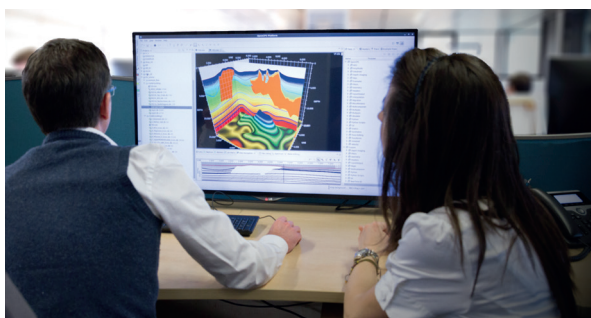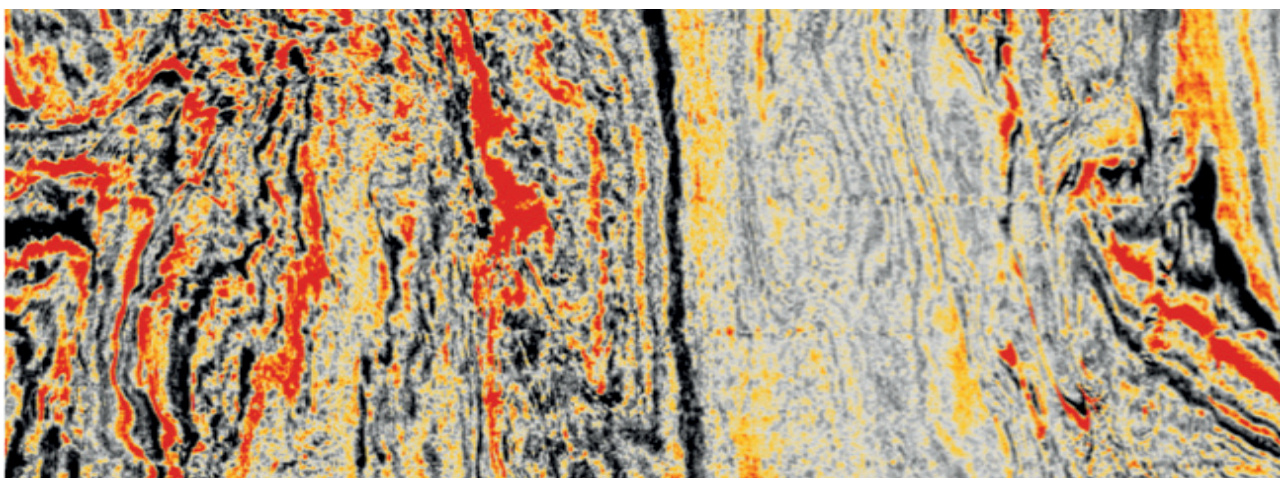# Regularization

The Shearwater 5D Regularization provides uniform coverage and regular trace spacing from real world acquisition geometries

- Interpolate missing shots and receivers
- Interpolate shots and receivers on to a regular grid
- Interpolate trace mid-points to bin centres
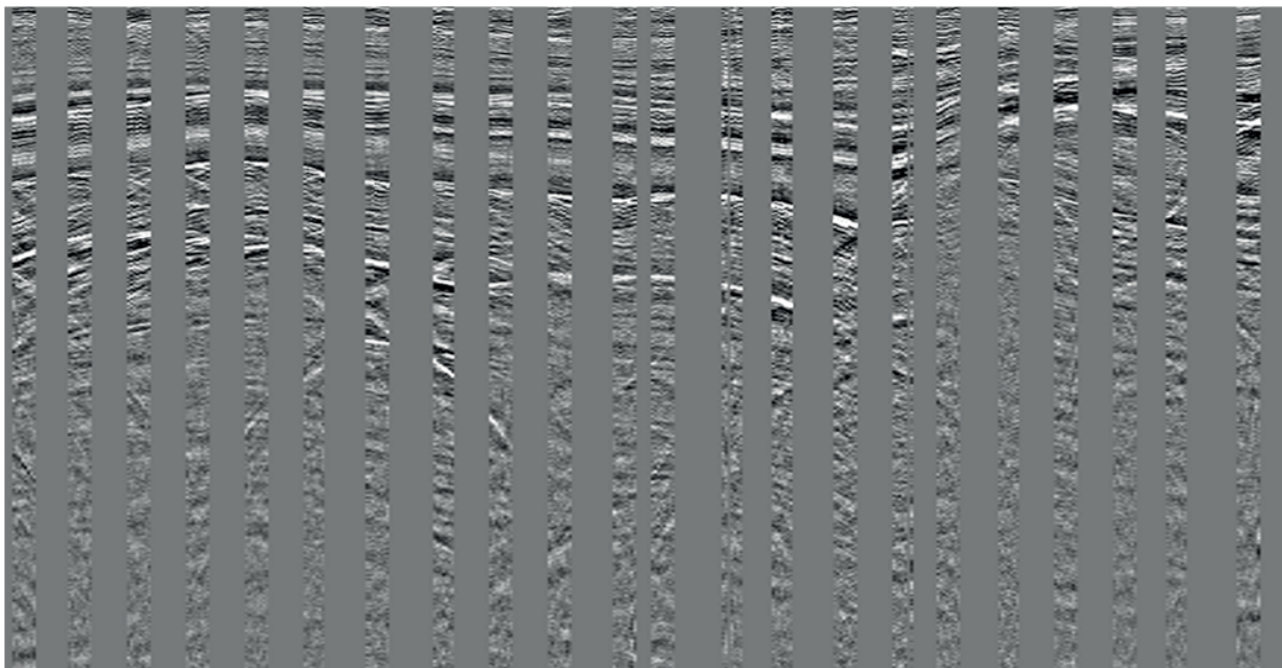- Uniform, regular coverage
- 3D, 4D or 5D

Time slice through a near offset, marine dataset showing holes in the coverage caused by variable currents.

After regularisation, the data is well sampled on a regularly spaced grid.

The Shearwater regularization interpolates irregularly spaced, land or marine data onto a regular, well populated grid suitable for further processing and imaging. Traces are not only interpolated into empty bins, but live traces are also interpolated to the bin centres.

Revealing possibilities

Crossline through a 3D marine near offset volume showing irregular coverage caused by ocean currents.
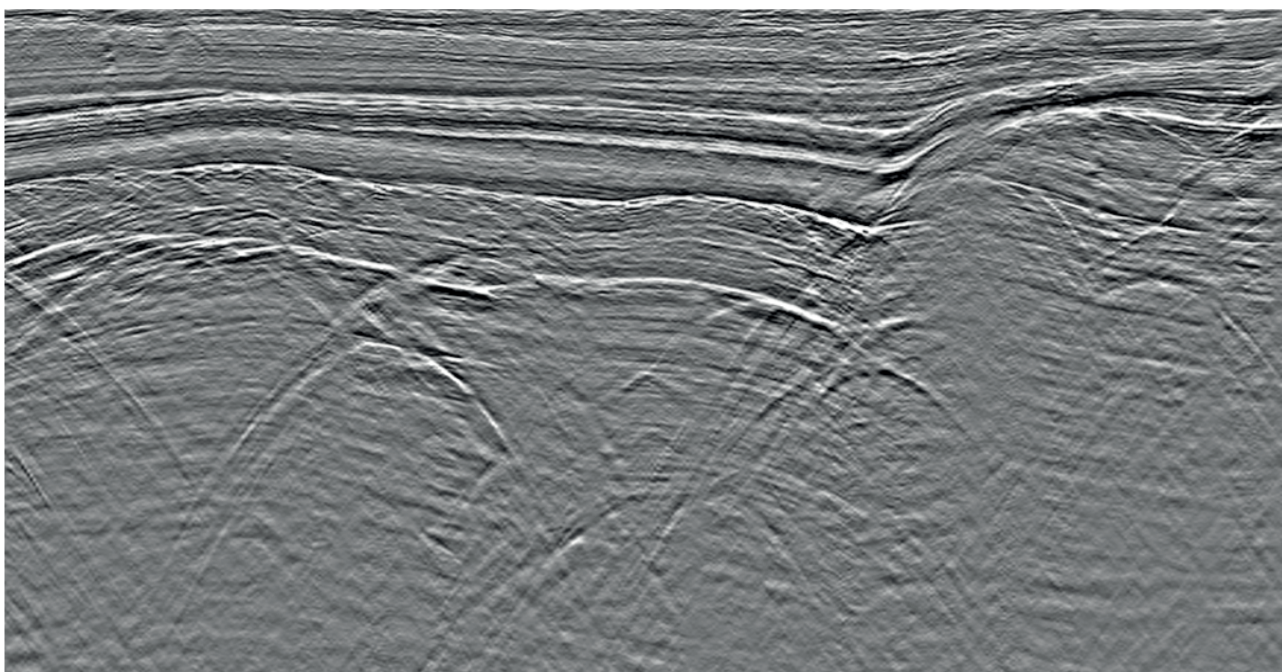
Crossline after 4D regularization to fill empty bins and interpolate traces to bin centres ensuring a well sampled dataset for further processing such as pre-stack imaging.

On land surveys it is often run using a 5D algorithm but for marine data 3D or 4D is typically used. The 4D method allows the algorithm to use data from adjacent offsets as well as adjacent bins.

sales@shearwatergeo.com
+44 (0) 1892 701000

77 Mount Ephraim,
Brockbourne House,
Tunbridge Wells, Kent, TN4 8BS UK

Chevron House,
30 Raffles Place, 23/F
Singapore 048622

1080 Eldridge Parkway
Suite 1100, Houston,
TX 77077, USA

Solheimsgaten 15,
5058 Bergen,
Norway