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[Continued on next page]

(54) Title: SEPARATING INTERFERING SIGNALS IN SEISMIC DATA

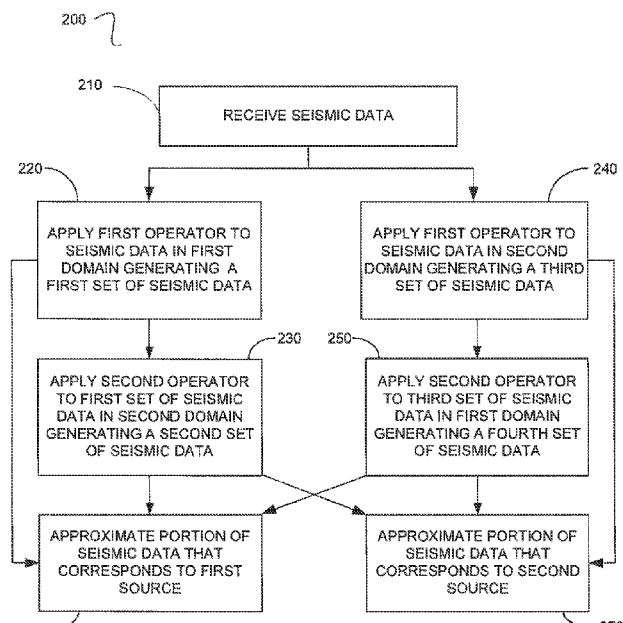


FIG. 2

(57) Abstract: A method for processing seismic data. The method may include receiving seismic data due to a plurality of seismic sources and applying a first operator to the seismic data in an i^{th} domain to generate a first estimate of seismic data due to an i^{th} seismic source. The i^{th} domain may correspond to the i^{th} seismic source of the plurality of seismic sources. The method may then include applying a second operator to the first estimate of seismic data due to the i^{th} seismic source in one or more domains other than the i^{th} domain to generate residual seismic data due to one or more seismic sources other than the i^{th} seismic source. After applying the a second operator to the first estimate of seismic data due to the i^{th} seismic source, the method may determine a second estimate of seismic data due to the i^{th} seismic source based on the first estimate and the residual seismic data due to the seismic sources other than the i^{th} seismic source. The method may then repeat some of the steps described above (i.e., applying a first operator to the seismic data, applying a second operator to the first estimate of seismic data and determining a second estimate of seismic data due to the i^{th} seismic source for each seismic source). The method may then process the second estimate of seismic data due to each seismic source to determine the presence of hydrocarbon deposits in a subterranean area of the earth.

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INTERNATIONAL SEARCH REPORT

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PCT/US2011/065710**A. CLASSIFICATION OF SUBJECT MATTER***G01V 1/28(2006.01)i, G01V 1/38(2006.01)i, G01V 1/36(2006.01)i*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G01V 1/28; G01R 13/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & Keywords: seismic, operator, source, domain, residual, subterranean and similar terms.**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| A | US 2010-0271904 A1 (MOORE, I. et al.) 28 October 2010 See the whole document. | 1-20 |
| A | US 2007-0055465 A1 (DIDIER, L. & COLEOU, T.) 08 March 2007 See the whole document. | 1-20 |
| A | US 2006-0247860 A1 (ANGERER, E. et al.) 02 November 2006 See the whole document. | 1-20 |
| A | US 04608673 A (LAZEAR, G. D.) 26 August 1986 See the whole document. | 1-20 |

 Further documents are listed in the continuation of Box C. See patent family annex.

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Information on patent family members

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