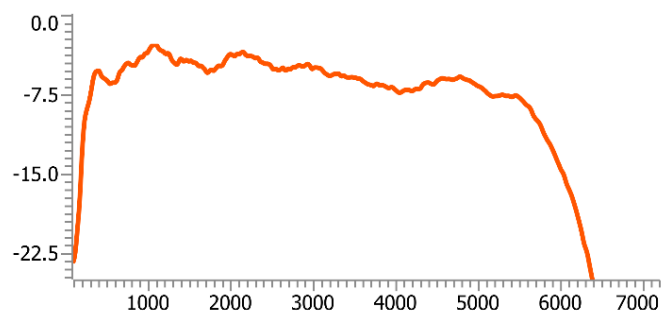
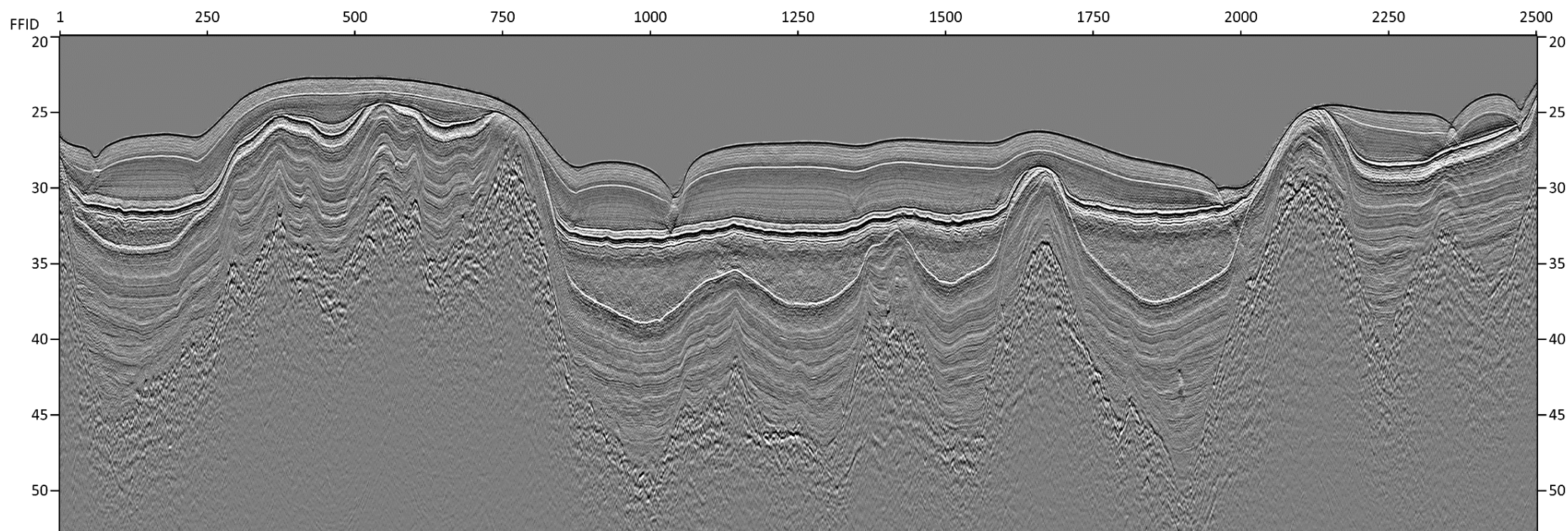


## Holocene sediments over glacial deposits



### Key processing steps

- Noise attenuation
- Swell statics
- Designature
- Multiple attenuation
- Migration

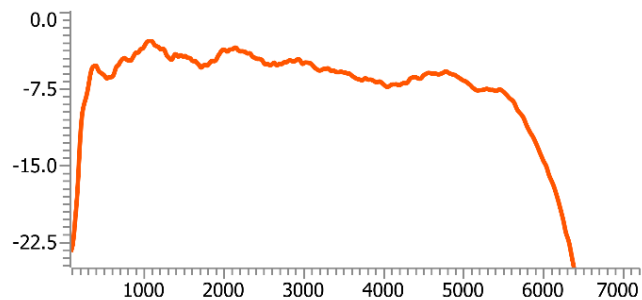
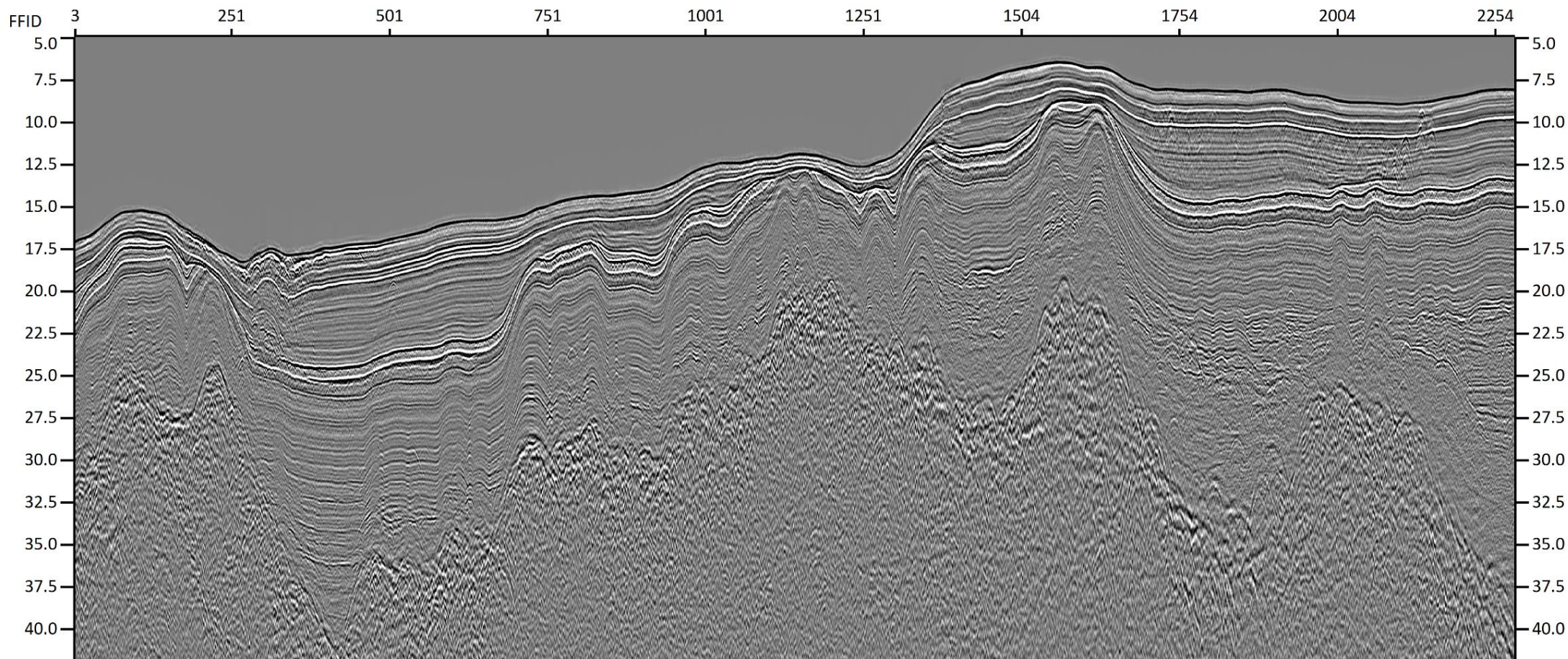
### Acquisition parameters

Source: G-Boomer HF  
Receiver: HR Streamer (1 channel)  
Acquired: GEODEVICE

Water depth: 18-25 m  
Vertical scale: time  
Resolution: < 1m



## Post-glacier boulder detection, non-migrated image



### Key processing steps

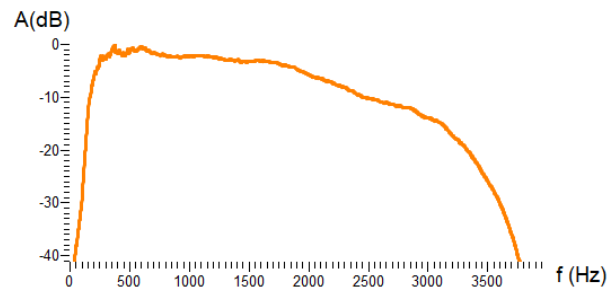
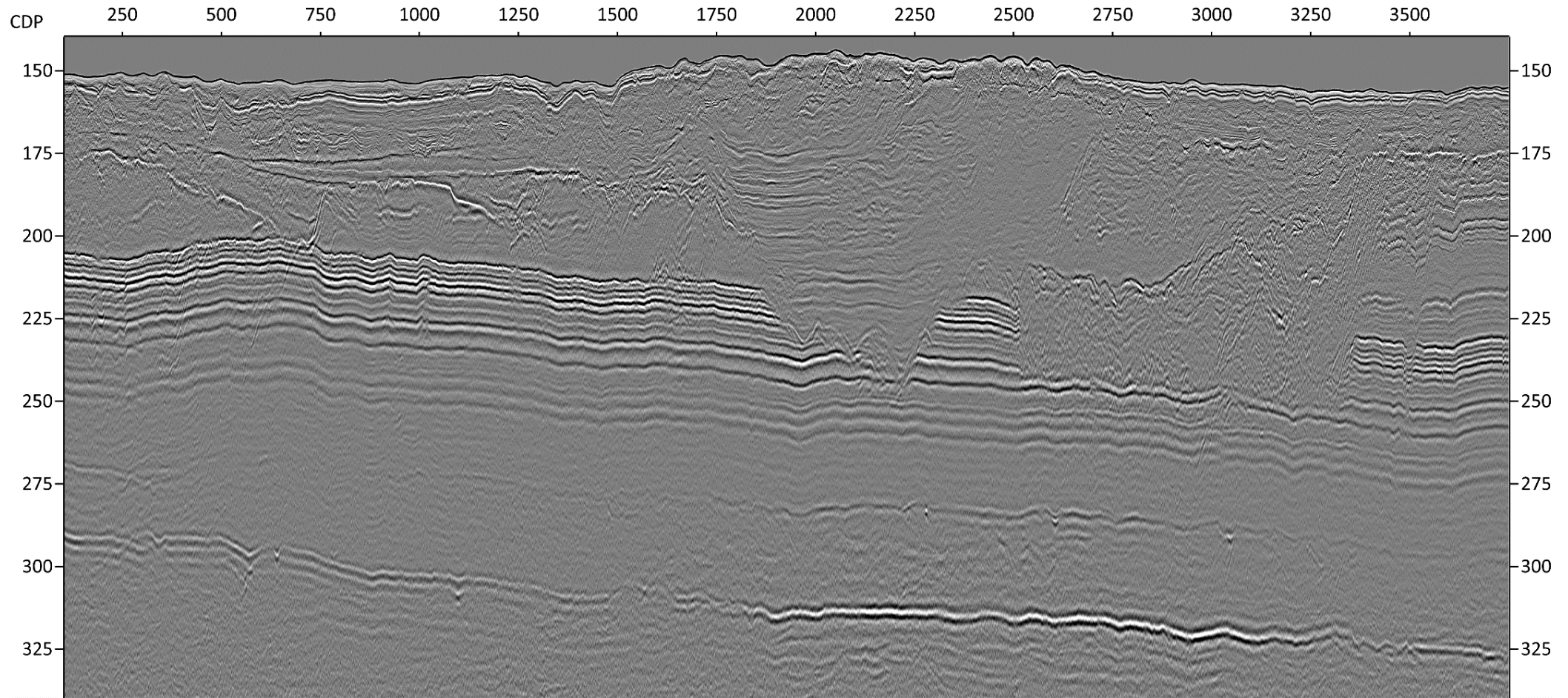
Noise attenuation  
Swell statics  
Designature  
Multiple attenuation  
Migration

### Acquisition parameters

Source: Sparker FWS-125  
Receiver: HR Streamer (1 channel)  
Acquired: GEODEVICE  
Water depth: 5-13 m  
Resolution: < 1m



## Kara Sea – shallow geohazard assessment



### Key processing steps

Noise attenuation  
UHR Statics  
Velocity Analysis

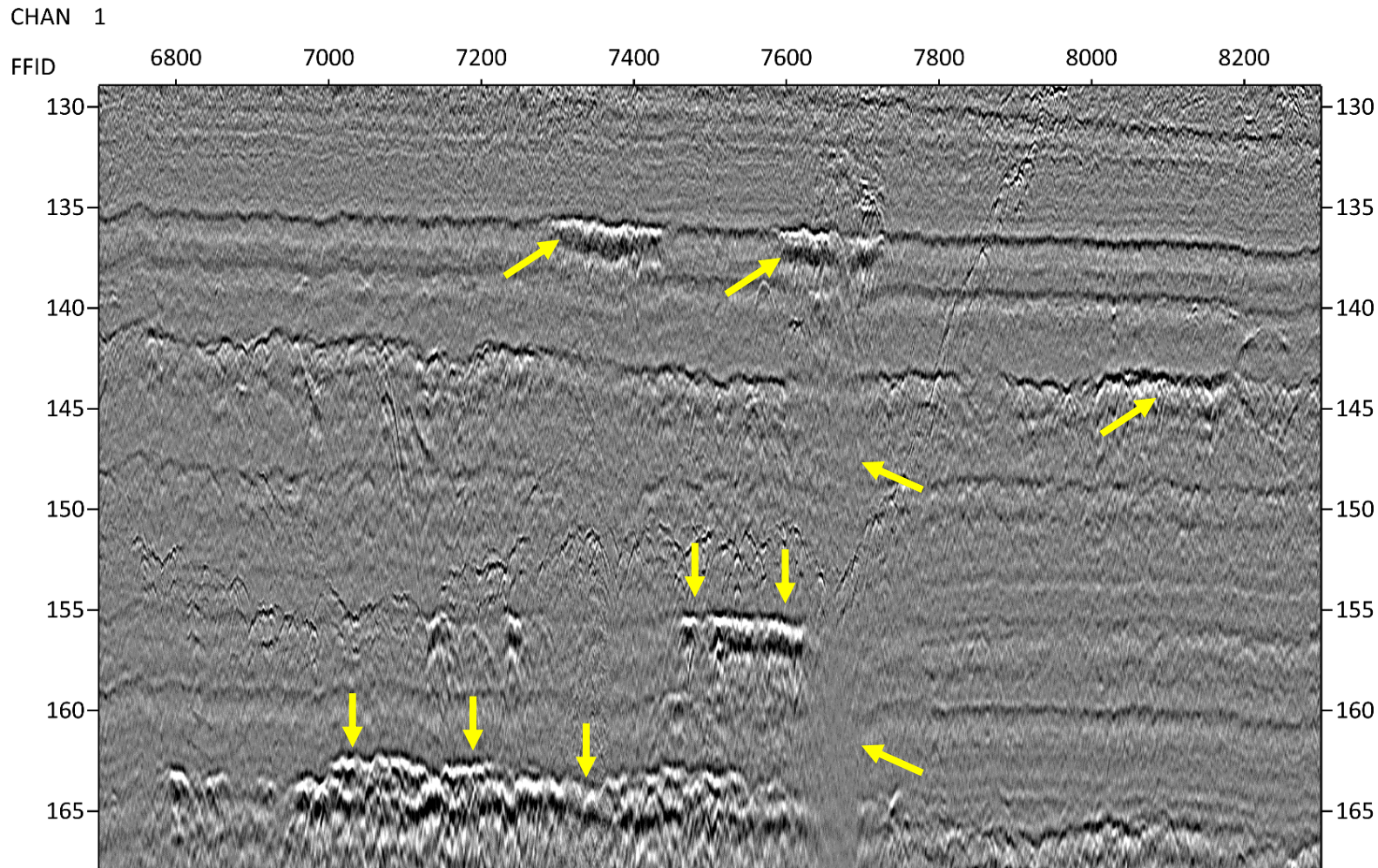
Sparker Designature  
SRME  
PSTKM

### Acquisition parameters

Source: Sparker SWS-500  
Receiver: 48 channels @ 3.125 m  
Acquired: MAGE  
Water depth: 110-140 m



## Shallow gas detection – geohazard assessment survey



Shallow gas intervals and leakage zones, denoted by the arrows can be clearly seen on the resulting image

### Key processing steps

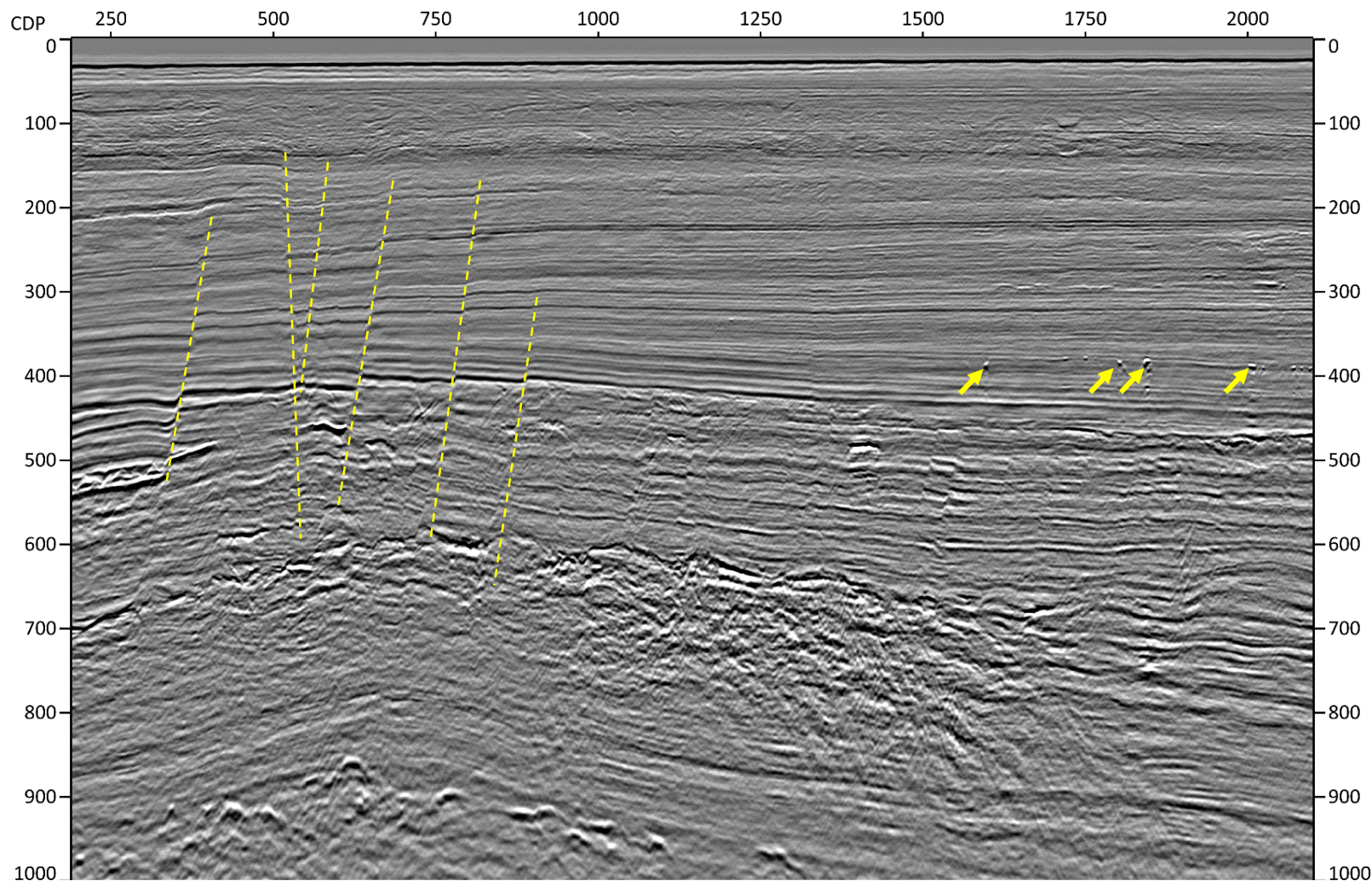
- Noise attenuation
- Swell statics
- Signature
- Multiple attenuation
- Migration

### Acquisition parameters

Source: Sparker FWS-125  
Receiver: HR Streamer (4 channels)  
Acquired: GEODEVICE



## High resolution seismic survey - airgun



High resolution seismic survey for geohazard assessment. Faults and small-scale reflection events nicely imaged after PSTKM.

### Key processing steps

- Noise attenuation
- Velocity Model building
- Designature
- Multiple attenuation
- PSTKM

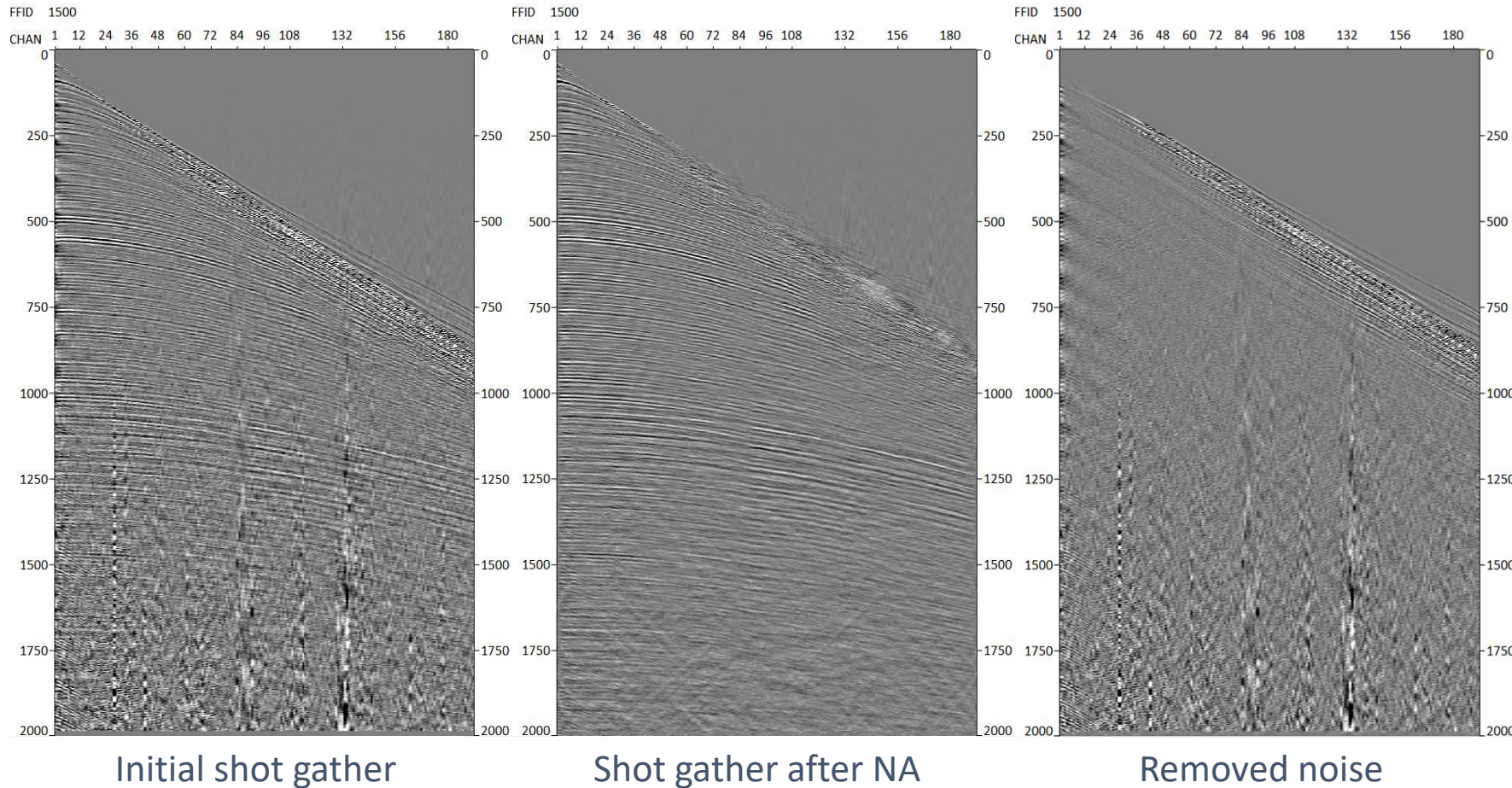
### Acquisition parameters

- Source: Airgun
- Streamer: 192 channels @ 6.25 m

## Noise elimination

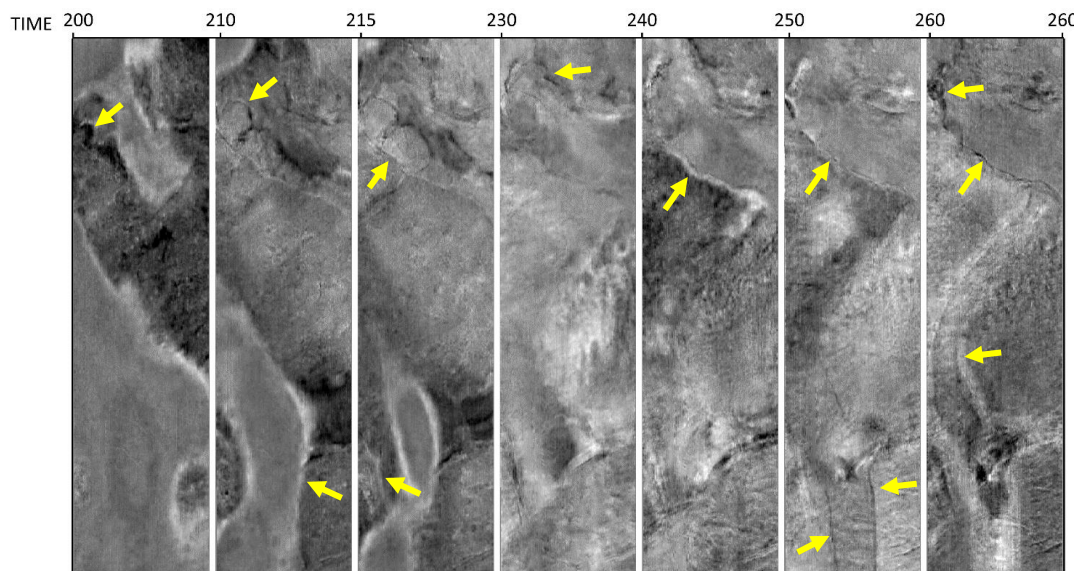
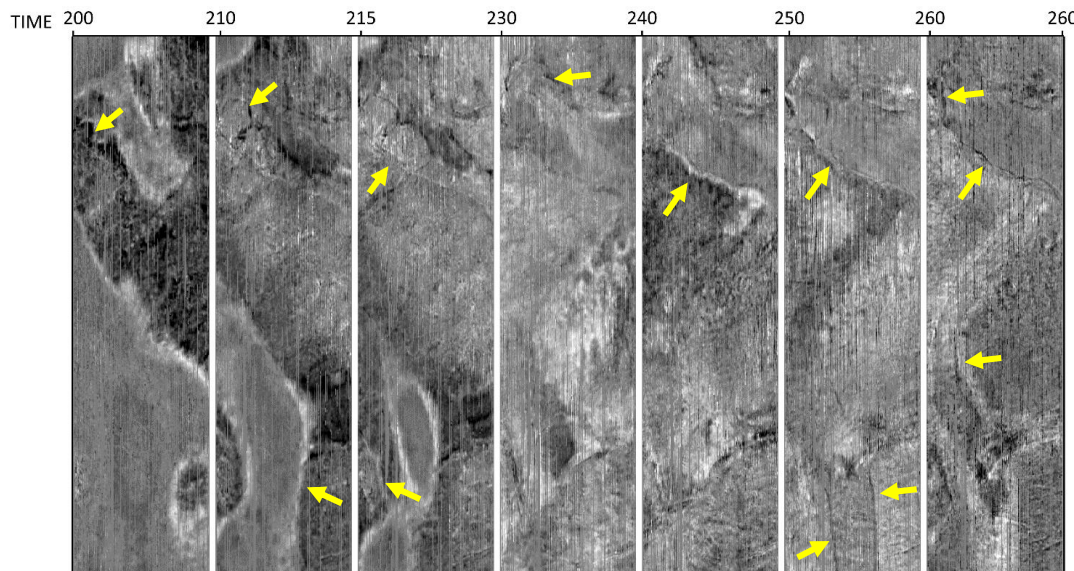
As any other marine seismic surveys, HR/UHR are subjected to various types of noise (swell, linear, random, industrial, etc.)

RadExPro provides a complete set of algorithms and approaches for noise elimination, including sophisticated Sparse Radon and FK techniques.





## 3D Regularization



Inaccuracy in cable steering during high resolution 3D seismic surveys (weather conditions, absence of steering birds, etc.) and other aspects of data acquisition, result in coverage gaps as well as non-regular fold and offset distributions in bins. These issues can be fixed by regularization routine.

Application of 3D regularization to 3D high resolution seismic survey with a small volume airgun is shown. Time slice images significantly improved due to filled gaps coverage and fold regularization. Arrows denote paleo channels and small scale features.

### Acquisition parameters

Source: Small volume airgun

Flip-flop shooting

Streamers: 2x48 channels @ 6.25 m

Bin size: 6.25x6.25 m



**RadExPro**  
seismic software

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[sales@radepro.com](mailto:sales@radepro.com)