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Declarations under Rule 4.17:

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR DETERMINING MULTISCALE SIMILARITY BETWEEN NMR MEASUREMENTS AND A REFERENCE WELL LOG

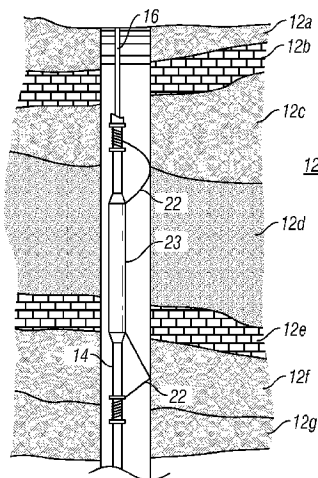
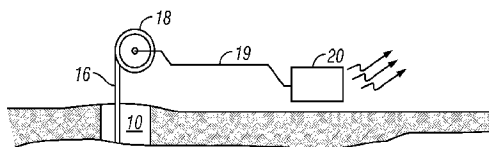


FIG. 1

(57) Abstract: Pulse sequences are applied to a fluid in an earth formation in a static magnetic field and NMR spin echo signals are obtained. The signals are processed to give a distribution of a relaxation time at a plurality of depths. Semblance between the distributions and a log of a formation property are used to identify depths at which portions of the distributions are similar to the formation property logs.



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- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))* — *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*
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A. CLASSIFICATION OF SUBJECT MATTER*G01V 3/32(2006.01)i, G01V 3/34(2006.01)i, G01V 5/12(2006.01)i, G01V 3/18(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 3/32; C01V 3/00; G01V 5/04; G01V 3/00; G01V 3/14; G01V 3/38

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: NMR, logging, relaxation time, semblance

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2009-0189604 A1 (PEDRO ANTONIO ROMERO) 30 July 2009 See abstract; claims 1-9 and figures 1, 3.	1-20
A	US 6600315 B1 (NICHOLAS J. HEATON et al.) 29 July 2003 See column 5, line 47 - column 6, line 14 and figure 4.	1-20
A	US 2009-0037109 A1 (PEDRO A. ROMERO) 05 February 2009 See abstract; claims 1, 6, 7 and figure 1.	1-20
A	US 2003-0178994 A1 (MARTIN D. HURLIMANN et al.) 25 September 2003 See abstract and figure 16.	1-20

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

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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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