



(51) International Patent Classification:

G01V 3/28 (2006.01) **E21B 47/00** (2006.01)
G01V 3/26 (2006.01) **E21B 47/12** (2006.01)

(21) International Application Number:

PCT/US2009/046141

(22) International Filing Date:

3 June 2009 (03.06.2009)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

12/135,639 9 June 2008 (09.06.2008) US

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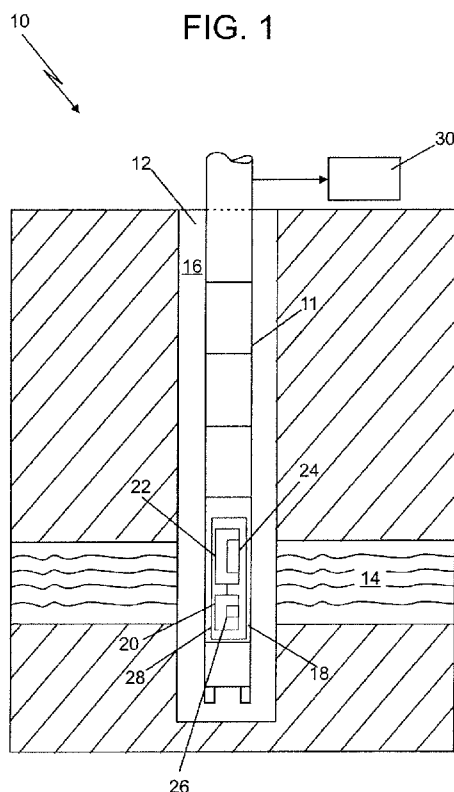
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,

[Continued on next page]

(54) Title: APPARATUS AND SYSTEM FOR GEOSTEERING AND FORMATION EVALUATION UTILIZING IMPROVED ANTENNAS



(57) Abstract: An apparatus for measuring one or more earth formation properties during applications including formation evaluation and geosteering applications is provided. The apparatus includes: an elongated body; at least one recessed portion on a periphery of the elongated body; an electrically conductive coil forming a closed loop, at least a portion of the coil extending through the at least one recessed portion; and a u-shaped magnetically permeable and non-conductive material disposed between the coil and the at least one recessed portion, the u-shaped material partially surrounding the coil in the at least one recessed portion. A system for measuring one or more properties of an earth formation is also provided.



TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- 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))

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))

(88) Date of publication of the international search report:

11 March 2010

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2009/046141**A. CLASSIFICATION OF SUBJECT MATTER****G01V 3/28(2006.01)i, G01V 3/26(2006.01)i, E21B 47/00(2006.01)i, E21B 47/12(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 3/28; E21B 47/01; G01V 3/10; G01V 3/18; G01V 3/30

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

(Chinese Patents and application for patent)

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

eKOMPASS(KIPO internal) & Keywords; earth, formation, magnetically, permeable, conductive, recess

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2005-0218898 A1 (MARK FREDETTE et al.) 06 October 2005 See all the documents	1-20
A	US 5939885 A1 (MCCLURE; PAUL ANTHONY DONEGAN et al.) 17 August 1999 See all the documents	1-20
A	EP 0778474 A2 (INTEGRATED DRILLING SERVICES LIMITED et al.) 11 June 1997 See all the documents	1-20



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

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"&" document member of the same patent family

Date of the actual completion of the international search

18 JANUARY 2010 (18.01.2010)

Date of mailing of the international search report

19 JANUARY 2010 (19.01.2010)

Name and mailing address of the ISA/KR

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gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2009/046141

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