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[Continued on next page]

(54) Title: METHOD FOR DETERMINING FORMATION FLUID CONTROL EVENTS IN A BOREHOLE USING A DYNAMIC ANNULAR PRESSURE CONTROL SYSTEM

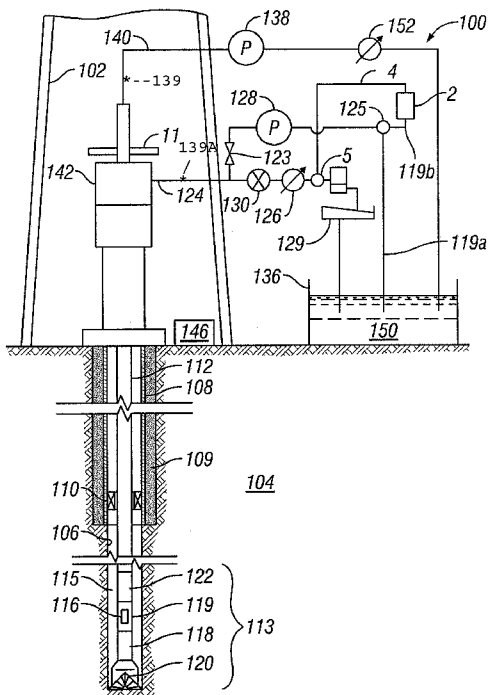


FIG. 2A

(57) Abstract: A method for determining existence of a borehole fluid control event by controlling formation pressure during the drilling of a borehole includes selectively pumping a drilling fluid through a drill string extended into a borehole, out a drill bit at the bottom end of the drill string, and into an annular space between drill string and the borehole. The drilling fluid leaves the annular space proximate the surface. Existence of a well control event is determined when at least one of the following events occurs: the rate of the selective pumping remains substantially constant and the annular space pressure increases, and the rate of the selective pumping remains substantially constant and the annular space pressure decreases.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2010/045594**A. CLASSIFICATION OF SUBJECT MATTER***E21B 43/12(2006.01)i, E21B 21/08(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)

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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

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

eKOMPASS(KIPO internal) & Keywords: determining existence, drilling, annular space, pressure

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007-0151762 A1 (DONALD G. REITSMA) 05 July 2007 See abstract, figure 2 and claims 1-4	1,5,9-12
A	US 6904981 B2 (EGBERT JAN VAN RIET) 14 June 2005 See abstract, figure 2 and claims 1-12	1,5,9-12
A	US 2007-0227774 A1 (DONALD G. REITSMA et al.) 04 October 2007 See abstract, figure 2 and claims 1-9	1,5,9-12
A	US 2007-0246263 A1 (DONALD G. REITSMA) 25 October 2007 See abstract, figure 2 and claims 1-13	1,5,9-12

 Further documents are listed in the continuation of Box C. See patent family annex.

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