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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, 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.

(57) Abstract: A device and related method for conducting a wellbore operation controls a tool by using at least one pressure estimated at a contact between a reaction surface and a contact face associated with the tool. The device may include a contact face and a sensor associated with the contact face. The sensor may be config-

ured to estimate a pressure applied to the contact face.

[Continued on next page]

### (54) Title: TACTILE PRESSURE SENSING DEVICES AND METHODS FOR USING SAME

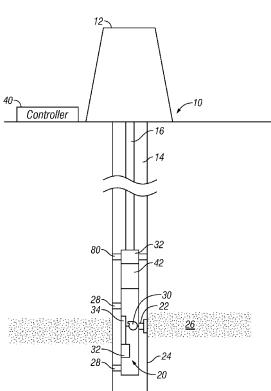
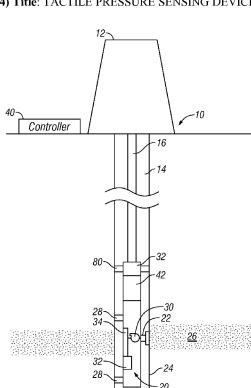


FIG. 1



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### **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))

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

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### A. CLASSIFICATION OF SUBJECT MATTER

### E21B 47/06(2006.01)i, E21B 47/01(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)

E21B 47/06; E21B 49/10; E21B 49/00; E21B 47/01; E21B 47/09

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: borehole, contact face, pressure, carrier, sensor, probe

### 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 2007-0151727 A1 (CHEN TAO et al.) 05 July 2007 See paragraph 44, 46, 77-78 and figures 1A-2B, 3L.	1-3,5-12,15 4,13,14
Y	US 7581440 B2 (MEEK DALE et al.) 01 September 2009 See column 30 and figure 22.	4,13,14
A	US 05335542A A (RAMAKRISHNAN; T. S. et al.) 09 August 1994 See column 5 and figures 1, 3.	1-15

	Further documents are lis	4 - 1 1 - 41	41 41	- CD C
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See patent family annex.

- \* Special categories of cited documents:
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26 AUGUST 2011 (26.08.2011)

Date of mailing of the international search report

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## INTERNATIONAL SEARCH REPORT

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