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(54) Title of the Invention: **Surveying techniques using multiple different types of sources**
Abstract Title: **Surveying techniques using multiple different types of sources**

(57) Techniques are disclosed relating to acquisition and imaging for marine surveys. In some embodiments, a transition survey that uses both one or more sources of a first type (e.g., impulsive sources) and one or more sources of a second type (e.g., vibratory sources) may facilitate calibration of prior surveys that use the first type of sources with subsequent surveys that use the second type of source. In some embodiments, the different types of sources may be operated simultaneously at approximately the same location. In some embodiments, signals generated by the sources are separated, e.g., using deconvolution. The signals may then be compared to generate difference information, which in turn may be used to adjust sensor measurements from a previous or subsequent survey. In various embodiments, the disclosed techniques may improve accuracy in images of geological formations and may facilitate transitions to new types of seismic sources while maintaining continuity in 4D surveys.

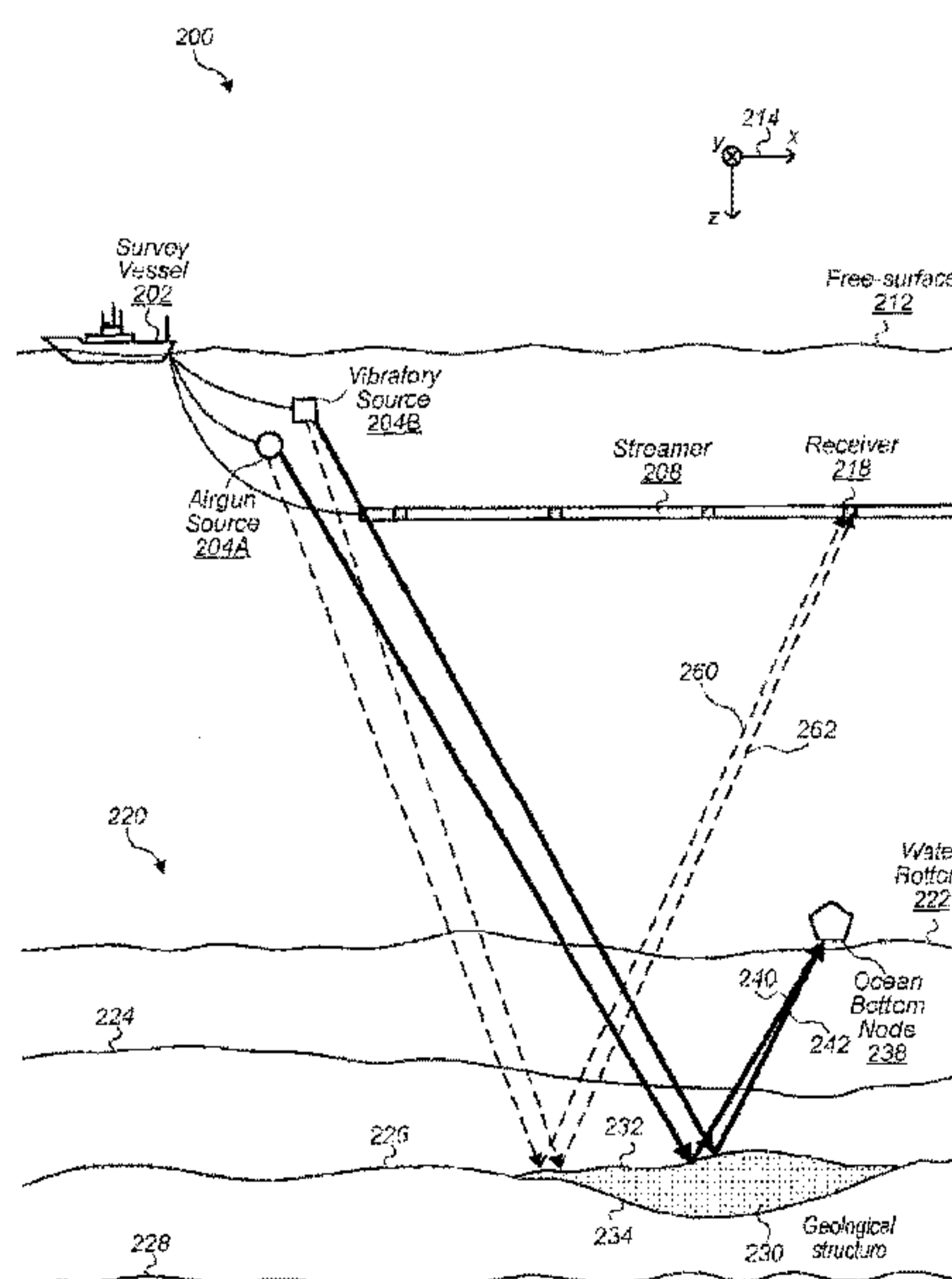


Fig. 2