Approximate reverberation deconvolution is a process
by which a reverberation, which has been linearly
convolved with the impulse response of the earth, is
approximately removed by an inverse filter. The
ultimate desired in a seismogram is a representation
of the earth's acoustical boundaries with a series of
sharply defined impulses. The approximate deconvolution
is accomplished by the application of a whitening filter
designed from auto-correlation functions, which are
derived from the trace to be deconvolved. The time gate
for the auto-correlation varies from trace to trace
following 250 milliseconds below the water bottom.

Time Variant Deconvolution (T.V.D.) designs two or
more filters per trace. Each filter design gate is
overlapped by 50% and the application of the filters
is on a true time variant basis such that as one filter
tapers off, the next filter is tapered on with the same
50% overlap. For effective removal of the water bottom
multiple, the filter length should be greater than the
four-way water time. In general, two 80 point (316 msec.)
operators were designed for each trace.

Time Variant Filtering (T.V.F.) was applied to the data
using filters derived from the filter analyses run in
the area. The filter analyses were performed on final
stack records after T.V.D. to determine the optimum
display filter setting required to enhance signal and
attenuate noise. The final filter used on each line
was annotated on the top of each section.

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