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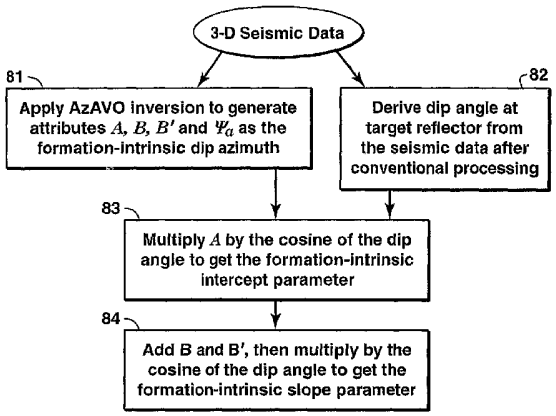
Declarations under Rule 4.17:
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD FOR QUANTIFICATION AND MITIGATION FOR DIP-INDUCED AZIMUTHAL AVO



(57) Abstract: This patent delineates methods for quantifying and mitigating dip-induced azimuthal AVO effects in seismic fracture detection using Azimuthal AVO analysis by accurately accounting for the divergence correction and azimuthal dependence of the reflection angle. Solutions are provided for three cases: (1) dipping isotropic reservoirs; (2) anisotropic reservoirs with fractures aligned in arbitrary direction; and (3) anisotropic reservoirs where vertical fractures are aligned perpendicular to the dip direction.

WO 2006/055137 A3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/36968

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G01V 1/00 (2006.01)
USPC - 702/14; 367/53
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)
U.S. : 702/14, 17; 703/5; 367/21 40, 46, 50,51,53, 59, 63, 73

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PUBWEST -- PGPB, USPT, EPAB, and JPAB --------Azimuthal, AVO, seismic data volume, 3-D, 3D, three dimensional, dependence, divergence, Azimuth, dipping reservoir, seismic, isotropic, dip, dip induced, seismic migration, AzAVO, Exxonmobil, Seismic Wave, Amplitude variation with offset

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/0210394 A1 (TRAPPE et al.) 21 October 2004 (21.10.2004), see paragraphs 10-12 and 24-26	1, 17, 21 and 32
A	US 6,681,184 B2 (JENNER et al.) 20 January 2004 (20.01.2004), see entire document	1-40
A	US 5,903,515 A (BEASLEY et al.) 11 May 1999 (11.05.1999), see entire document	1-40
A	US 2004/0093163 A1 (RESHEF et al.) 13 May 2004 (13.05.2004), see entire document	1-40
A	US 2002/0007247 A1 (CHENG et al.) 17 January 2002 (17.01.2002), see entire document	1-40

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

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Date of the actual completion of the international search	Date of mailing of the international search report
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