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(54) Title: ORGANOPHILIC CLAY ADDITIVES AND OIL WELL DRILLING FLUIDS WITH LESS TEMPERATURE DEPENDENT RHEOLOGICAL PROPERTIES

(57) Abstract: An organophilic clay additive for oil based drilling fluids providing such fluids with improved temperature stable rheological properties. The additive includes an attapulgite clay having a cation exchange capacity of at least 5 milliequivalents per 100 grams of clay, 100% active clay basis; a first organic cation provided by an alkoxyated quaternary ammonium salt; and a second organic cation wherein such second organic cation is not provided by an alkoxyated quaternary ammonium salt. The total amount of organic cations b) and c) is provided in an amount from about +25% to -25% of the cation exchange capacity of the attapulgite clay.



WO 2007/100586 A3

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - C09K 8/02 (2007.01) USPC - 507/103 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) USPC - 507/103 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC - 507/103, 139, 203 (text search, see terms below) Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PubWEST(USPT,PGPB,EPAB,JPAB); DialogPRO(Engineering); Google Scholar Search Terms: organoclay, attapulgite, quaternary ammonium salt, cation exchange capacity, smectite		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,458,343 B1 (Zeman et al.) 1 October 2002 (01.10.2002), entire document especially col 68, ln 10-36 and ln 64-67, col 3, ln 65 to col 4, ln 40 and 68, ln 10-36	1-26
Y	US 5,725,805 A (Kemnetz et al.) 10 March 1998 (10.03.1998), entire document especially col 10, ln 52-54, col 8, ln 8-53	1-26
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