

[54] **CONVERSION OF SEISMIC DEPTH SECTIONS TO SEISMIC TIME SECTIONS**

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[57] **ABSTRACT**

In seismic exploration, a seismic time section is generated in a form which can be compared to the original seismic traces. In the preliminary processing, a seismic depth section is generated to specify the velocity, thickness and depth of each reflecting zone of the subsurface formation. For a particular reflecting zone, the coordinates of sampling points along the interface are generated. The ray path, normal to a sampling point and extending through successive layers to a surface coordinate point, is determined. From the velocity and thickness of each zone, the travel time of seismic energy between the sampling point and the surface coordinates is computed. Travel times are plotted as a function of the surface coordinates to generate a travel time curve. The foregoing procedure is repeated for succeeding reflecting zones to generate a time section which can be compared to the original seismic traces.

8 Claims, 9 Drawing Figures

