

(51) International Patent Classification:
G01V 1/38 (2006.01)(21) International Application Number:
PCT/US2011/056163(22) International Filing Date:
13 October 2011 (13.10.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/418,690 1 December 2010 (01.12.2010) US
61/526,541 23 August 2011 (23.08.2011) US(71) Applicant (for all designated States except US): **EXXON-MOBIL UPSTREAM RESEARCH COMPANY**
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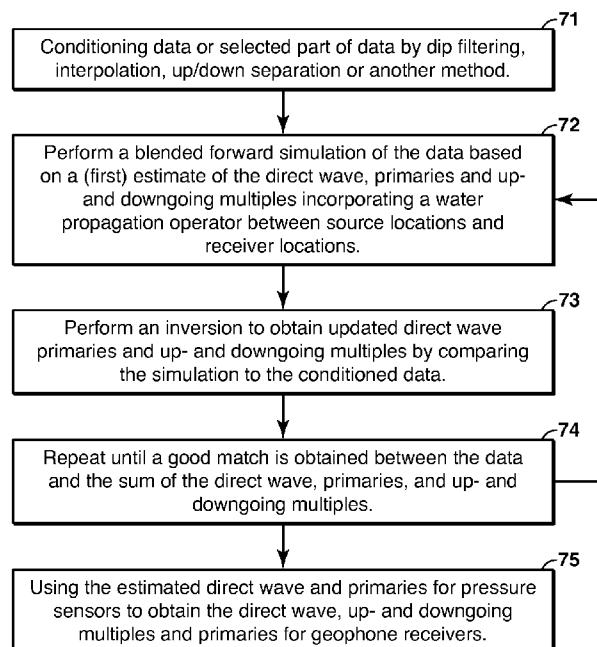
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,

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(54) Title: PRIMARY ESTIMATION ON OBC DATA AND DEEP TOW STREAMER DATA

**FIG. 7**

(57) **Abstract:** Method for correcting OBC or deep-towed seismic streamer data for surface-related multiple reflections. The measured pressure data, preferably after conditioning (71), are simulated using a forward model that includes a water propagation operator between source locations and receiver locations and a term representing primary impulse responses (72). Other terms include direct arrivals and source wavelets. Iterative optimization of an objective function is used to minimize the difference between measured and simulated data, updating the primary impulse response term and optionally the source wavelets term each iteration cycle (73). The converged primary impulses (74) are used to construct simulated multiples and direct arrivals (75), which can be subtracted from the measured data. Optionally the measured data might be blended during the forward simulation (72), to save computational costs in the forward simulation (72) and in the inversion (73).



LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

— *as to the applicant's entitlement to claim the priority of
the earlier application (Rule 4.17(iii))*

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii))*

Published:

— *with international search report (Art. 21(3))*
— *with amended claims (Art. 19(1))*