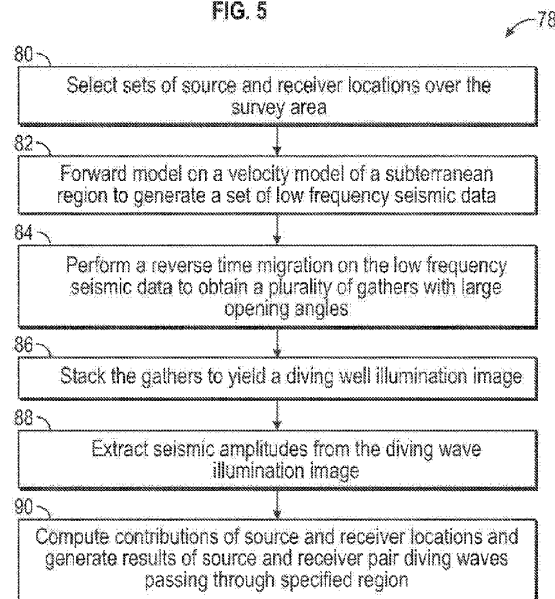




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FIG. 5



(57) **Abstract:** A method, and system to implement the process, of selecting a plurality of sets of source and receiver locations over a survey area, modeling on a subsurface attribute model of a subterranean region each source and receiver pair of the plurality of sets of source and receiver locations to generate low frequency seismic data, performing a reverse time migration on the low frequency seismic data to reposition diving wave energy of each source and receiver pair of the plurality of sets of source and receiver locations to generate a diving wave illumination image, extracting seismic amplitudes from the diving wave illumination image at a region of interest, and computing a contribution of a respective diving wave from each source and receiver pair of the plurality of sets of source and receiver locations to diving waves passing through the region of interest.

SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR,
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