

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
1 March 2007 (01.03.2007)

PCT

(10) International Publication Number
WO 2007/024534 A3

- (51) **International Patent Classification:**
G01V 1/40 (2006.01)
- (21) **International Application Number:**
PCT/US2006/031641
- (22) **International Filing Date:** 14 August 2006 (14.08.2006)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
11/212,270 26 August 2005 (26.08.2005) US
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- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, 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, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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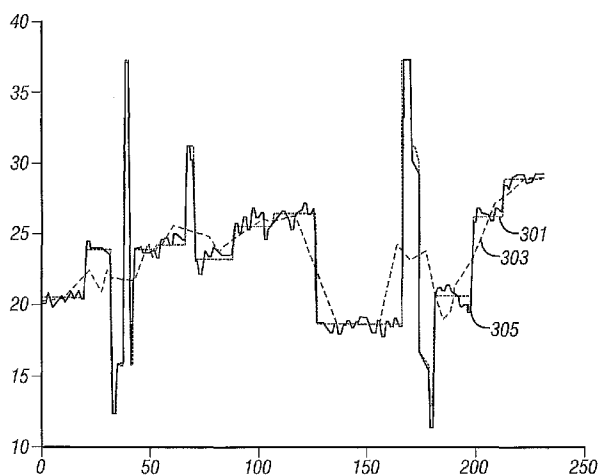
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
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Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) **Title:** THE ENHANCEMENT OF NMR VERTICAL RESOLUTION USING WALSH FUNCTION BASED INVERSION



(57) **Abstract:** NMR data are acquired using a phase-alternation of the tipping pulse. Averaged properties are estimated over a window length. The averaged properties are inverted to undo the effects of the averaging. A matrix defined in terms of Walsh functions is used in the inversion.

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

8 November 2007

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.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US06/31641

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G01V 1/40 (2007.01)
USPC - 709/9
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)
IPC(8) - G01F 19/00; G01V 1/40, 3/00, 3/18, 5/04, 9/00 (2007.01)
USPC - 324/300, 303, 307; 702/6-10

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)
PATBASE, GooglePatents

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6,253,155 B1 (HAGIWARA) 26 June 2001 (26.06.2001) entire document	1, 2, 7-10 ----- 3-6, 15, 17
X --- Y	US 5,517,115 A (PRAMMER) 14 May 1996 (14.05.1996) entire document	11-14, 16, 18-20 ----- 15, 17
Y	US 6,717,404 B2 (PRAMMER) 06 April 2004 (06.04.2004) entire document	3, 5, 6
Y	WANG, Ning. 'The application of thin bed information of well-logs to enhance the vertical resolution of NMR logs'. Halliburton Energy Services, Houston, Texas SPE International Oil and Gas Conference, Beijing, China 7-10 November 2000, pages 5-11.	4

Further documents are listed in the continuation of Box C.

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Date of the actual completion of the international search
06 May 2007

Date of mailing of the international search report
28 AUG 2007

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