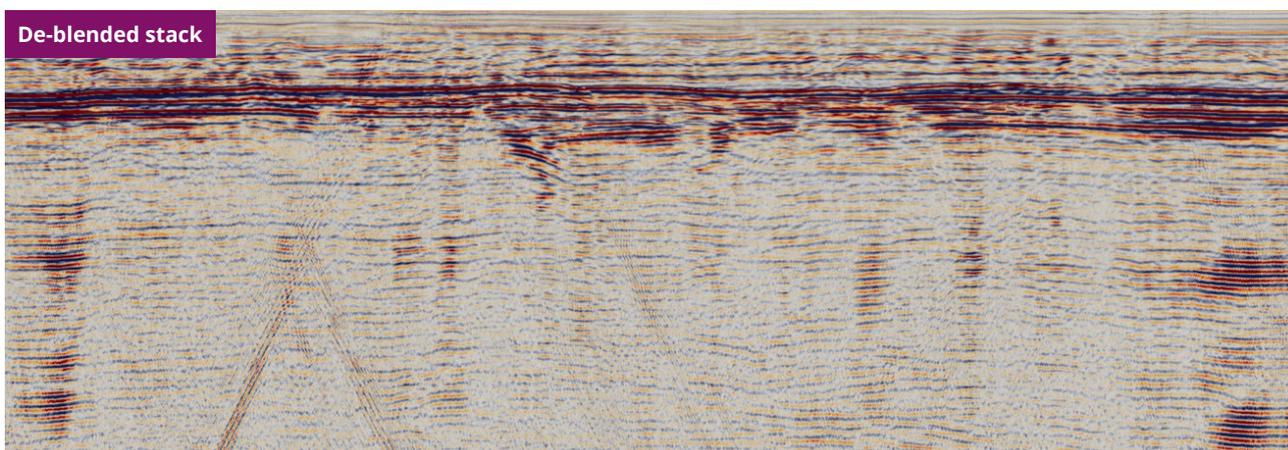
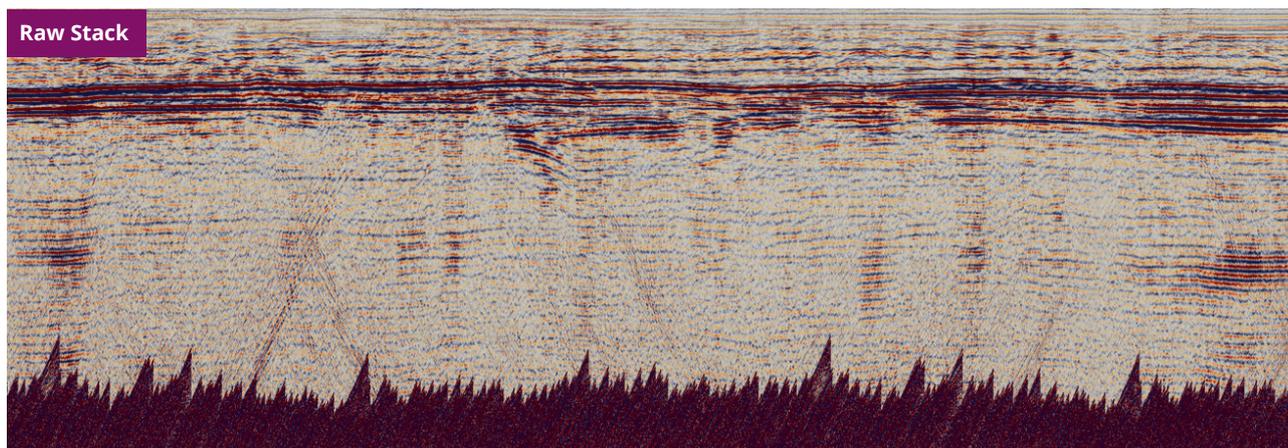


### Dual, Triple and Multi-source De-blending



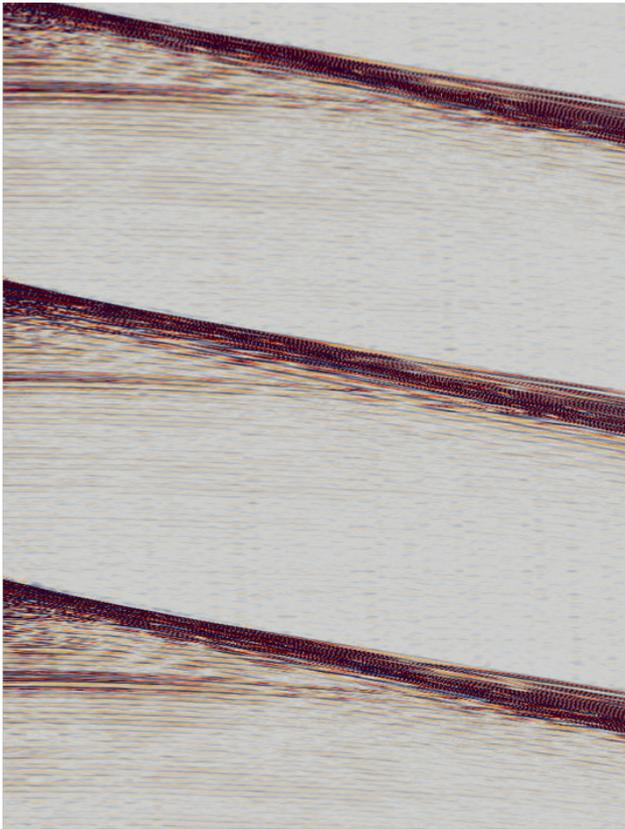
The Shearwater de-blending provides accurate shot separation for dual, triple or multi-source surveys

- Cost effective acquisition
- Natural random dither
- Higher fold
- Improved crossline resolution
- Record length extension
- Part of the FlexiSource package
- Not limited to Shearwater Acquisition



Stack section from a N. Sea triple source dataset. The upper section shows the overlapping input data while the lower section shows the same data after de-blending.

Overlapping sources can provide more cost effective acquisition, higher fold and higher resolution data but the shot records need to be carefully separated during processing to prevent the overlap causing high levels of interference in the final images.

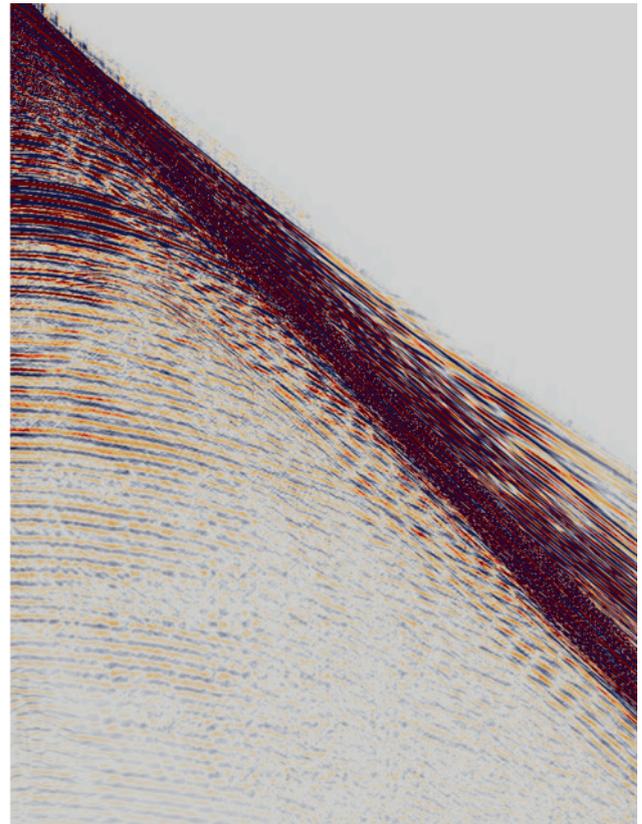
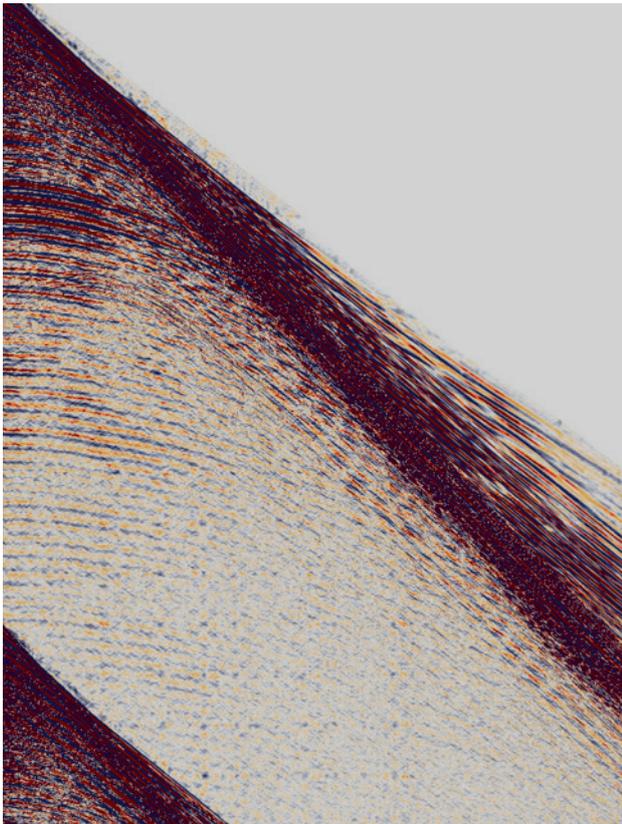


Shearwater 3D rank reduction de-blending separates overlapping shots acquired with a random dither caused by the irregular movement of the equipment through the ocean's waves. This allows acquisition with shot overlaps ranging from a few hundred milliseconds to several seconds. This results in a number of benefits such as higher fold, higher crossline resolution or faster vessel speed and less equipment towed through the water.

The Shearwater overlapping sources can provide more cost effective acquisition and higher resolution data

The Shearwater de-blending is performed pre-stack in order to separate shots for further processing and also to provide CMPs or angle stacks for AVO. A triple source overlapping shot is shown on the left while a zoom below shows the shallower portion of the shot record before and after de-blending.

Shearwater have used this de-blending on projects that include a 3D survey covering over 13,000 sq. km.



## Further reading

Record-length Extension by Rank-reduction De-blending  
M. Maraschini\*, A. Kielius , J.B. Barnes, & S. Grion, 78th Annual EAGE Conference.