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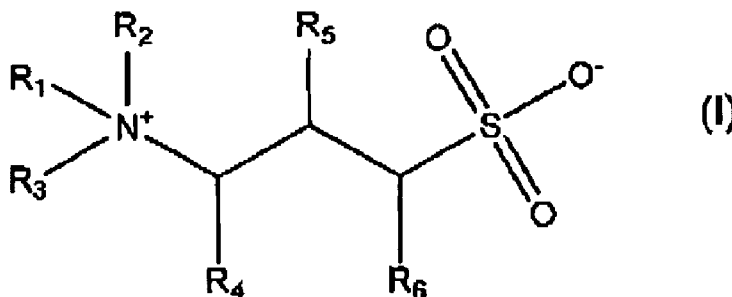
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(54) **Title:** ENHANCED FOAM STABILITY APPLICATIONS AND METHODS



(57) **Abstract:** A method for enhancing foam stability In foaming compositions for use in oilfield treatment application, including but not limited to use in mobility control for gas flooding. The method comprises the step of adding to a foaming composition a foam stabilizer of formula (I): wherein R₁ is an alkylamido group or a branched or linear alkyl group; R₂ and R₃ are individually hydrogen or a methyl group; R₄, R₅ and R₆ are individually hydrogen or a hydroxy group, with the proviso that at least one of R₄, R₅ or R₆ is a hydroxyl group; wherein the alkyl group has greater than about 10 carbon atoms. Also disclosed are methods to enhance foam stability in an aqueous foaming composition, comprising the step of adding a foam stabilizer selected from alkyl dimethyl betaine, alkyl amidopropyl hydroxy sulfobetaine or alkyl hydroxy sulfobetaine, wherein the alkyl group has greater than 10 carbon atoms, or 12 carbon atoms or 16 carbon atoms.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/037442**A. CLASSIFICATION OF SUBJECT MATTER***E21B 43/22(2006.01)i, E21B 43/28(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 43/22; E21B 33/138; E21B 43/26

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: oil recovery, foaming composition, foam stabilizer, foaming agent and alkyl group.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 7134497 B1 (CHATTERJI, JITEN et al.) 14 November 2006 See abstract and claims 1-5.	1-19
A	US 2009-0131283 A1 (NGUYEN DUY T. et al.) 21 May 2009 See abstract and claims 1, 10.	1-19
A	WO 89-12158 A1 (CHEVRON RESEARCH COMPANY) 14 December 1989 See abstract, figure 1 and claim 1.	1-19
A	US 04706752A A (HOLM; LEROY W.) 17 November 1987 See abstract and claim 1.	1-19

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

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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"&" document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 7134497 B1	14.11.2006	CA 2642244 A1 US 2007-0187105 A1 US 2007-0203029 A1 US 7287594 B1 US 7407916 B2 WO 2007-093767 A2	23.08.2007 16.08.2007 30.08.2007 30.10.2007 05.08.2008 23.08.2007
US 2009-0131283 A1	21.05.2009	AU 2008-321109 A1 CA 2703883 A1 EP 2217673 A1 WO 2009-064719 A1	22.05.2009 22.05.2009 18.08.2010 22.05.2009
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US 04706752A A	17.11.1987	None	