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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))

[Continued on next page]

(54) Title: ESTIMATING TILT OF A RESERVOIR

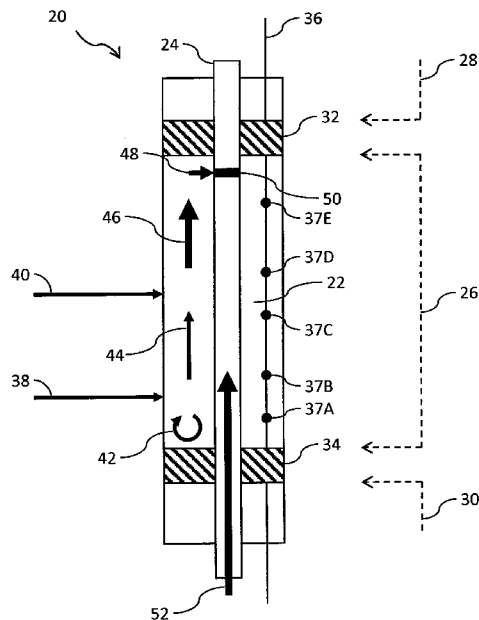


Fig 3

(57) Abstract: Method for estimating the tilt of a layer of a reservoir by measuring the temperature of fluid in a production well at one or more locations (37A, 37B, 37C, 37D, 37E) within the production well at a plurality of points in time. The method comprises: receiving temperature data from the measuring devices, the temperature data being indicative of a temperature of fluid (38, 40) entering the production well; identifying a trend indicative of a change in temperature with time; identifying a velocity of fluid within the layer in a direction of flow of fluid within the layer; using the identified trend and the identified velocity to determine an estimate of the change in temperature by distance for the fluid, the distance being in a direction of flow of fluid within the layer; identifying a geothermal gradient indicative of a change with depth in the temperature of rock within and surrounding the reservoir; and determining a measure of the tilt of a layer in the reservoir based on the estimated change in temperature by distance and the geothermal gradient.





— *of inventorship (Rule 4.17(iv))*

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER
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ADD.
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)
E21B G01V

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)
EPO-Internal, TULSA

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2006/131016 A1 (SNOGA) 22 June 2006 (2006-06-22) the whole document	1,7,8
A,P	EP 2 397 649 A1 (BP EXPLORATION COMPANY) 21 December 2011 (2011-12-21) paragraph [0059]	1,7,8

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

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- "E" earlier application or patent but published on or after the international filing date
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- "&" document member of the same patent family

Date of the actual completion of the international search 14 March 2014	Date of mailing of the international search report 03/04/2014
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Rampelmann, Klaus
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2012/076473

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2006131016	A1	22-06-2006	NONE

EP 2397649	A1	21-12-2011	NONE
