



6. Design of final display gain gates

Input velocity functions for normal moveout corrections in preliminary processing were designed on the basis of interpretations of the moveout scans and dynamic correlations. Water top functions were plotted directly from the scan/dynamic interpretations and then converted to water bottom functions by the following formula:

$$\bar{V}_b = \frac{\bar{V}_t T_v(t) - \bar{V}_w T_v(w)}{T_v(t) - T_v(w)}$$

where:

\bar{V}_b = Average velocity from bottom of water layer.

\bar{V}_t = Average velocity from top of water layer.

\bar{V}_w = Average velocity in water at 4850 ft. per second.

$T_{v(b)}$ = Vertical two-way time from bottom of water layer.

$T_{v(t)}$ = Vertical two-way time from top of water layer to reflector.

$T_{v(w)}$ = Vertical two-way time in water layer.

The resultant water bottom functions were input to the normal-moveout routine. In application the computer converted these water bottom functions to a unique water top function for every set of 12 sequential traces on the basis of the average water depth for this set of traces.

The tabulation following subsection G (final processing) of section VII of this report defines these velocity functions and shows where they were applied.