

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 May 2009 (28.05.2009)

PCT

(10) International Publication Number
WO 2009/067468 A1

(51) International Patent Classification:

E21B 4/00 (2006.01) *E21B 7/06* (2006.01)
E21B 4/18 (2006.01)

(21) International Application Number:

PCT/US2008/083957

(22) International Filing Date:

19 November 2008 (19.11.2008)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0722755.6 21 November 2007 (21.11.2007) GB

(71) Applicant (for CA only): **SCHLUMBERGER CANADA LIMITED** [CA/CA]; 525 3rd Avenue SW, Calgary Alberta, T2P0G4 (CA).

(71) Applicant (for AL, AU, AZ, BG, CO, CZ, DE, DK, GR, HU, ID, IE, IL, IT, KZ, LT, MX, MY, NO, NZ, OM, PL, RO, RU, SI, SK, TM, TN, TR, TT, UA, UZ, ZA only): **SCHLUMBERGER TECHNOLOGY B.V.** [NL/NL]; Parkstraat 83-89, NL-2514 JG The Hague (NL).

(71) Applicant (for all designated States except AL, AU, AZ, BG, CA, CO, CZ, DE, DK, FR, GB, GR, HU, ID, IE, IL, IT, JP, KZ, LT, MX, MY, NL, NO, NZ, OM, PL, RO, RU, SI, SK, TM, TN, TR, TT, UA, UZ, ZA): **PRAD RESEARCH**

AND DEVELOPMENT LIMITED; P.O. Box 71, Craigmuir Chambers, Road Town Tortola (VG).

(71) Applicant (for FR only): **SERVICES PETROLIERS SCHLUMBERGER** [FR/FR]; 42, rue Saint-Dominique, F-75007 Paris (FR).

(71) Applicant (for GB, JP, NL only): **SCHLUMBERGER HOLDINGS LIMITED**; P.O. Box 71, Craigmuir Chambers, Roadtown Tortola (VG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DOWNTON, Geoffrey, C.** [GB/US]; 3430 Williams Glen Drive, Sugar Land, TX 77479 (US). **ISKANDER, Sami** [EG/US]; 3223 Bridgeberry Lane, Houston, TX 77082 (US). **UTTER, Robert** [US/US]; 17 Lake Mist Drive, Sugar Land, TX 77479 (US).

(74) Agents: **HOFMAN, Dave, R.** et al.; Schlumberger Technology Corporation, 200 Gillingham Lane MD 200-9, Sugar Land, TX 77478 (US).

(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, 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,

[Continued on next page]

(54) Title: DRILLING SYSTEM

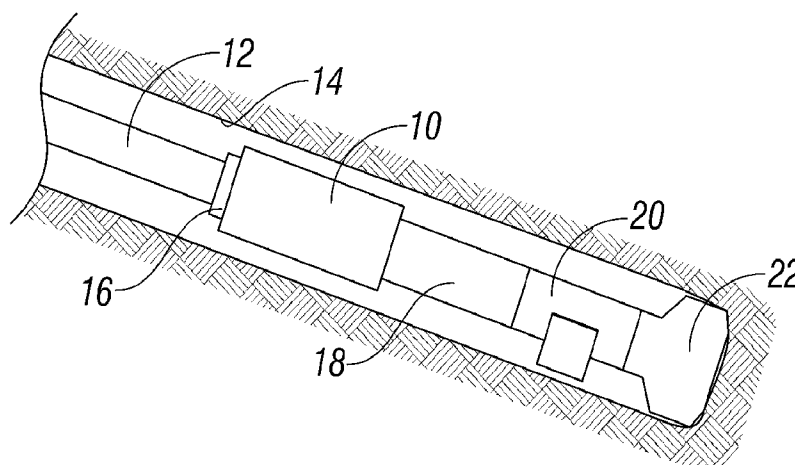


FIG. 1

(57) Abstract: A drilling system comprising a rotatable drill pipe 12 connected to a tractor unit 10, and a steerable drilling system 18, 20, 22, connected to and movable by the tractor unit 10.

WO 2009/067468 A1



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.

FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, 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).

(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,

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*