



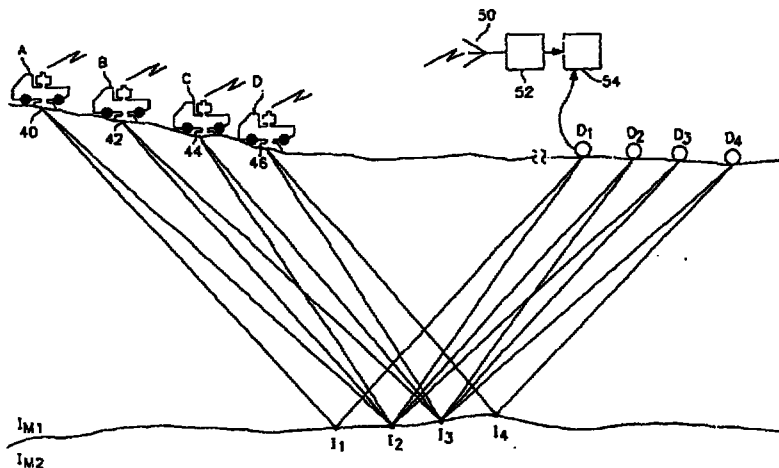
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(54) Title: METHOD FOR SEPARATION OF A PLURALITY OF VIBRATORY SEISMIC ENERGY SOURCE SIGNALS ✓



(57) Abstract

A method and apparatus for separating and pre-processing vibratory source data includes varying the phase of vibratory sources according to two patterns. A first pattern is used for odd numbered sources while a second pattern is used for even numbered sources. Each pattern begins with a zero phase shift, the zero phase shift occurring at the sweep number corresponding to the position number of the source. The first pattern is one of zero phase shift, ninety degree phase shift, ninety degree phase shift and one hundred eighty degree phase shift. The second pattern is one of zero phase shift, one hundred eighty degree phase shift, ninety degree phase shift and ninety degree phase shift. The patterns are alternated for each source, the beginning of the pattern corresponds to the position of the source in a line. The first source begins with the first pattern. The second source begins with the second pattern, with zero starting at the second sweep. The third source begins with the first pattern, with zero occurring at the third sweep. The fourth source follows the second pattern, with zero being at the fourth sweep.