RadExPro Real-Time –
# Real-Time Marine Seismic QC Solution

Why Real-Time QC?

- Identify and address problems at the very moment they happen

- Produce and store data quality tags

- Minimize data acquisition and processing time
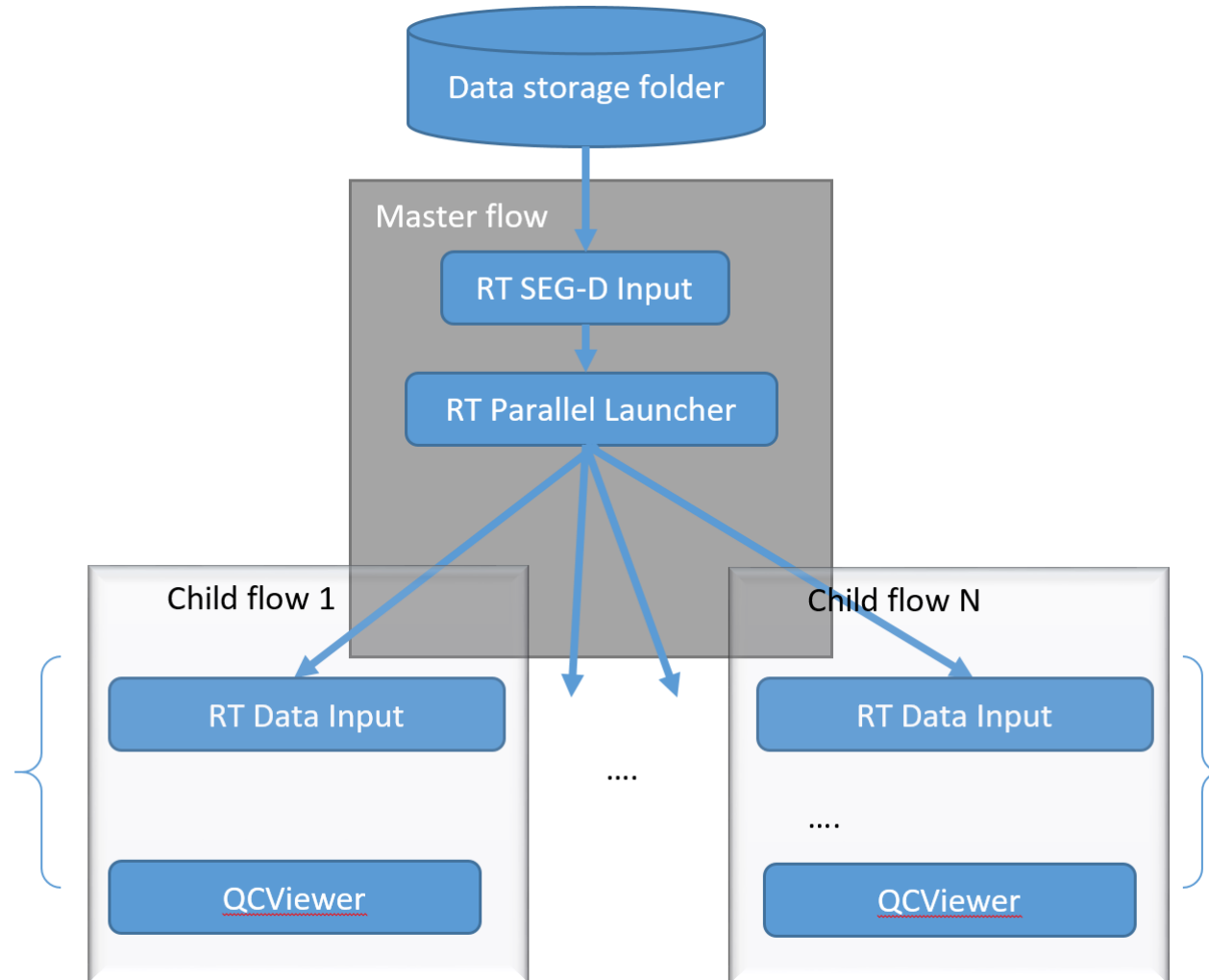
RTQC requirements

- Easy installation with generic hardware

- Common industry formats data import and export

- Intuitive UI — anomaly detection and interpretation

- Flexible data analysis — meeting variety of client requirements

- Crush proof — stability and appropriate support

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- Each shot is read only once

- Everything runs locally on a Windows 7/8/10/11 PC

- Low network load, no HPC server time needed
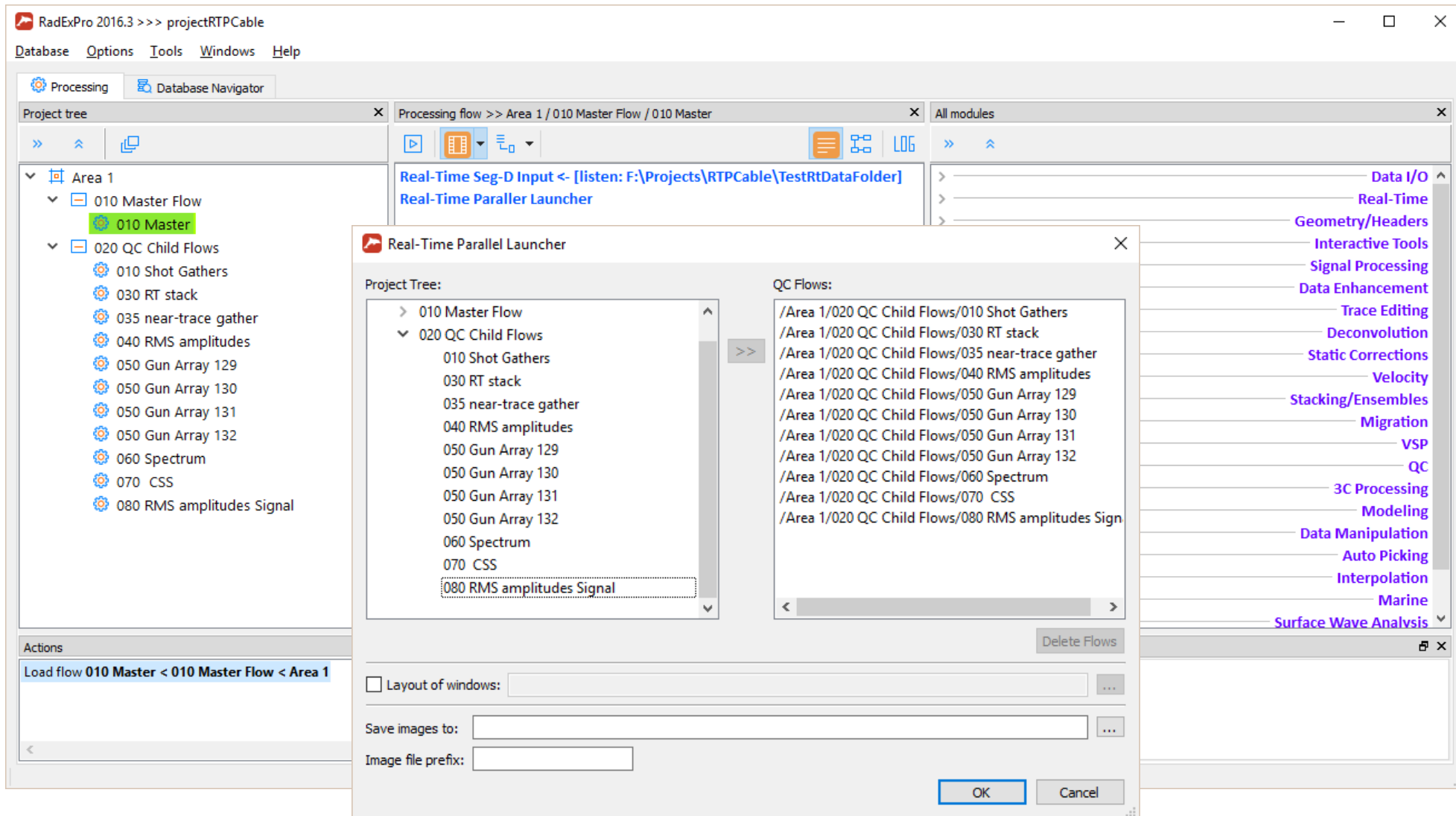
- Low latency, minimal delays

Acquisition system

Data storage

Shipboard LAN

QC processing PC with RadExPro Real-Time
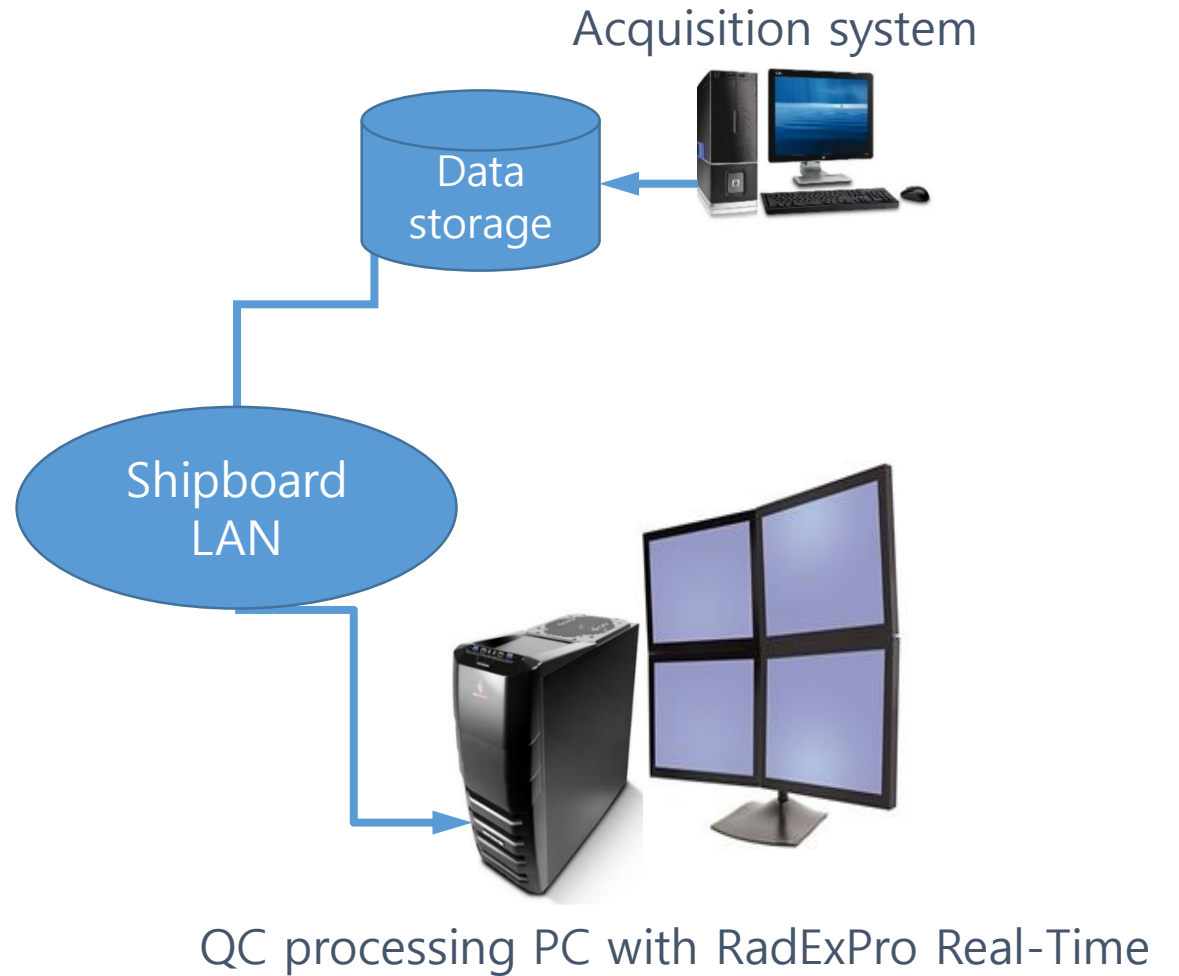
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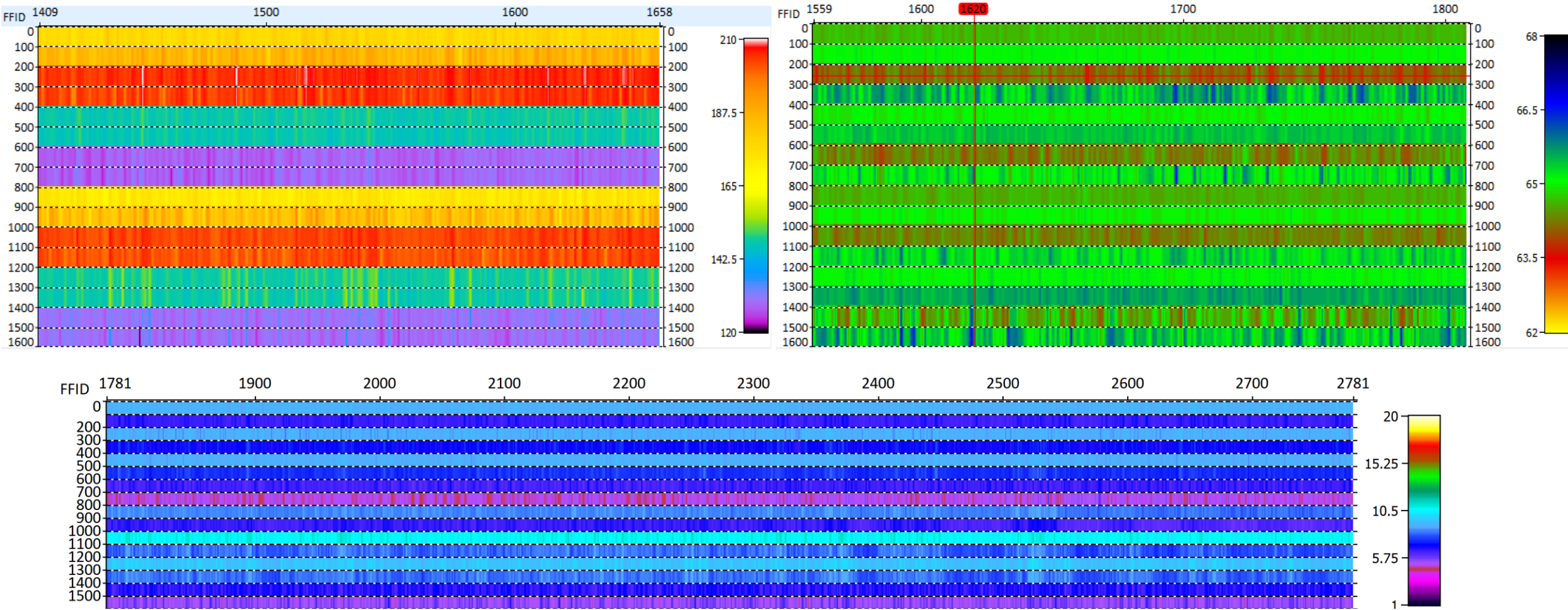
- Overall software view and RT QC Master Flow

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No pre-defined QC sequences: workflows are fully customizable
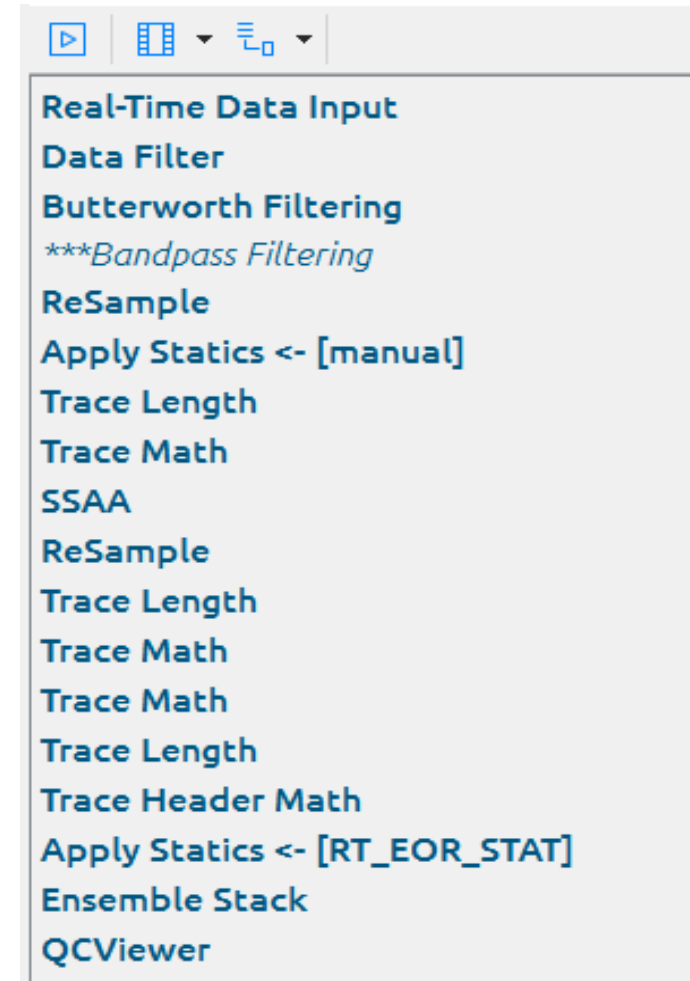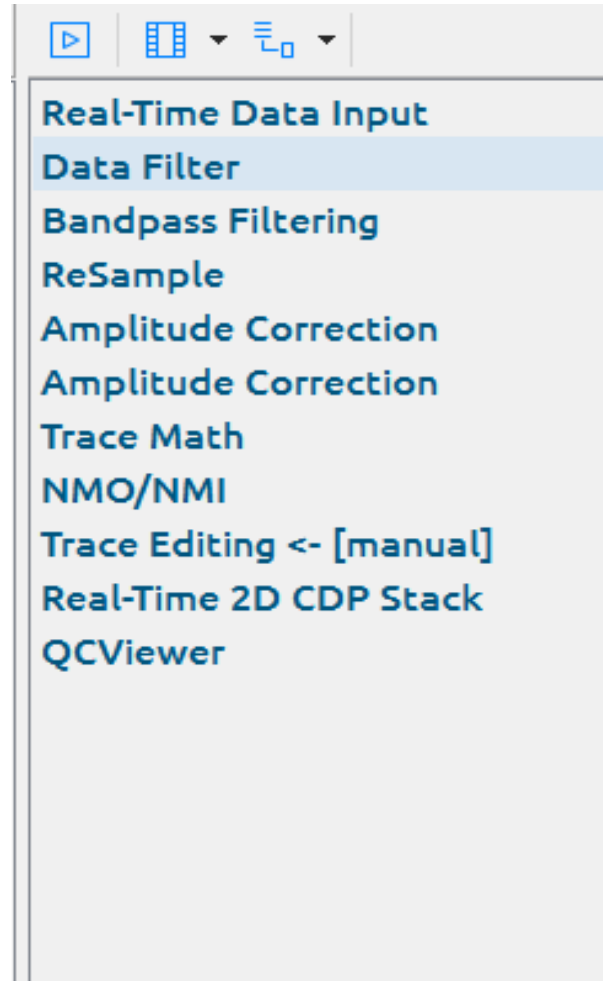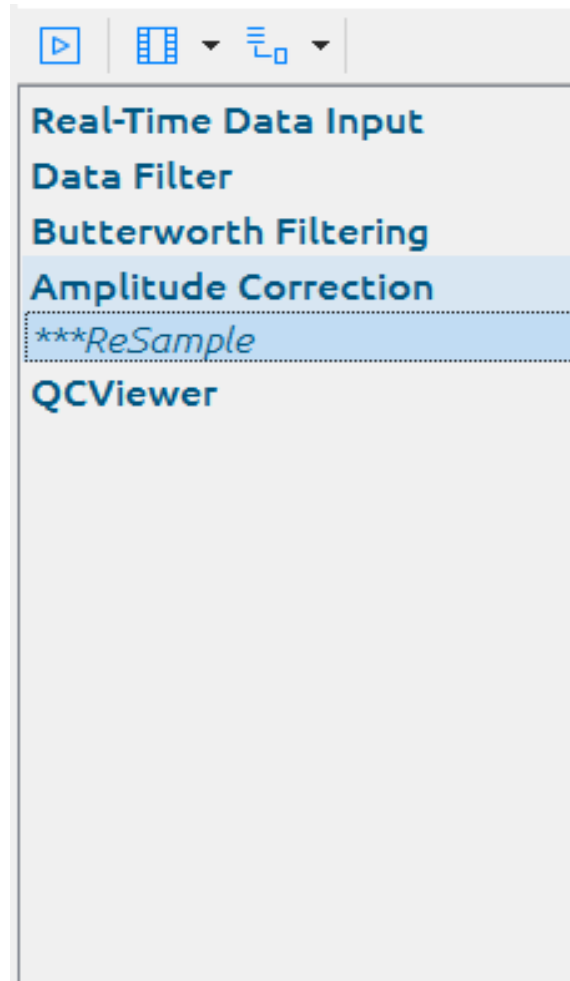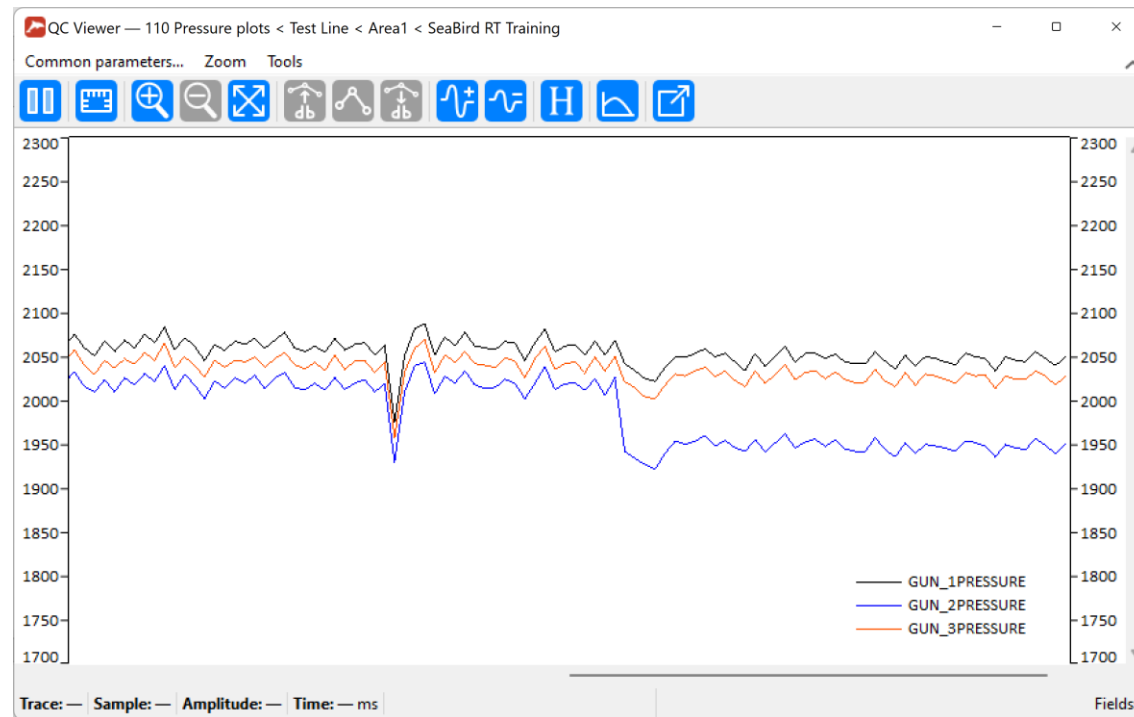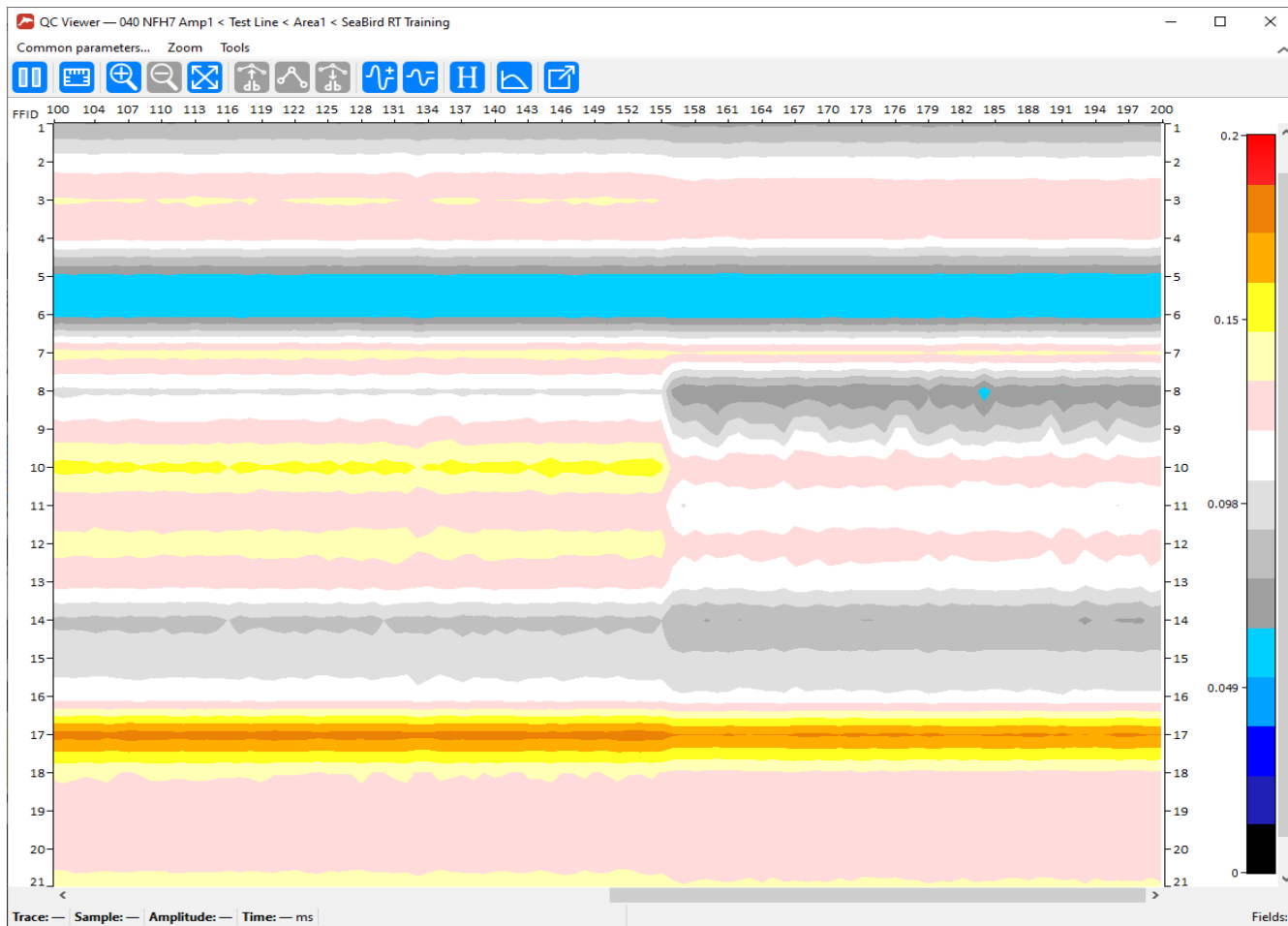
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Source QC: NFH bubble period, peak time, peak amplitude
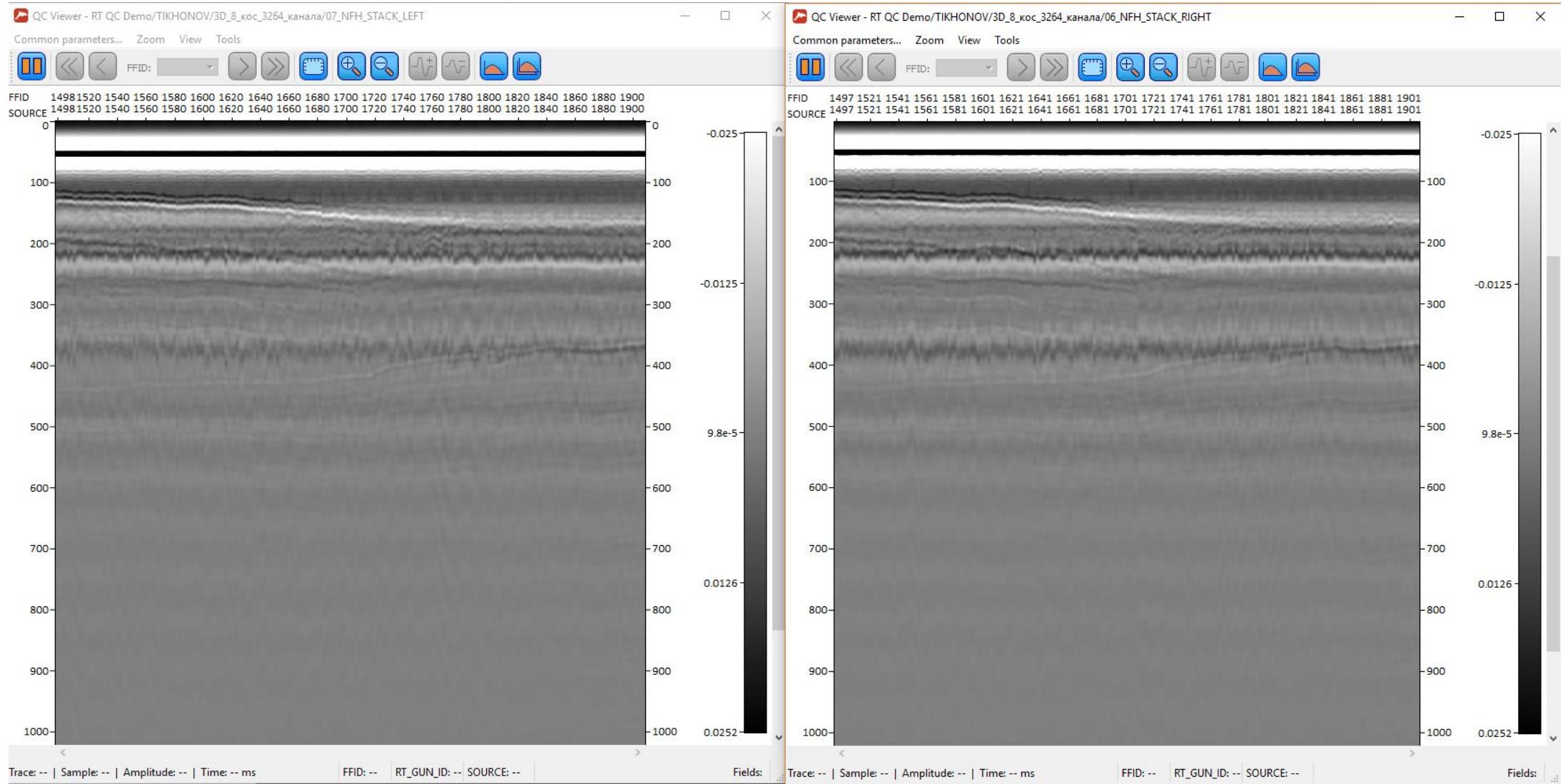
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Source QC: bubble 1st peak amplitudes (left) and gun air hose pressure plots (right)

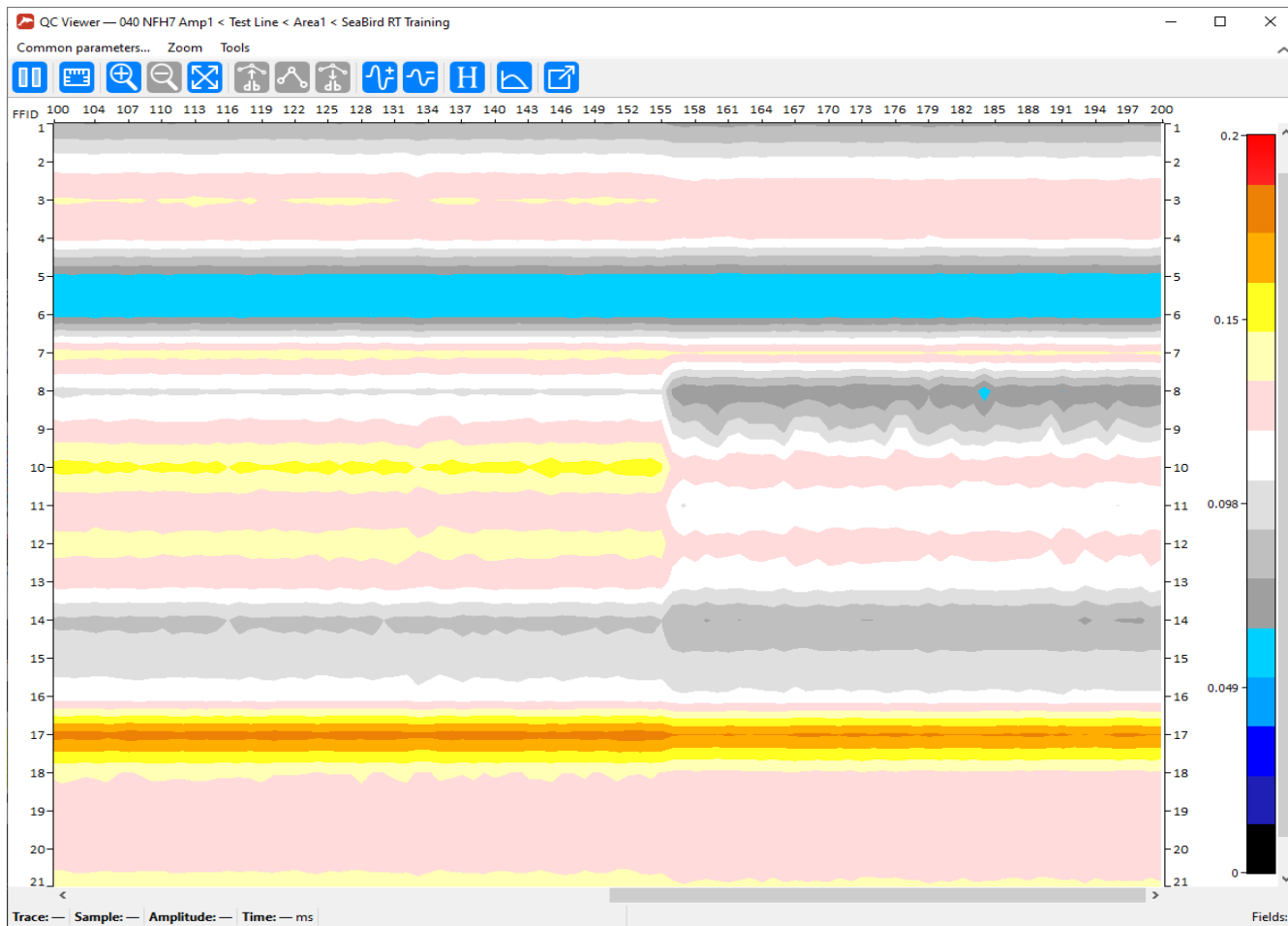Data courtesy of SeaBird Exploration

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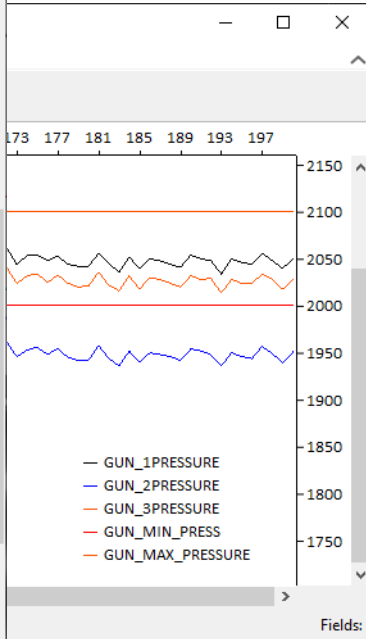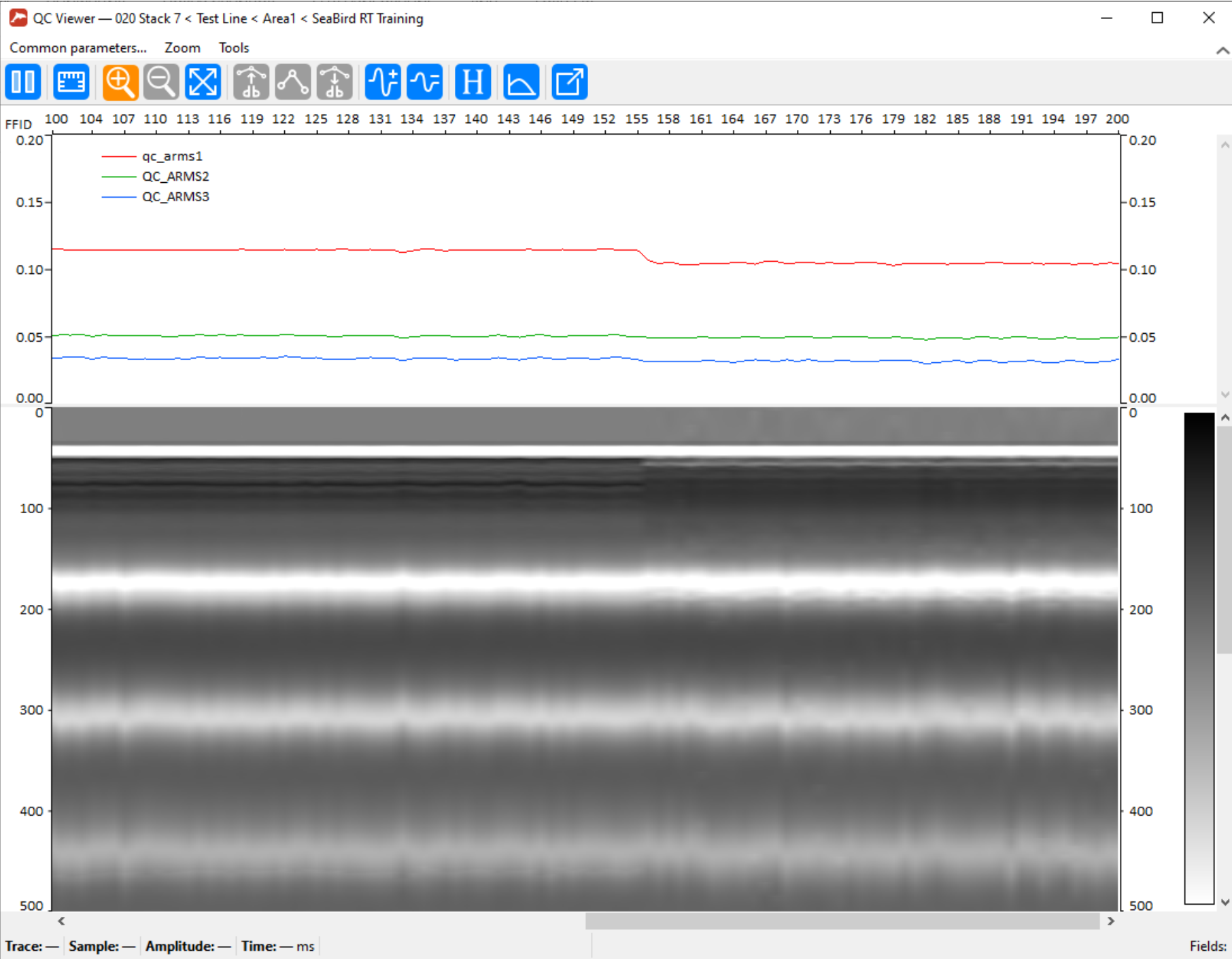## Source QC: left and right NFH stacks

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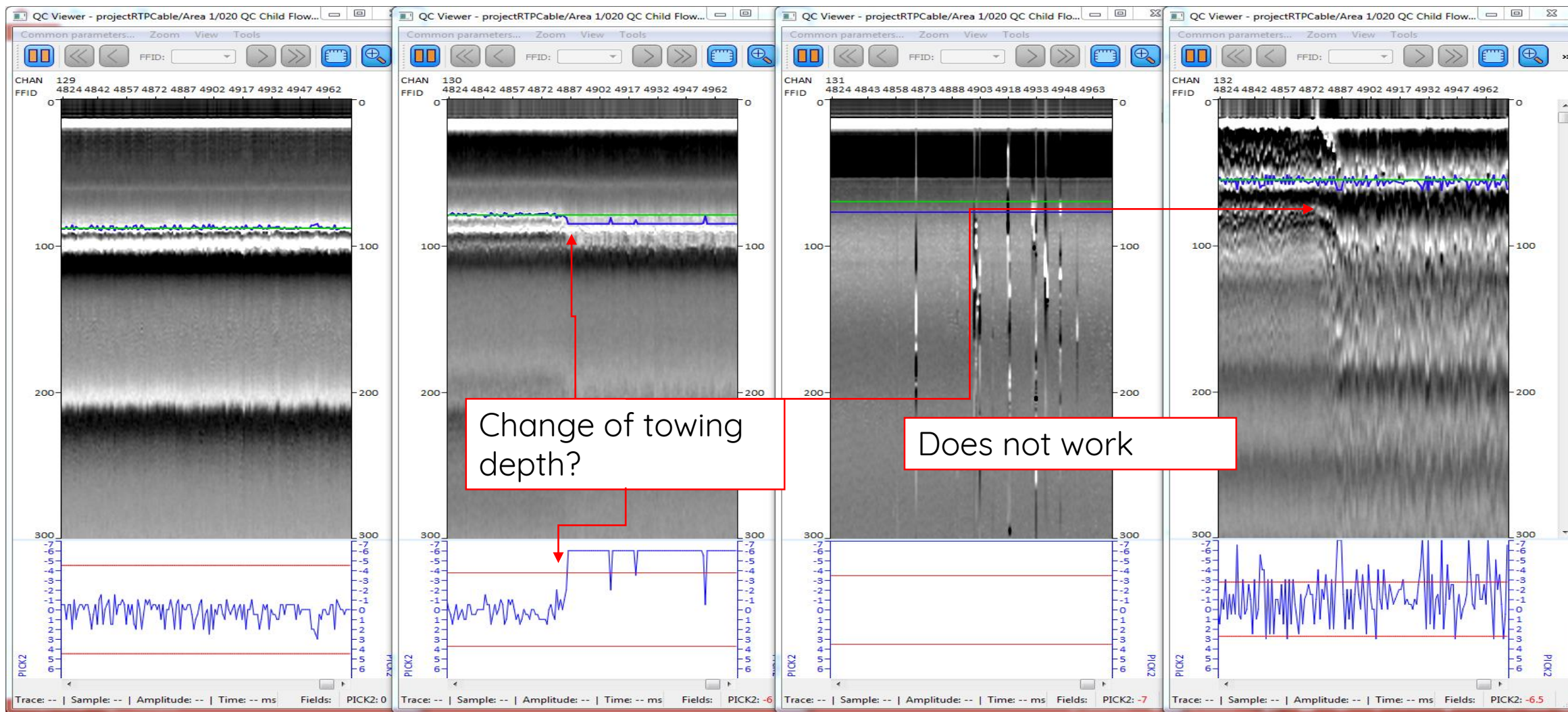## Source QC: bubble 1st peak amplitudes (left) and gun air hose pressure plots (right)

Data courtesy of SeaBird Exploration

Sour...
pres...

QC Viewer — 020 Stack 7 < Test Line < Area1 < SeaBird RT Training

Common parameters...   Zoom   Tools

- qc_arms1
- QC_ARMS2
- QC_ARMS3

QC Viewer — 040 NFH7 Amp1 < Test Line < Area...

Common parameters...   Zoom   Tools

Trace: —   Sample: —   Amplitude: —   Time: — ms

- GUN_1PRESSURE
- GUN_2PRESSURE
- GUN_3PRESSURE
- GUN_MIN_PRESS
- GUN_MAX_PRESSURE

Fields:

Trace: —   Sample: —   Amplitude: —   Time: — ms

Fields:

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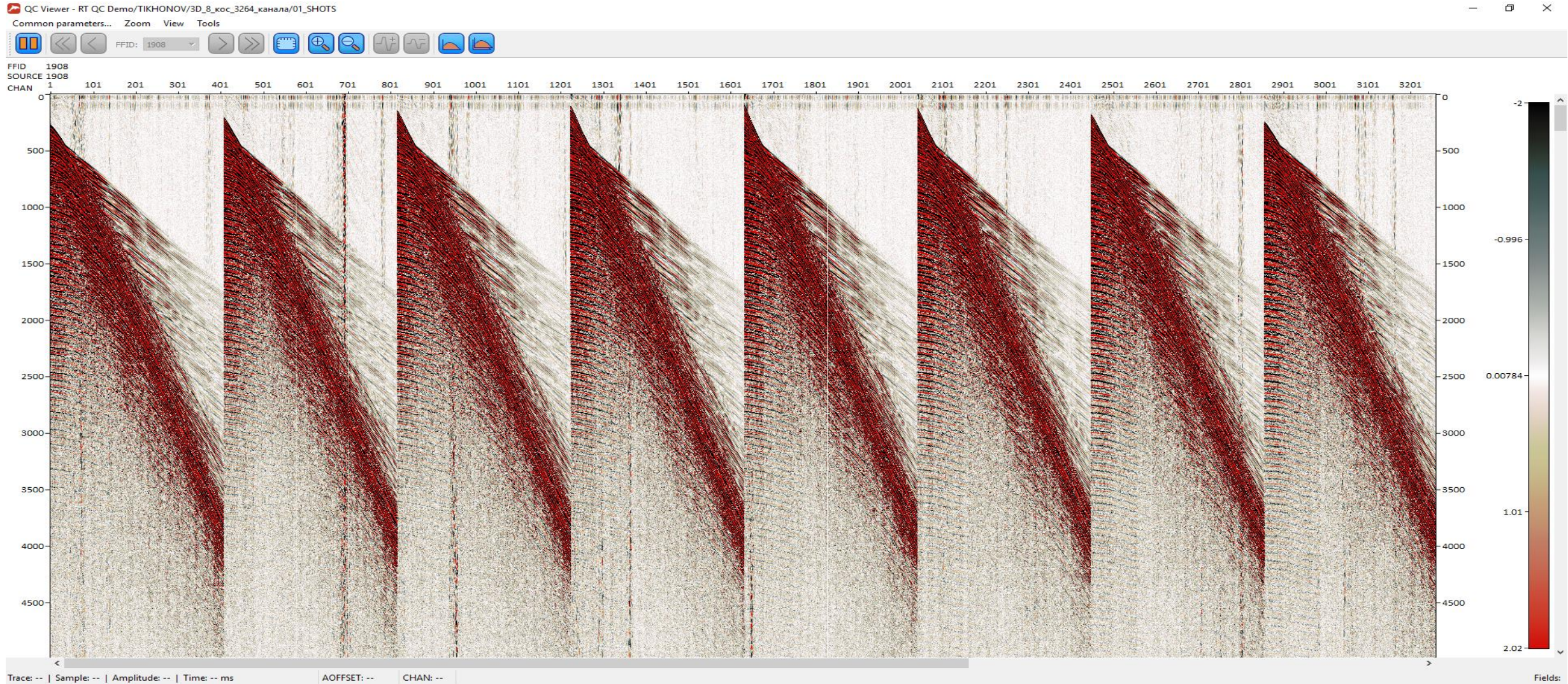
Source QC: Individual NFH Records

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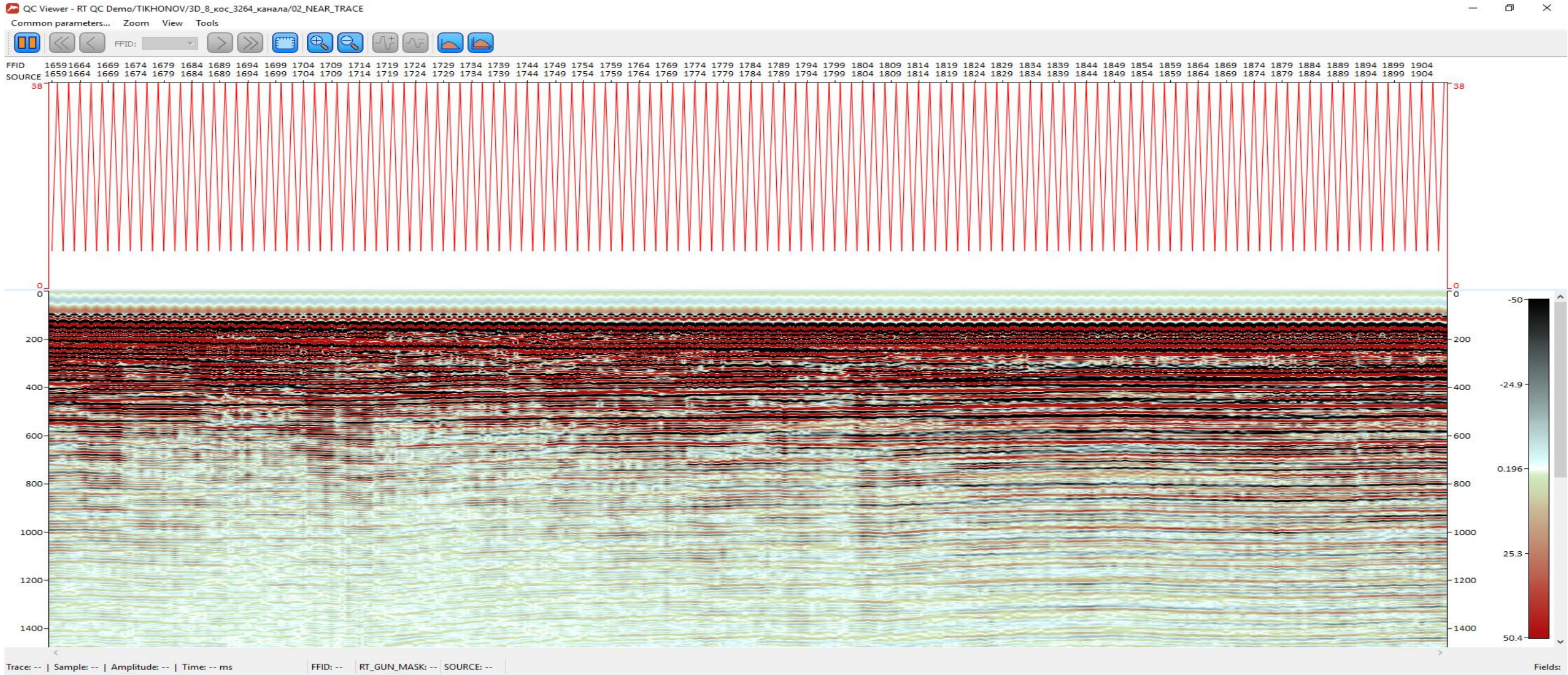
Data QC: Shot Gather

RadExPro Real-Time
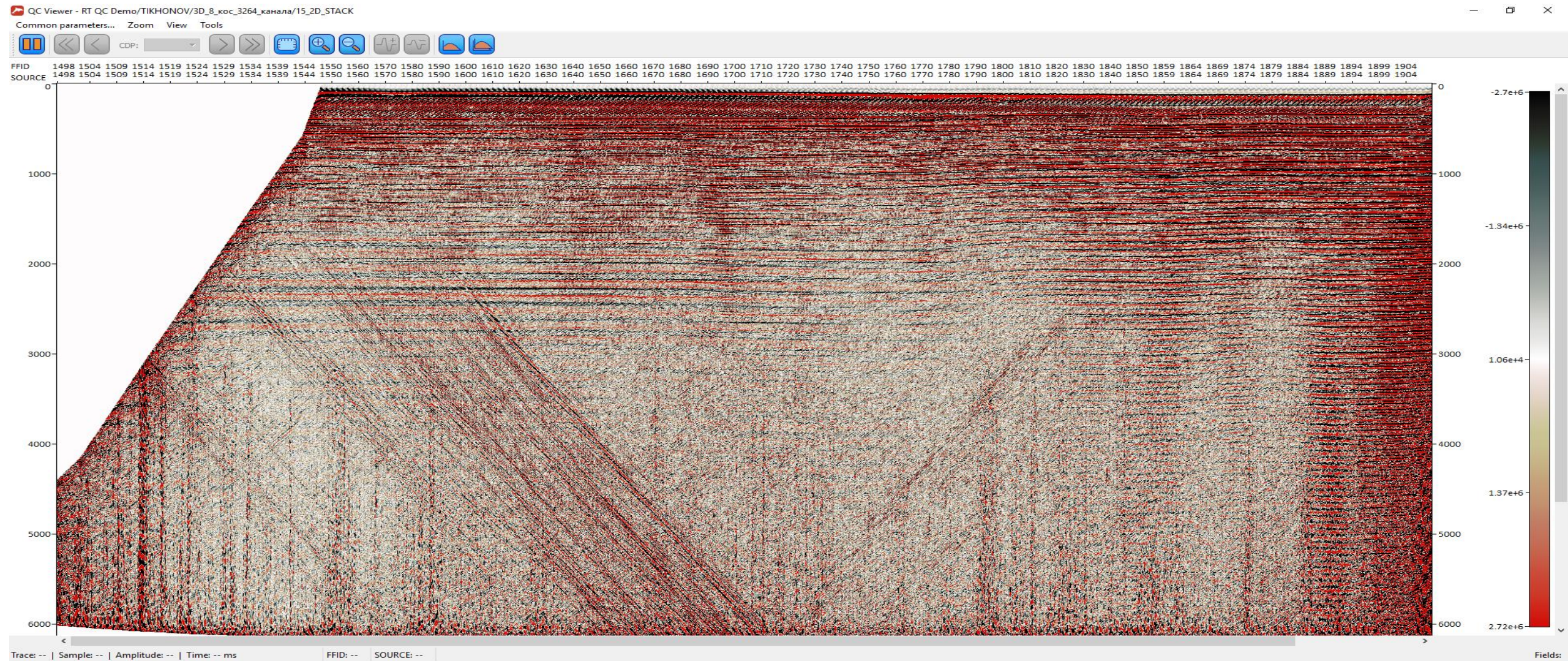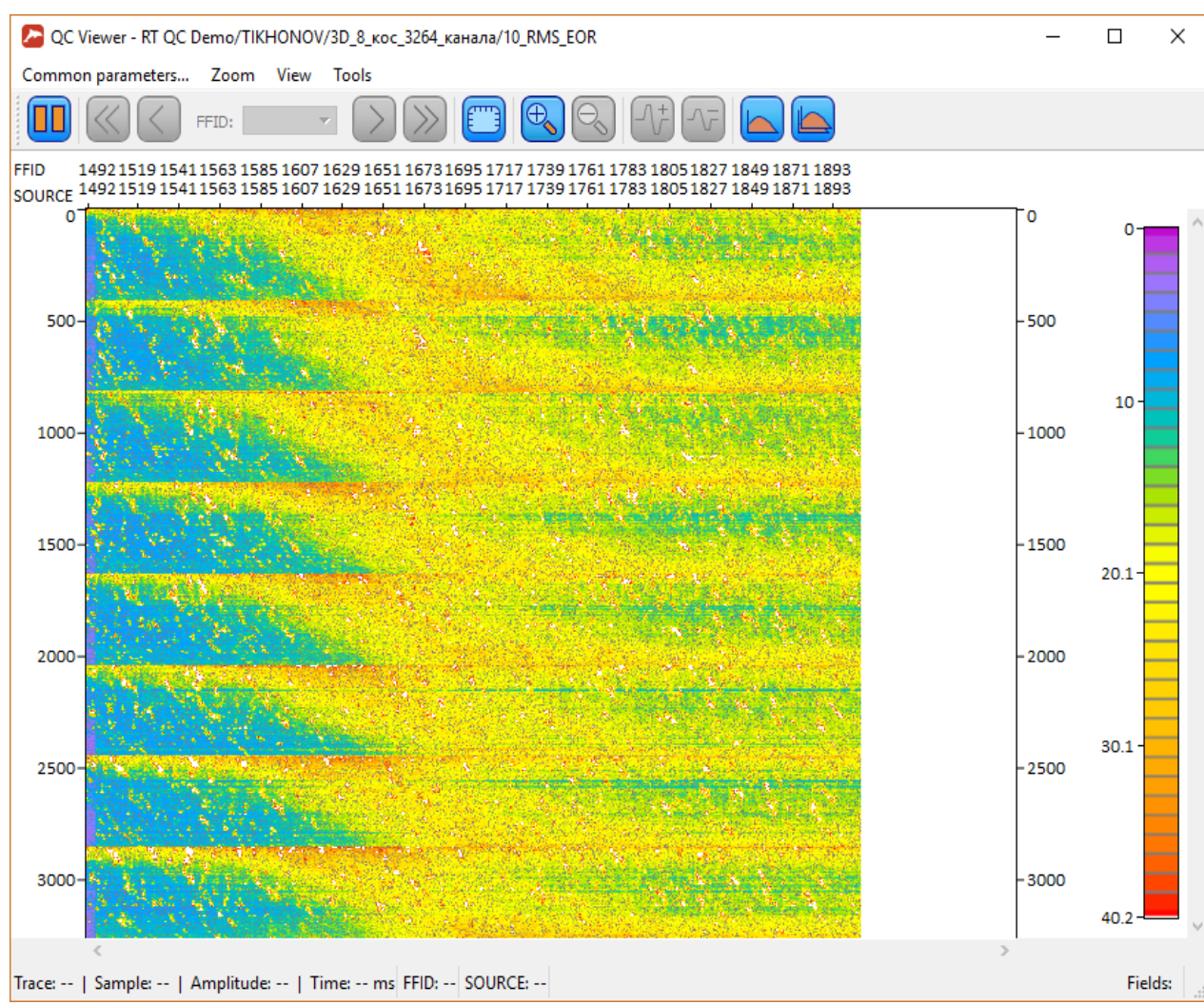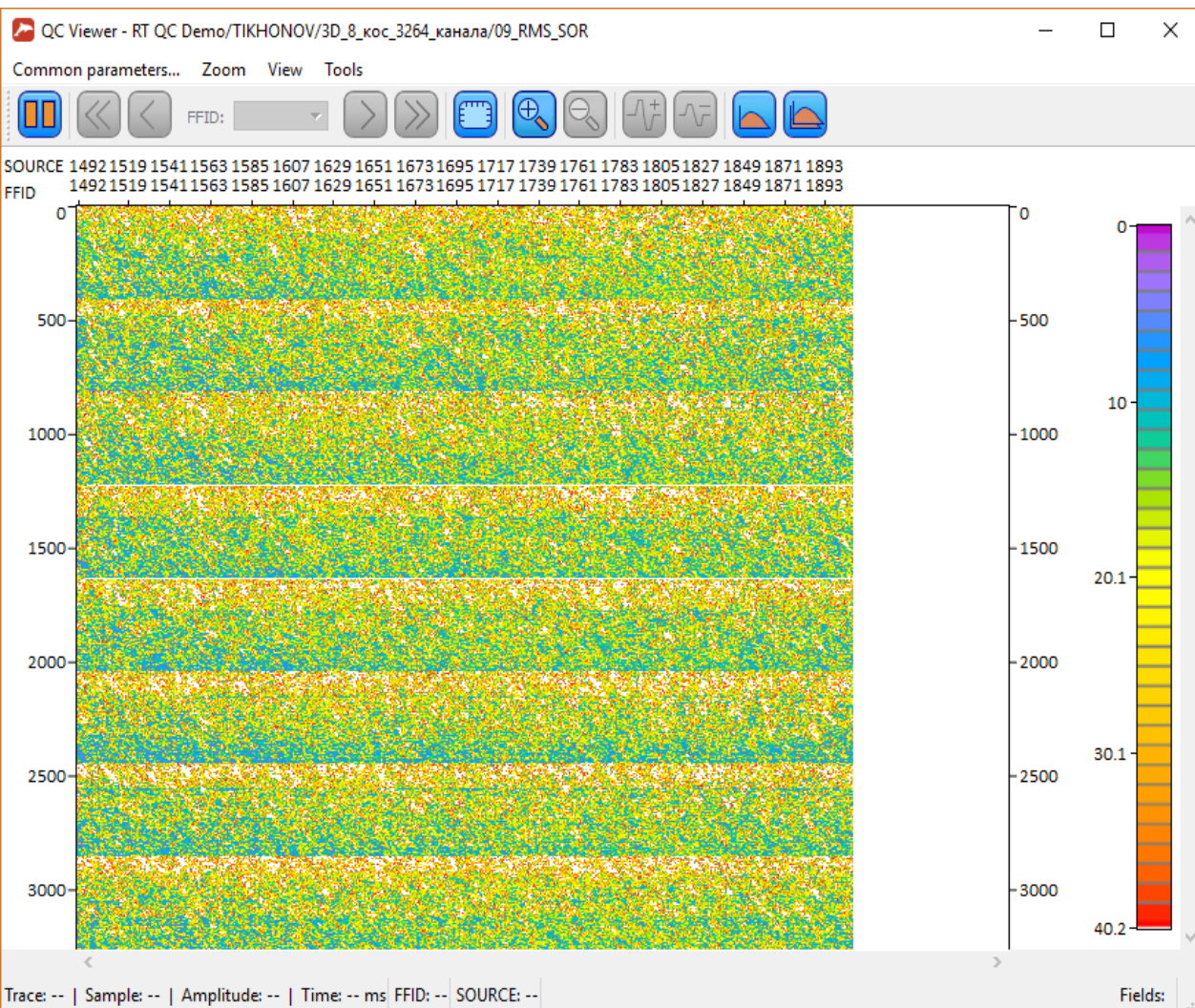
Data QC: Near Trace Gather

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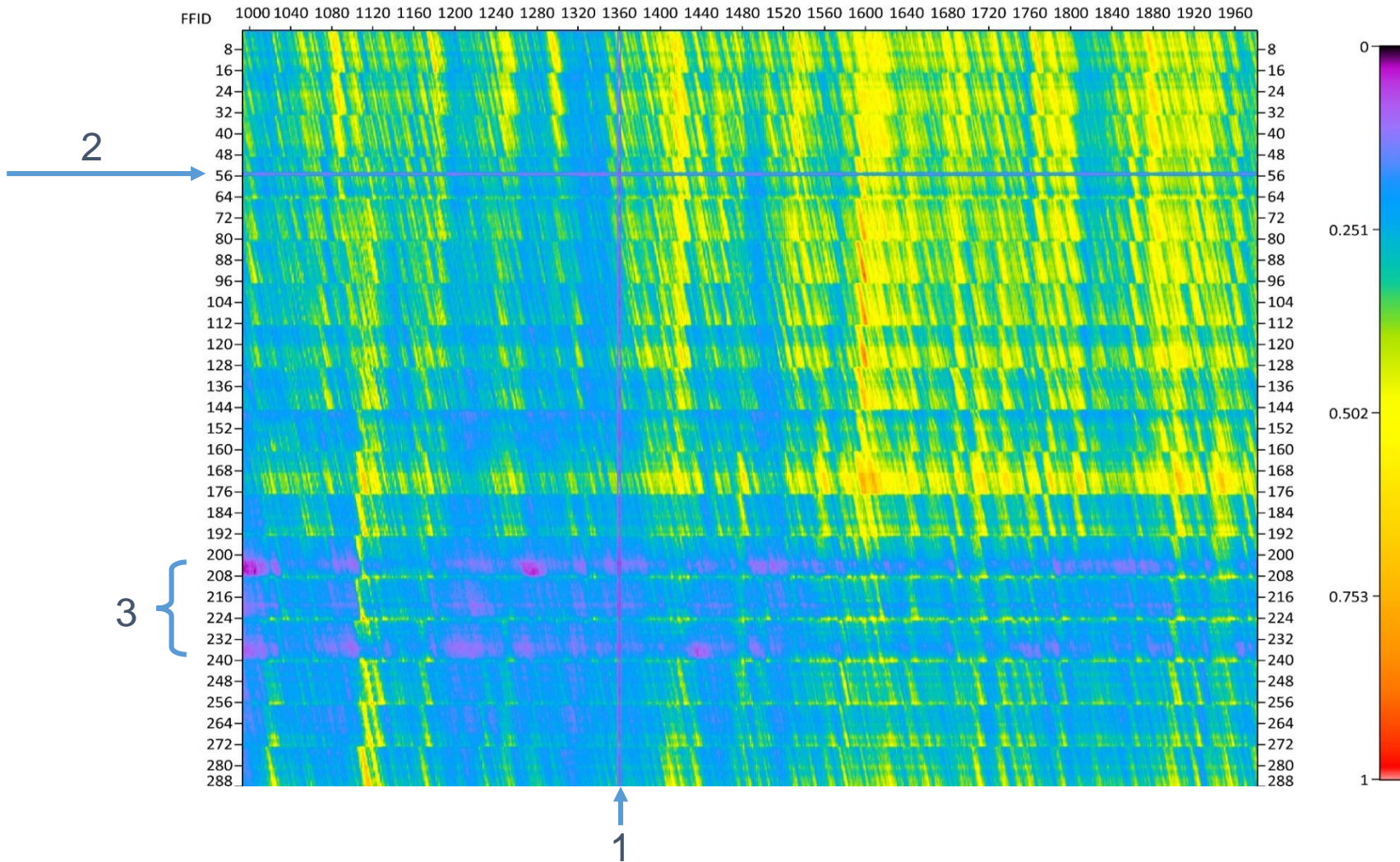## Data QC: RT CMP Stack

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Data QC: ARMS SOR and EOR
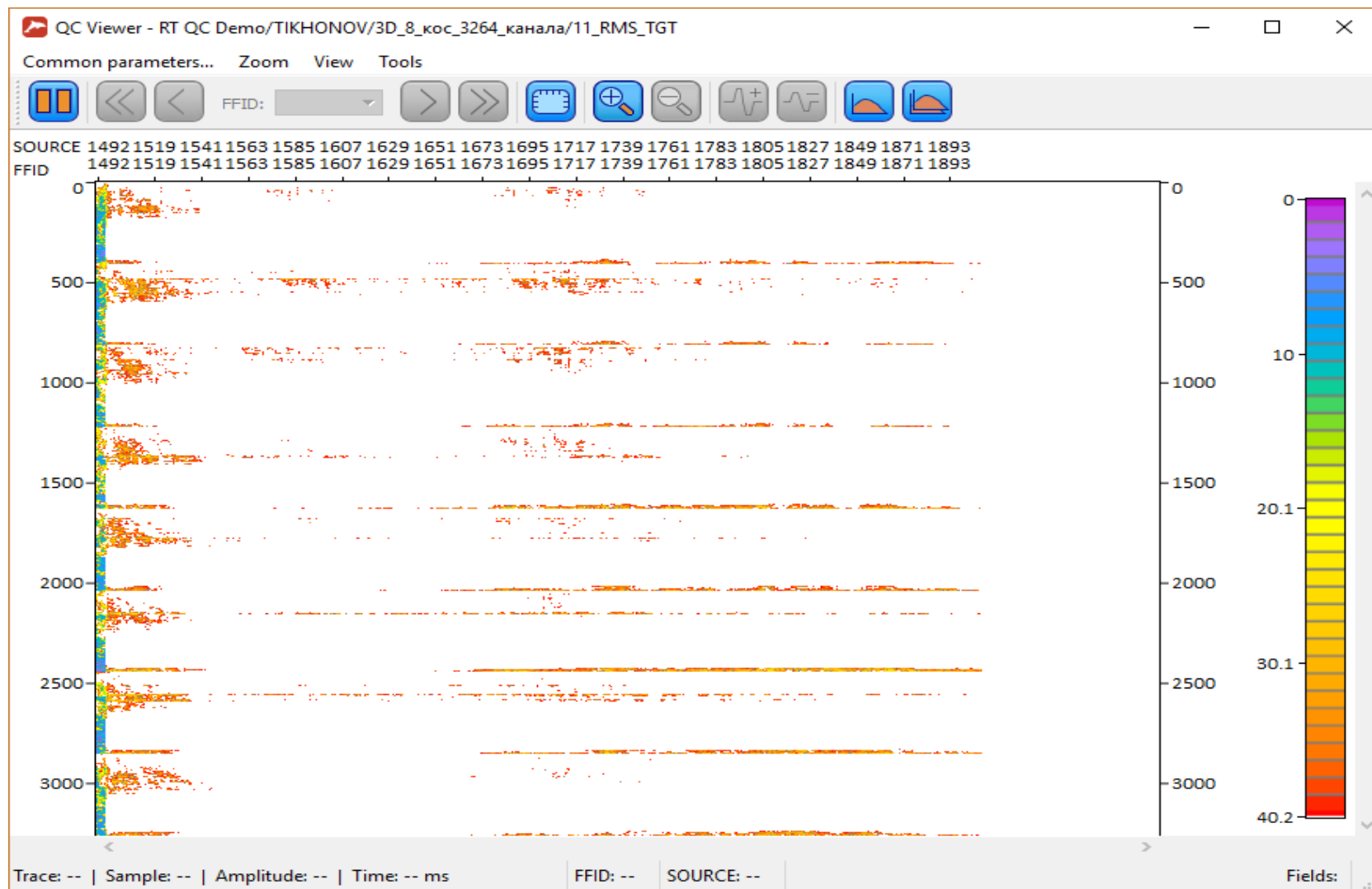
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Data QC: ARMS SOR

1- Missfire

2 – Bad channel
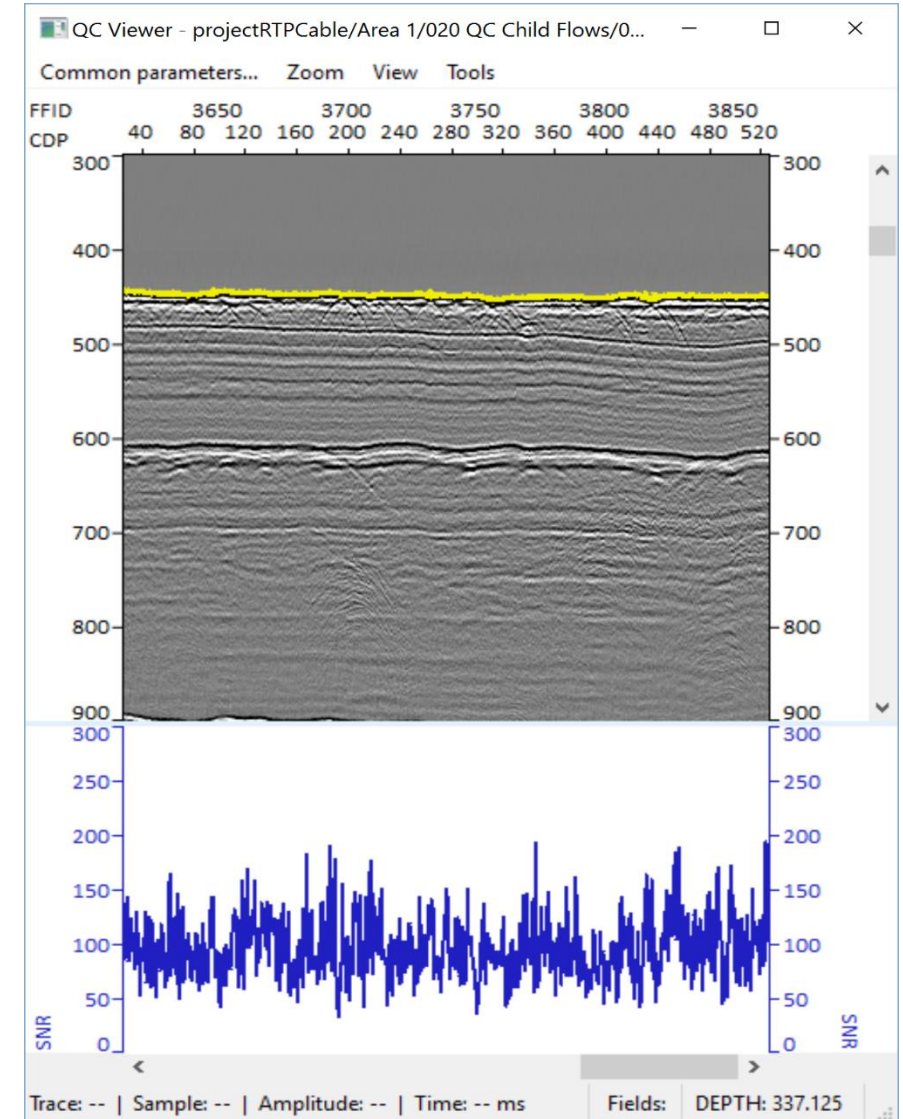
3 – Group of weak channels

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Data QC: ARMS at target reflections with 40uB treshold
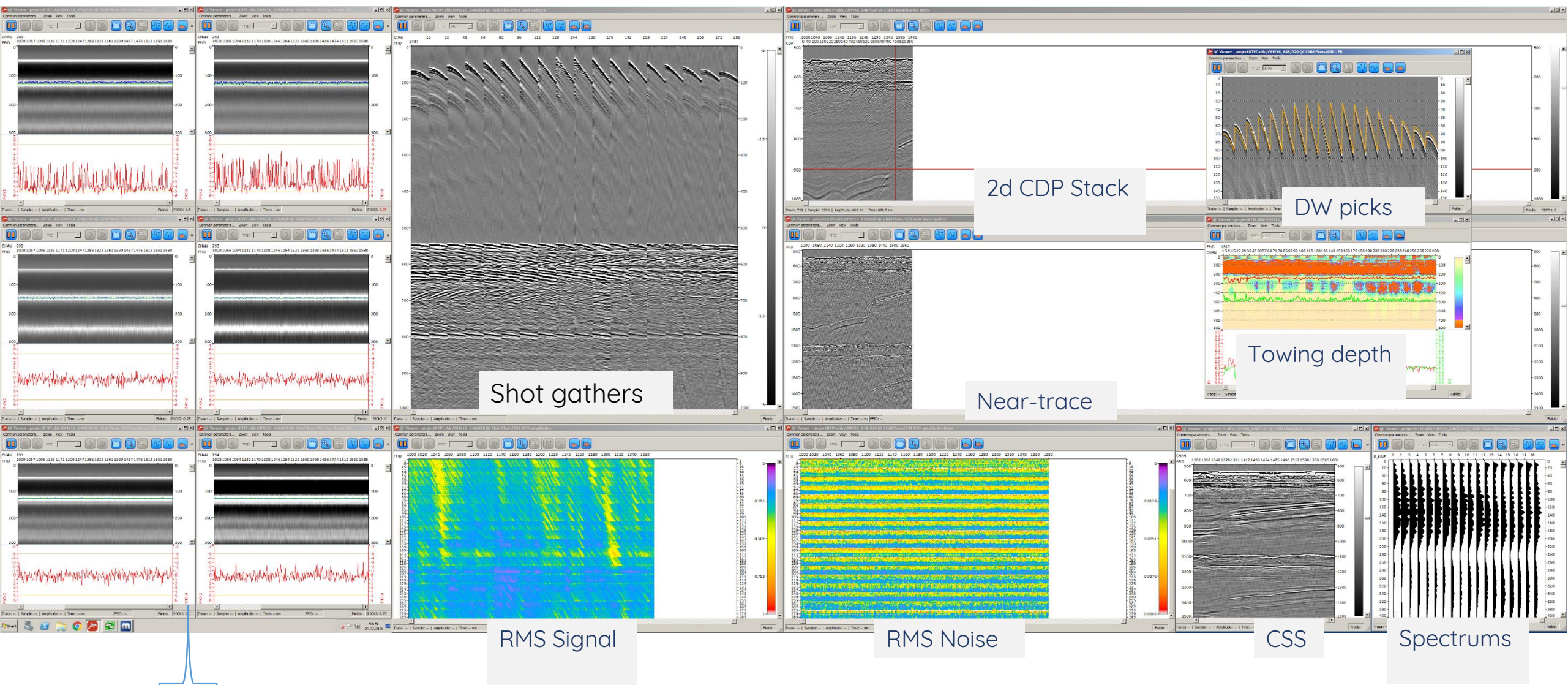
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Optional plots available in the real-time:

- SNR map

- Spectrums

- Amplitude and/or SNR plots for specific channels or/and stack

- Signal frequency map

- Frequency plots for specific channels or/and stack

- ....

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2d CDP Stack

DW picks

Towing depth

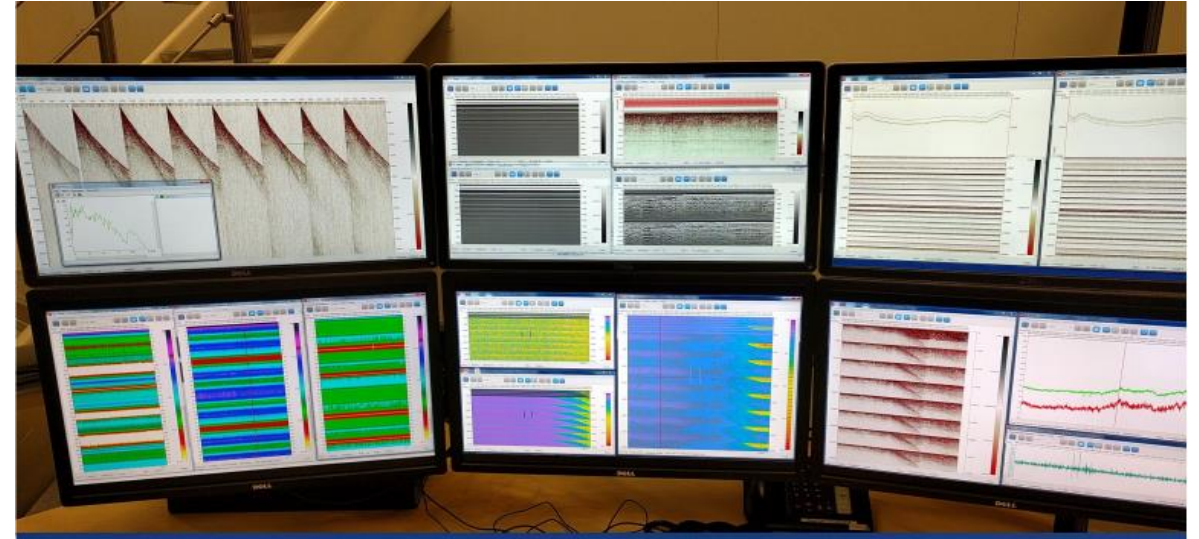Shot gathers

Near-trace

RMS Signal

RMS Noise

CSS

Spectrums

NFH

RadExPro Real-Time

Highly versatile RT QC system

Runs efficiently on regular PC

Comprehensive and cost-efficient
solution

RadExPro Real-Time operated by QC processors of GEOGALS Co. onboard of a 3D seismic vessel with 8 streamers

RTQC requirements

- Easy installation with affordable generic hardware ✅

- Common industry formats data import and export ✅

- Intuitive UI — anomaly detection and interpretation ✅

- Flexible data analysis — meeting variety of client requirements ✅

- Crush proof — stability and appropriate support ✅

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OUR CLIENTS:

Honestly this software is well worth the price and will pay for itself in the first 5 week rotation. It is definitely an excellent tool and I will recommend it be used on every crew I join. We have identified electrical leakage, air leaks, autofires, misfires, loose hardware on gun plates, oddities with PT/DTs etc. etc.

Their support is excellent.

Riley Lopez
Chief Technician
M/V SANCO SPIRIT

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