



d. Deconvolution (less than 600' of water
greater than 5000' of water)

The approximate deconvolution was accomplished by the application of a whitening filter designed from auto-correlation functions, which were derived from the trace to be deconvolved. Two filters were designed per trace and applied with a 50% overlap, such that the first filter tapered off while the second filter tapered on. The operators were designed as double section operators; i.e., to dereverberate the first and second water bottom reverberations.

De-Water (600' - 5000' of water)

Deep Water Trapped Energy Removal (De-Water) is non-whitening deconvolution which is designed to significantly attenuate simple coherent multiples generated from a deep water bottom and to attenuate peg-leg multiples generated from a primary reflecting horizon and the deep water bottom.

Firstly, normal moveout is applied to the CDP records using a constant velocity that will flatten all water bottom multiples. These corrections are removed later, after the De-Water process. De-Water utilizes an improved inverse filtering technique. The filter is designed and applied in a time variant manner to allow for changes in the frequency spectrum of the seismic data as a function of record time. The frequency spectrum of the output from De-Water approximates the envelope of the input frequency spectrum.