



(51) International Patent Classification:
E21B 1/22 (2006.01) *E21B 7/24* (2006.01)
E21B 6/00 (2006.01)

(21) International Application Number:
PCT/NZ2011/000123

(22) International Filing Date:
29 June 2011 (29.06.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
586560 1 July 2010 (01.07.2010) NZ
586882 19 July 2010 (19.07.2010) NZ
593040 24 May 2011 (24.05.2011) NZ

(71) Applicant (for all designated States except US): **FLEX-
IDRILL LIMITED** [NZ/NZ]; 220 Lake Road, Taka-
puna, North Shore City (NZ).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **POWELL, Peter
Evan** [NZ/NZ]; 408 Pages Road, Timaru (NZ). **GREEN-
WOOD, Roland** [AU/AU]; 347 Miller Road, Allans Flat,
Victoria (AU). **SISSON, Danny** [NZ/NZ]; 28B
Washdyke Flat Road, Timaru (NZ).

(74) Agents: **ADAMS, Matthew, D.** et al.; A J Park, 6th Floor
Huddart Parker Building, PO Box 949, Wellington 6015
(NZ).

(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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD,
SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG,
ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,
TM), European (AL, 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, RS, SE, SI, SK,
SM, 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))

(54) Title: RADIAL VIBRATIONAL APPARATUS

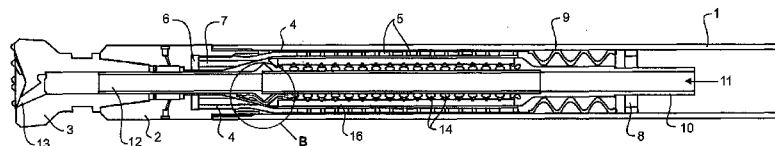


FIGURE 1

(57) Abstract: A vibrational apparatus for a downhole assembly comprising first and second assemblies, each of the said assem-
blies having magnetic arrays around a common axis, wherein a fluid feed or other suitable drive causes a relative rotation be-
tween the assemblies, which relative rotation generates a vibration resulting in interactions between the magnetic arrays, thereby
causing a reciprocating rectilinear movement of the assemblies along or parallel to the common axis.

