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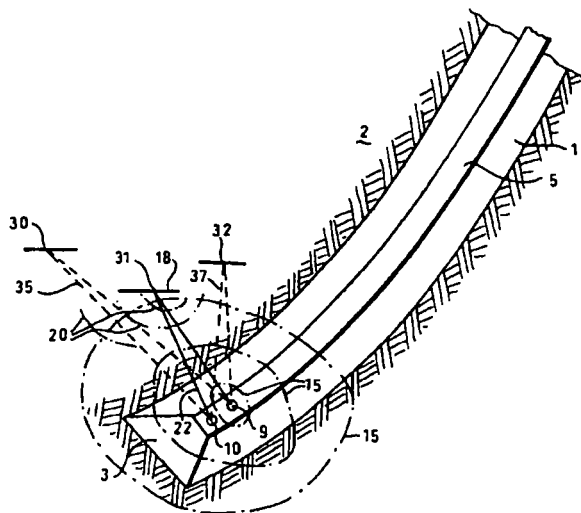
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(54) Title: OBTAINING AN IMAGE OF AN UNDERGROUND FORMATION



(57) Abstract: An image of an underground formation (2) around a borehole (1) is obtained by activating an omnidirectional source (9) and recording with a three-component receiver (10) the components of the reflected energy (15); determining therefrom the components the directions from which the energy arrives at the three-component receiver (10) as a function of two-way travel time; selecting a first underground position (30); assuming a reflector to be present at position (30) and calculating the arrival direction of a ray (35) extending from the source (9) via the reflector (30) to the receiver (10) and two-way travel time along the ray (35); accepting the data if the calculated arrival direction is substantially equal to an arrival direction that has the same two-way travel time, and attributing the data on the position (30); and selecting a next position (31 or 32) and repeating steps (e) and (f) until the last underground position to obtain the image of the underground formation comprising a set of reflectors attributed to positions.

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