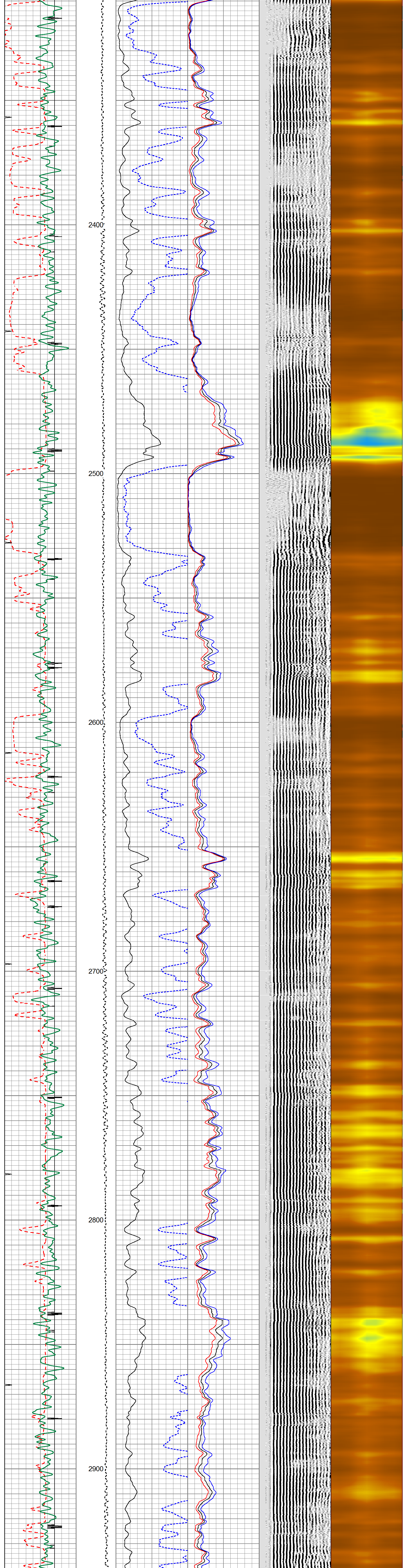
300 TT (usec) 200	LTEN	0 AMP (mV) 100	0 AMPAVG 100	200 VDL (usec) 1200	1 RADIAL MAP 8
7 CCL -3	0 (lb 1000	0 3FT X 5 (mV) 20	0 AMPMAX 100		
0 GR (GAPI) 150			0 AMPMIN 100		
0 MINMK 10					

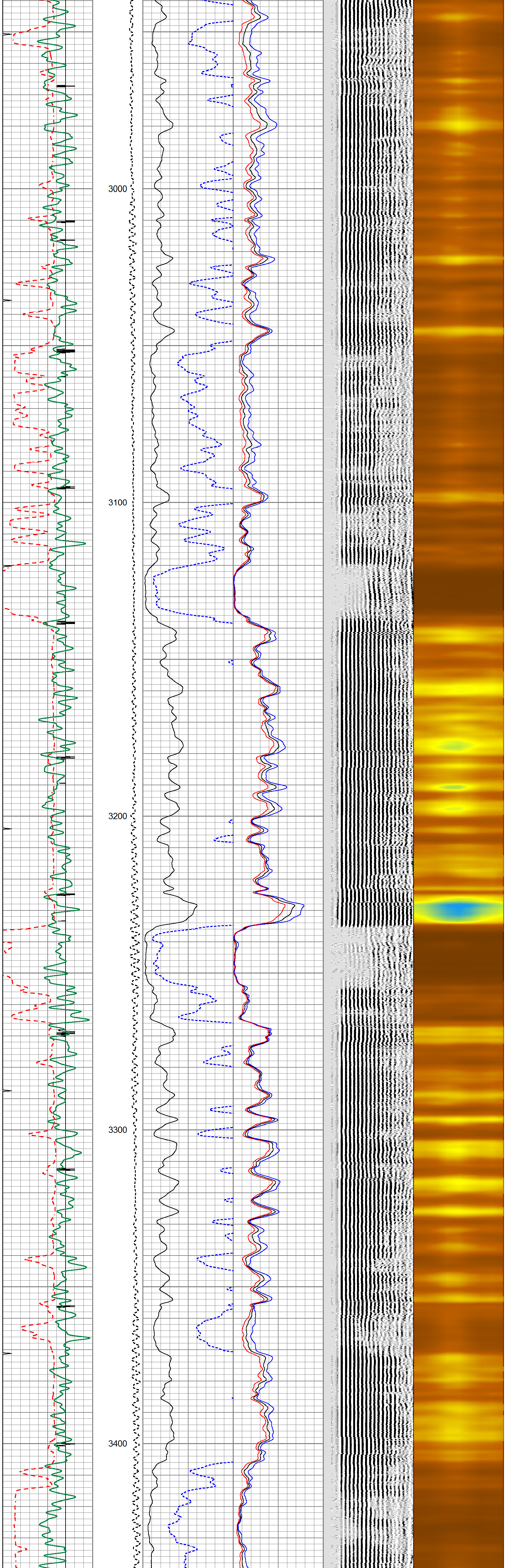


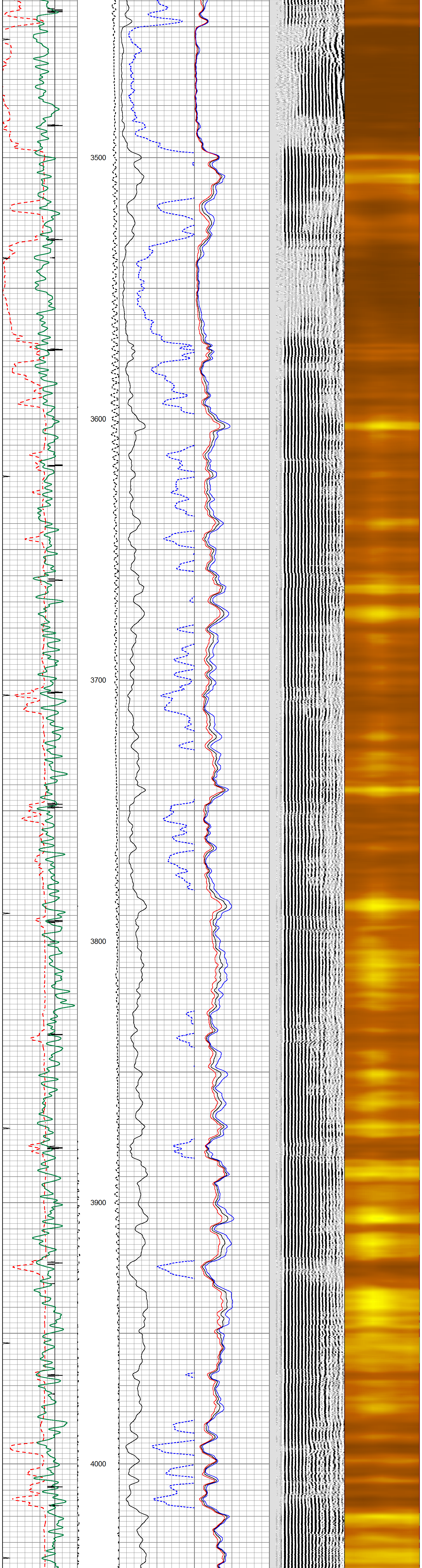


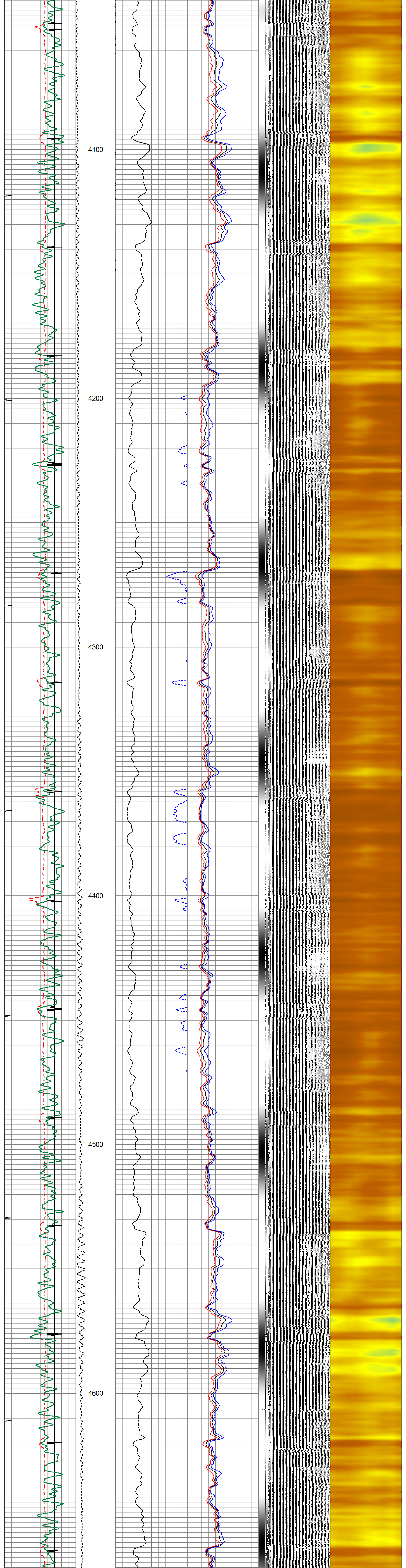


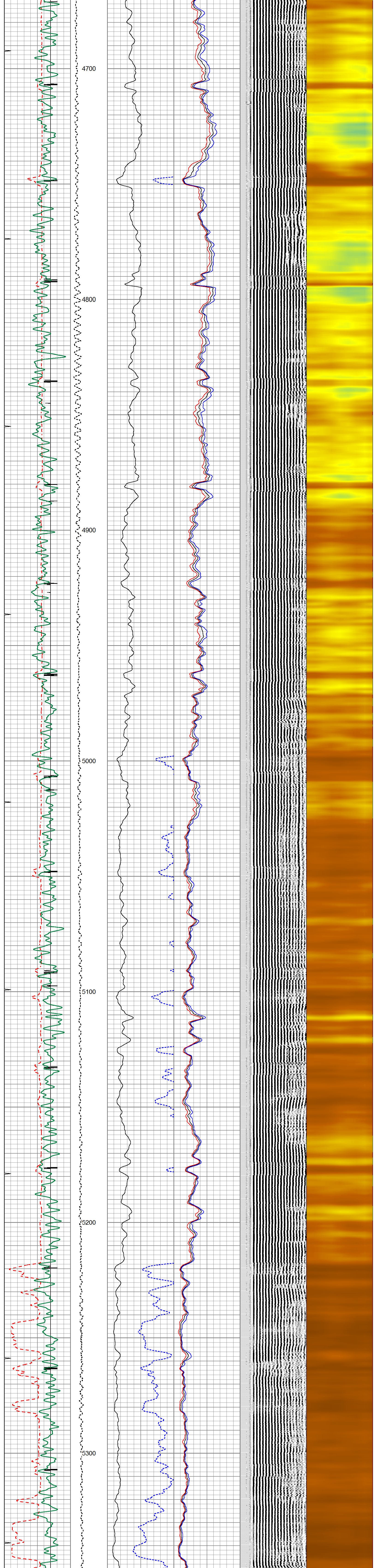


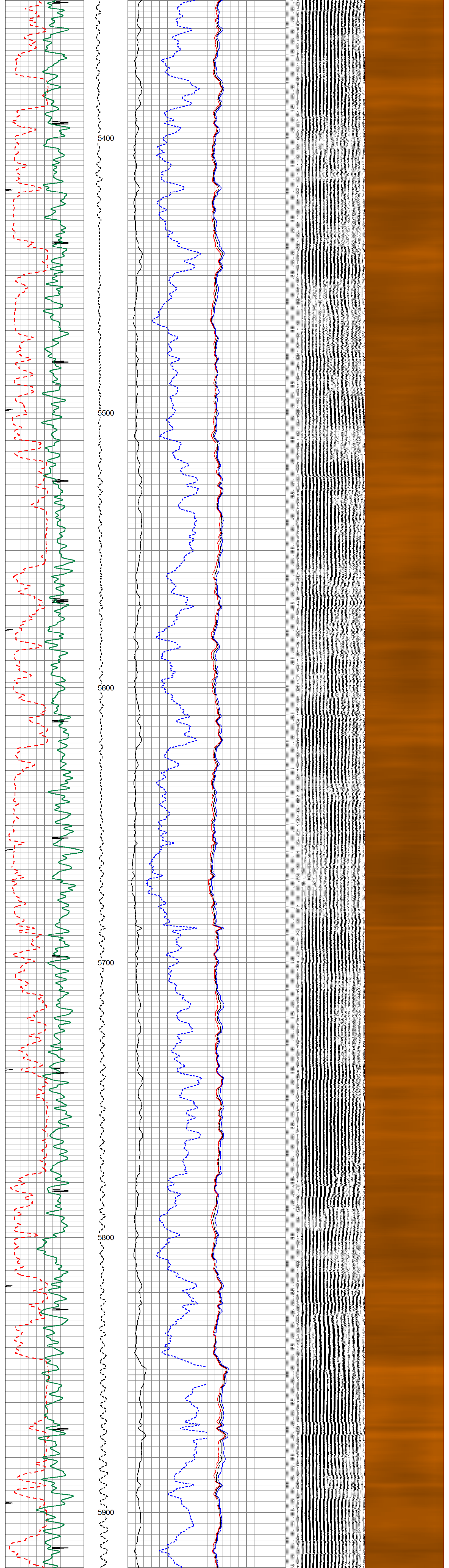


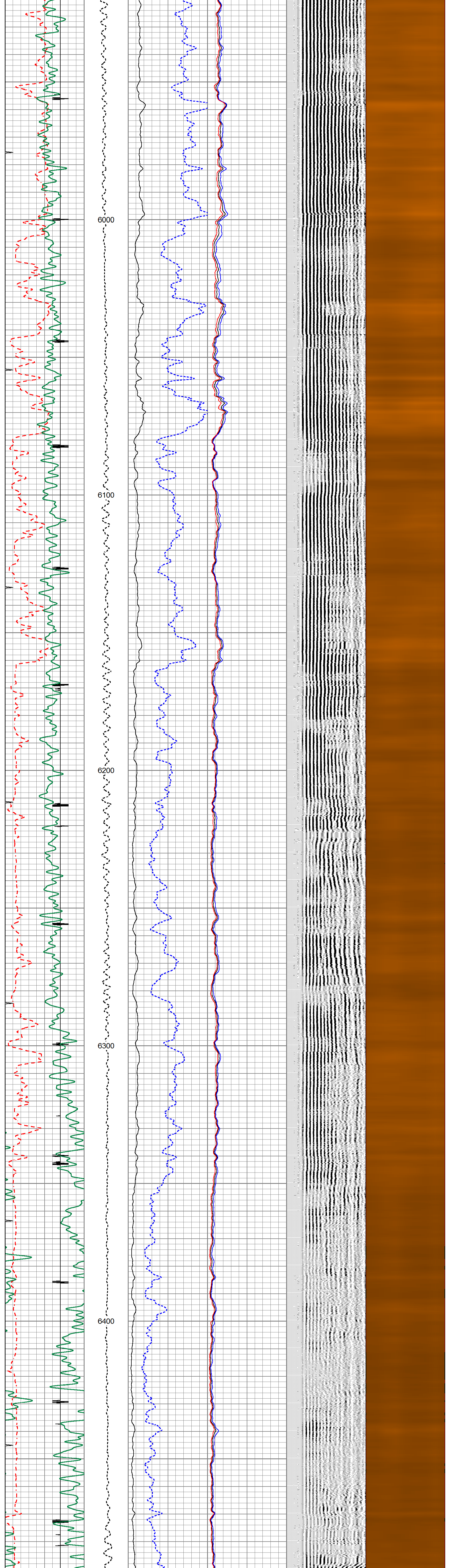


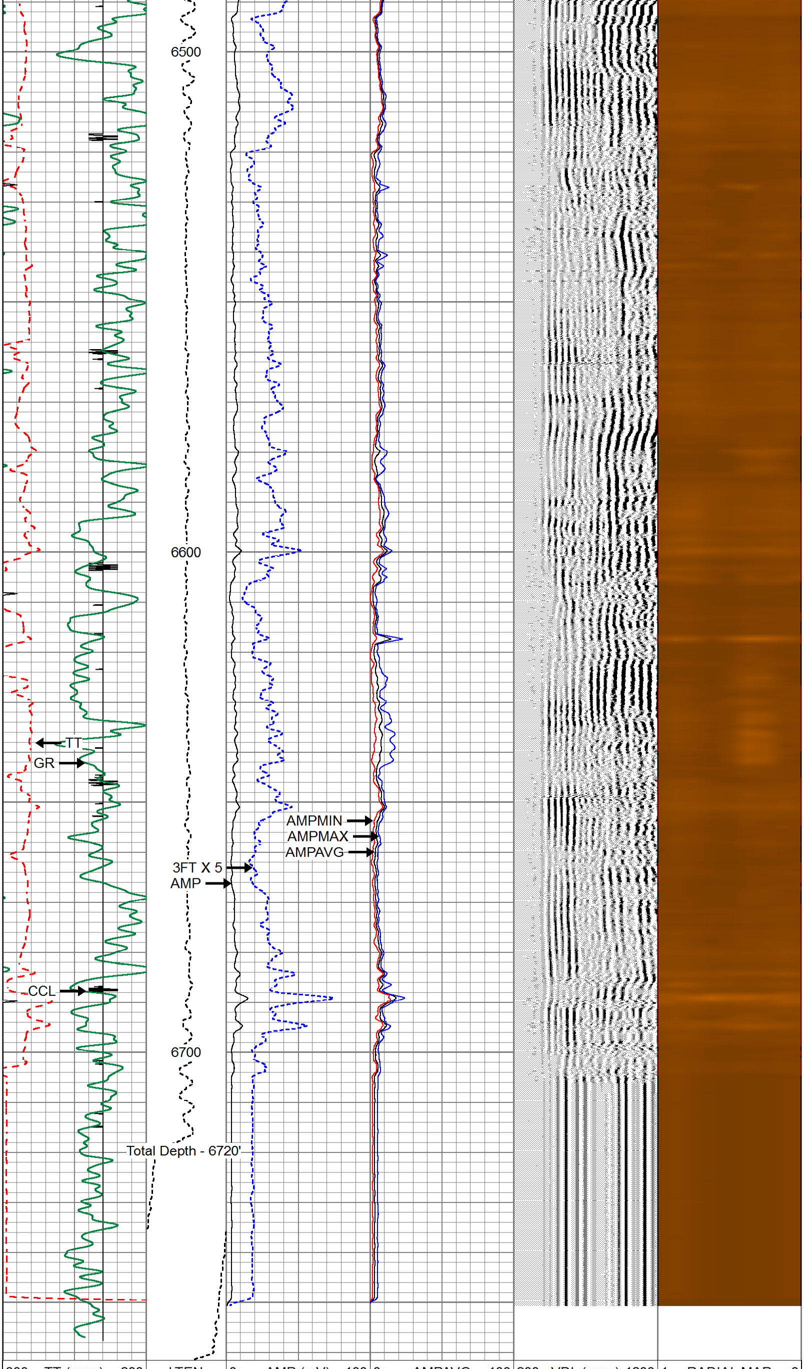












300 TT (usec) 200	LTEN	0 AMP (mV) 100	0 AMPAVG 100	200 VDL (usec) 1200	1 RADIAL MAP 8
7 CCL -3	0 (lb 1000	0 3FT X 5 (mV) 20	0 AMPMAX 100		
0 GR (GAPI) 150			0 AMPMIN 100		
0 MINMK 10					

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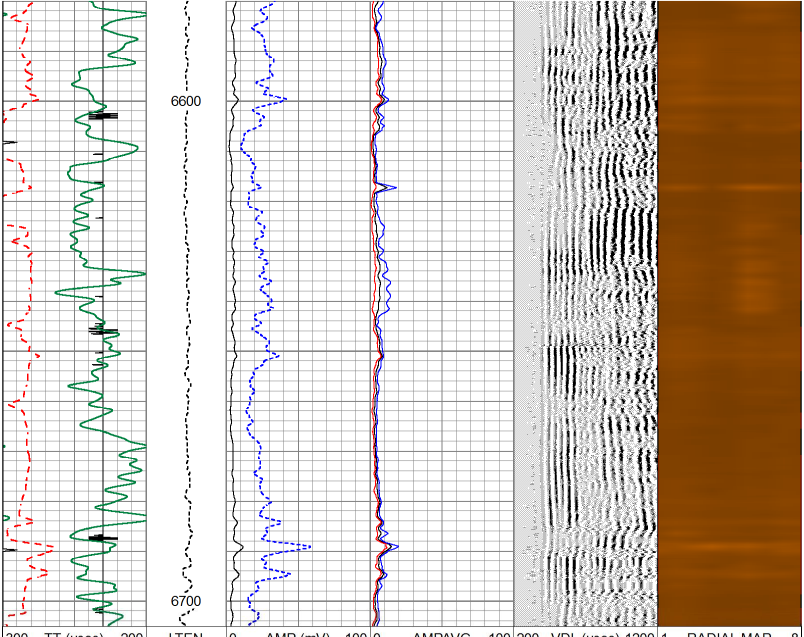
REPEAT SECTION

Database File	highpoint_park_1609d_rcbl.db
Dataset Pathname	REPEAT
Presentation Format	1patriotradii
Dataset Creation	Fri Mar 15 16:30:38 2019
Charted by	Depth in Feet scaled 1:240

300 TT (usec) 200	LTEN	0 AMP (mV) 100	0 AMPAVG 100	200 VDL (usec) 1200	1 RADIAL MAP 8
7 CCL -3	0 (lb 1000	0 3FT X 5 (mV) 20	0 AMPMAX 100		
0 GR (GAPI) 150			0 AMPMIN 100		
0 MINMK 10					



300 TT (usec) 200	LTEN	0 AMP (mV) 100	0 AMPAVG 100	200 VDL (usec) 1200	1 RADIAL MAP 8
7 CCL -3	0 (lb 1000	0 3FT X 5 (mV) 20	0 AMPMAX 100		
0 GR (GAPI) 150			0 AMPMIN 100		
0 MINMK 10					

Calibration Report

Database File	highpoint_park_1609d_rcbl.db
Dataset Pathname	FINAL
Dataset Creation	Fri Mar 15 16:33:48 2019

Gamma Ray Calibration Report

Serial Number:	071129	
Tool Model:	Probe275dig	
Performed:	Sun Mar 06 18:32:26 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.8500	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1704-30	
Tool Model:	RBTC3	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	517.558	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.025	1.497	2.000	84.000	55.712	0.590
CAL	0.022	2.013				
5'	0.032	1.555	2.000	84.000	53.815	0.294
SUM						
S1	0.024	1.617	0.000	100.000	62.785	-1.506
S2	0.028	1.735	0.000	100.000	58.595	-1.665
S3	0.033	1.729	0.000	100.000	58.962	-1.934
S4	0.031	1.645	0.000	100.000	61.951	-1.925
S5	0.032	1.519	0.000	100.000	67.250	-2.130
S6	0.021	1.454	0.000	100.000	69.792	-1.460
S7	0.023	1.418	0.000	100.000	71.681	-1.625
S8	0.032	1.485	0.000	100.000	68.842	-2.226

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.022	2.013	1.000	0.000

Air Zero Calibration, performed Fri Mar 15 10:24:53 2019:

	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

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Company	HIGHPOINT OPERATING CORP.		
Well	PARK 4-63-4-1609D		
Field	WATTENBERG		
County	WELD		
State	COLORADO	Country	USA