

Preliminary testing of very compact seismic profiling equipment with some results from Loch Lubnaig, Scotland

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Small, light acoustic profiling equipment has the advantage of easy transportation and installation in very small boats. We carried out tests in May 1981 with a 25 cm diameter "boomer" type source driven by a 4000 volt triggered capacitor bank for which power was supplied by two car batteries.

Loch Lubnaig is a body of water about 6 km long and 0.5 km wide lying in a narrow glaciated valley just north of the Highland Boundary Fault Zone. With the equipment described above installed in a 3-metre long car-top boat we ran

one longitudinal and six transverse profiles in the southern half of the loch. In December 1981, a small sediment sampling program confirmed coarse sandy gravel on the flanks of the loch, but the ice cover was insufficiently thick to allow successful sampling through the ice in the deeper (30 metres) central parts of the loch of a bottom material which the seismic record suggest would be much finer. This material from the loch bottom exhibits a series of mounds or waves having a vertical height of 5 metres, whose origin is obscure at present.