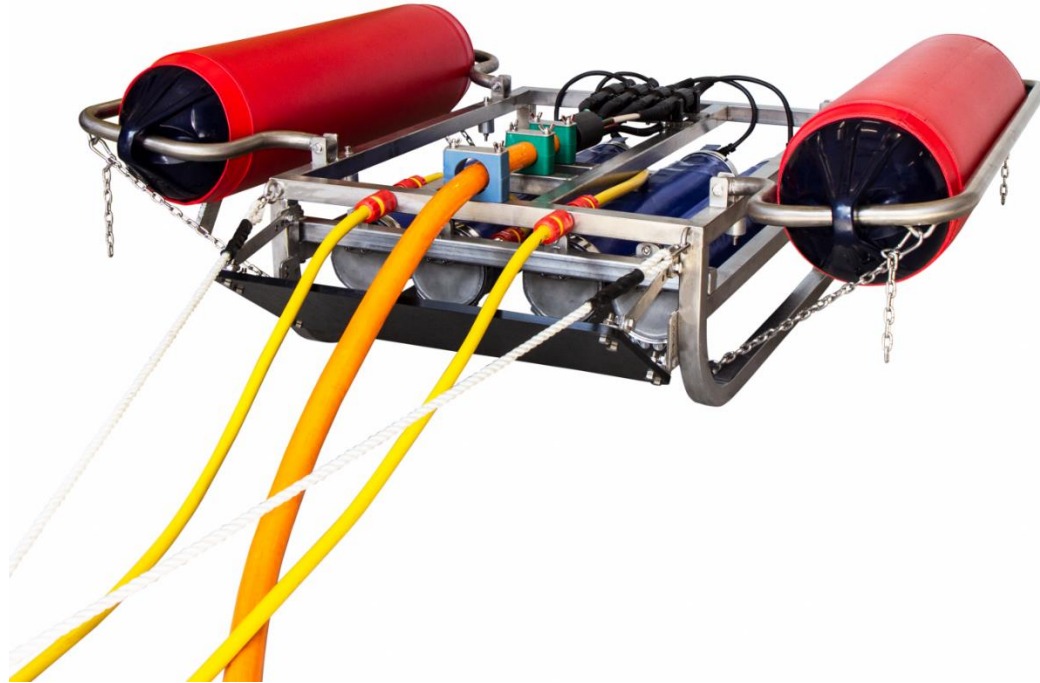


Energy sources MultiJack



Sparker is a marine seismic source, which generates acoustic signal by discharging an electrical pulse and is typically used for high-resolution (HR), ultra-high-resolution marine seismic surveys and VSP. Typically, sparkers are used in marine seismic acquisitions in seas and oceans, as salt water is a good current conductor. Salt Water Sparkers (SWS) of various configurations are available for this purposes. Fresh Water Sparkers (FWS) is a series of sparkers, which are specifically designed to work in fresh waters due to special containers with embedded multi-tip groups. Deep Water Sparkers (DWS) series is developed to ensure operations away from the surface and perfectly suited for deep-towed marine surveys and VSP.

SWS, FWS and DWS multi-tip sparkers with MultiJack energy source and HRStreamer provide state-of-art HR/UHR marine seismic acquisition solution, which can be used over a wide water depth range – starting from very shallow up to deepest Earth regions.

All type of sparkers produce high repeatable broadband signal, suitable for any type of HR/UHR seismic surveys with vertical resolution up to 30 cm such as geohazard seismic assessment, detailed stratigraphic studies, platform site surveys, windfarm surveys, oceanography studies. Frequency content of emitted signal can be adjusted by number of tip levels and energy per electrode, participating in the shot generation.

High durability of electrodes guaranteed by negative discharge technology used in MultiJack energy sources, which is typically referred to a non-wearing technology, preserving electrodes over a long time period.

Typical sparker systems are built with coaxial wires, assuming 10 J energy per tip as the optimal shooting mode. We have developed special sparker electrodes from unique material to acquire data with higher possible energies per tip, without any harmful consequences. This technology allows to reduce central frequency of the sparker by increasing energy per electrode, in case if deeper penetration is needed.

It can also be used for towed sparker system - while towing deeper, frequency content of the signal will be higher due to increase of hydrostatic pressure. This effect can be compensated by increasing energy per tip, keeping frequency range in spec.

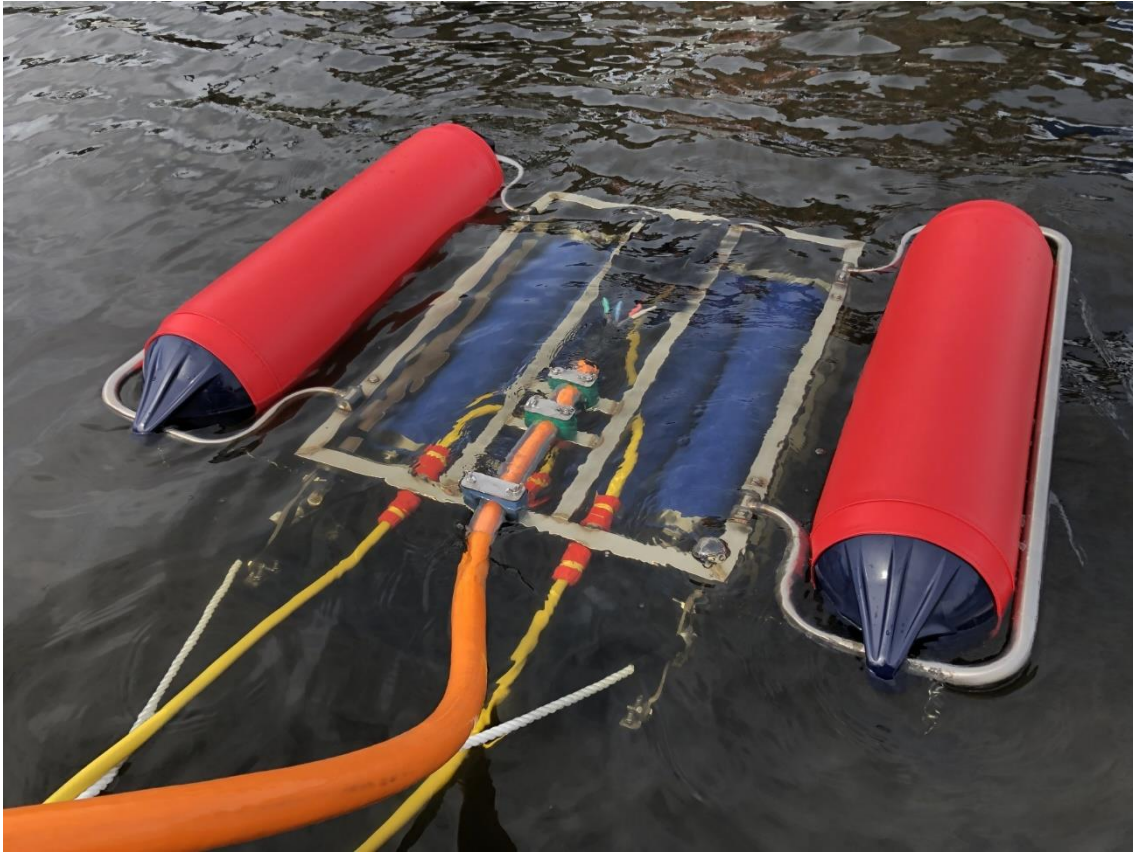
Full acquisition setup includes towed HV power coaxial cable, MultiJack energy source, towed hydrophone array HRStreamer and seismograph. Additionally, deck winches for HV cable and streamer with slip ring can be purchased to provide fast and safe deployment and recovery of UHR marine equipment during field operations.

Geodevice offers a full range of modern acquisition equipment, suitable for high resolution subsurface imaging. Complexity and variability of state-of-the-art shallow seismic data acquisition requires adequate processing approaches. RadExPro seismic processing software is fully capable of advanced single channel, multichannel, 2D, 3D high-resolution (HR) and ultra-high-resolution (UHR) marine data processing.

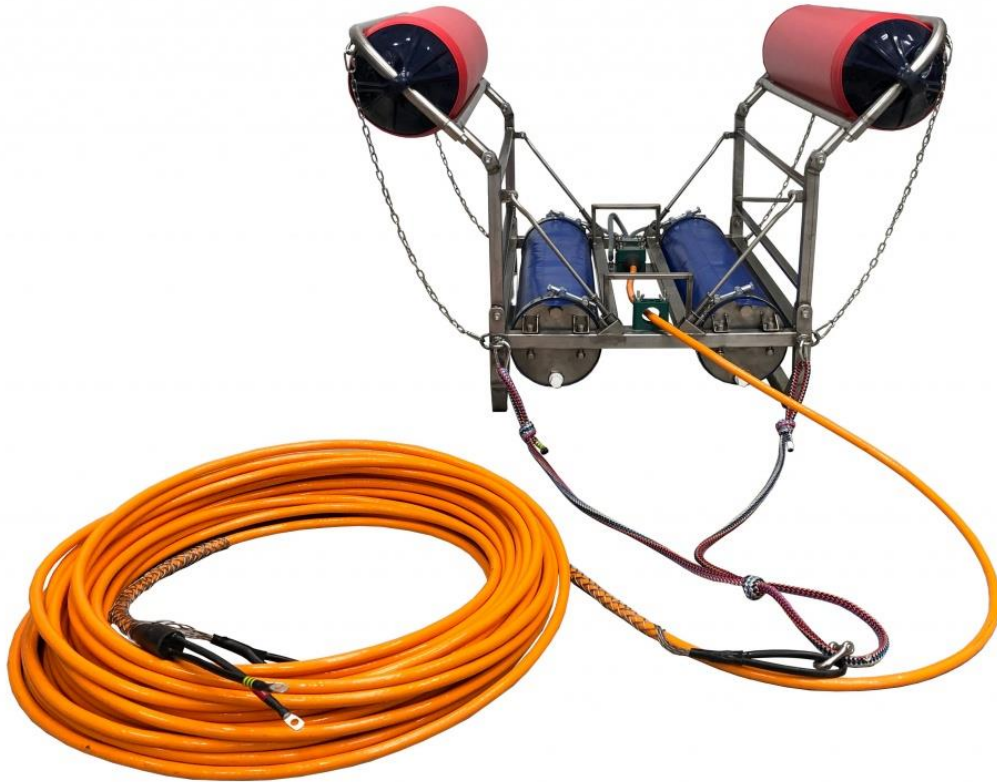
Geodevice team is ready for cooperation and developing customized equipment for special customer's needs and ideas.

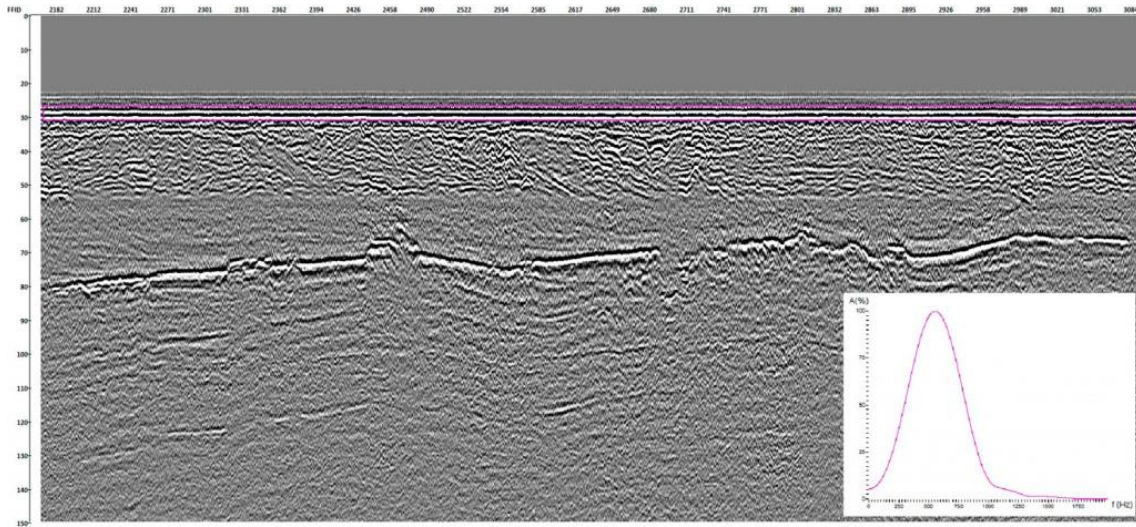
Please, contact us for generating the most suitable high resolution marine acquisition setup for your purposes. We will consider all the requirements and provide you with the best solution to achieve high quality image, starting from acquisition up to final data delivery. We provide trainings, technical support and consultancy services, as well as processing of high-resolution marine seismic surveys



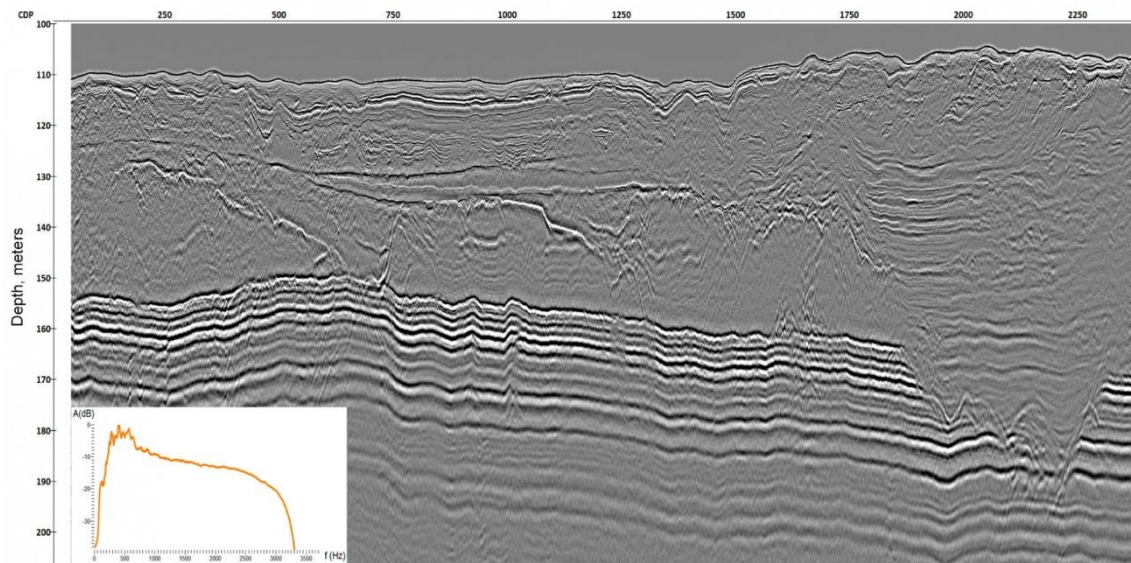


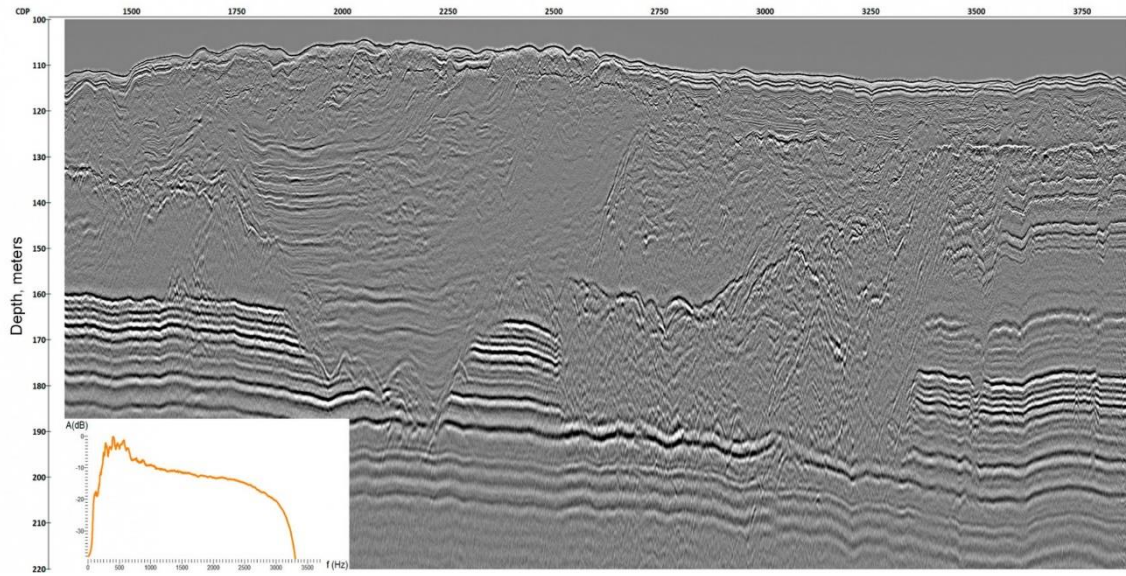




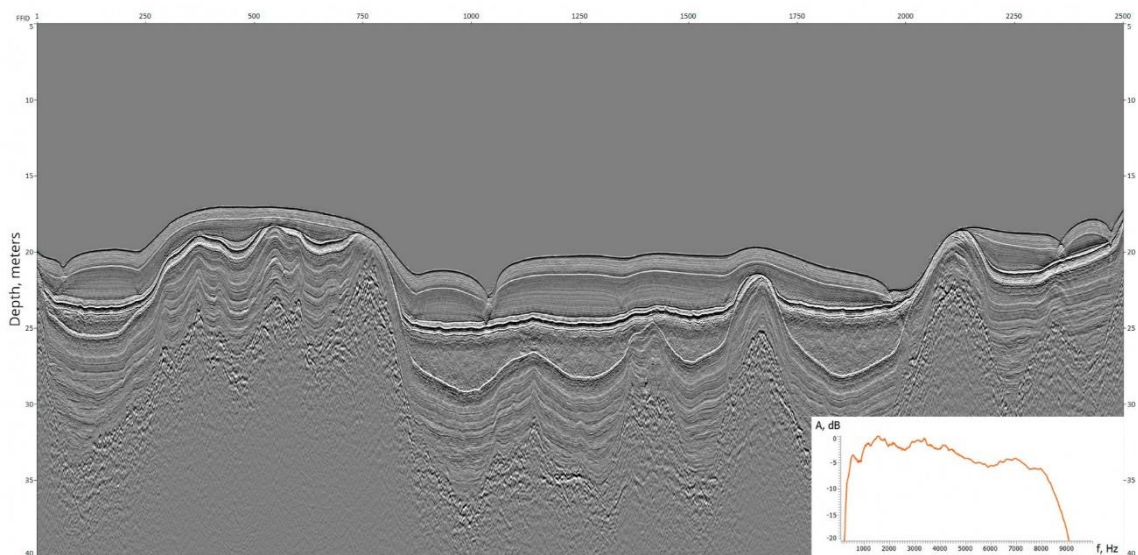


Kara Sea, SWS-600 source, MultiJack-5000HP4.5 energy source

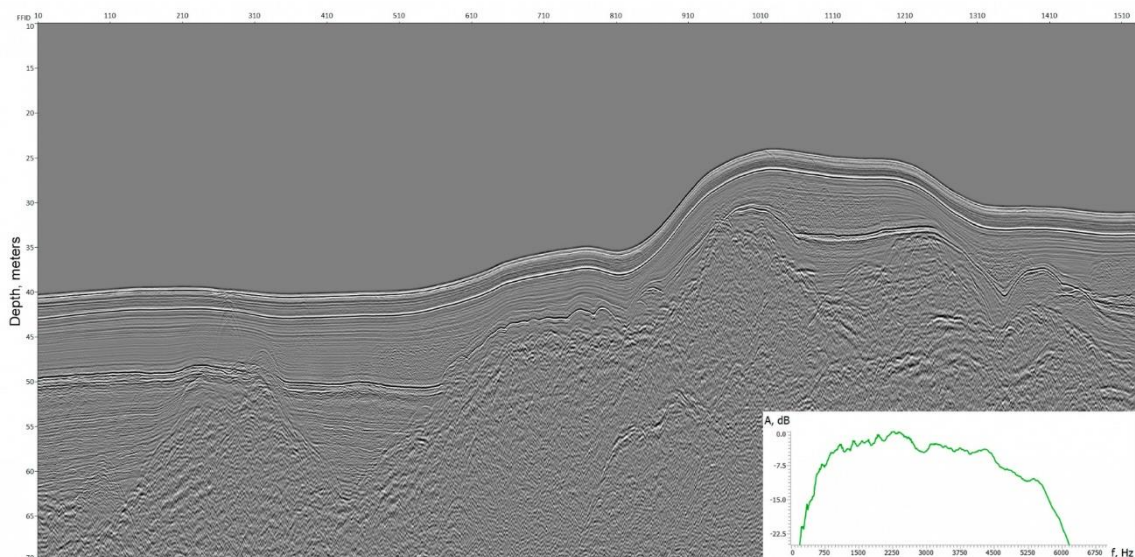




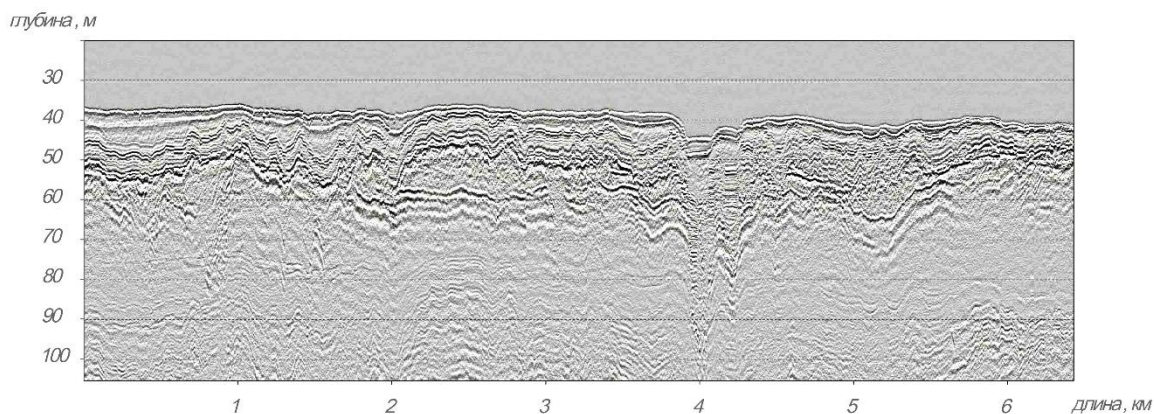
Lake Ladoga, FWS-250 source, MultiJack-2500HP3.0 energy source:



Lake Ladoga, FWS-125 source, MultiJack-500HP1.5 energy source :



Lake Omega, FWS-100 source, MultiJack-1200HP energy source



Kara Sea, SWS-270 source, MultiJack-5000HP4.5 energy source

