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For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: DRILLING FLUIDS COMPRISING SIZED GRAPHITE PARTICLES

(57) Abstract: Drilling fluid systems, graphite particle mixtures, and methods for use thereof including: (a) drilling fluid systems having effective rheology and lubricity properties comprising a suspension of graphite particles having a particle size distribution sufficient to permit greater than 65 wt.% of the graphite particles to pass through a shaker screen having a mesh size of about 80 or less; and (b) spotting fluids having effective rheology comprising graphite particles having an average particle size of 120 mesh or greater.



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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2004/010650

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C09K7/02

CORRECTED VERSION

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)
IPC 7 C09K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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

EPO-Internal, WPI Data, PAJ, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	WO 02/22759 A (THUSLICK INC) 21 March 2002 (2002-03-21) page 2 - page 5, line 10	1-23, 39-47 24-38, 48-52
X A	----- US 5 826 669 A (DERWIN DAVID J ET AL) 27 October 1998 (1998-10-27) column 5, line 48 - line 51 column 1 - column 3	1-23, 39-47 24-38, 48-52
X A	----- US 5 401 719 A (DEBEER JOHANNES M) 28 March 1995 (1995-03-28) column 2, line 15 - column 3, line 60	1-23, 39-47 24-38, 48-52
P,A	----- US 2003/132000 A1 (SHAARPOUR MANO) 17 July 2003 (2003-07-17) the whole document -----	1-52

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "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
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

7 December 2004

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Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International application No.
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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-23,39-47

- Independant claim 1 relates to a drilling fluid system comprising a suspension of graphite particles having a particle size distribution sufficient to permit greater than 65 wt% of the graphite particles to pass through a shaker screen having a mesh size of about 80 or less.
 - Independant claim 16 relates to a graphite particle mixture comprising 82wt% or more particles having a particle size of 60 mesh or less.
-

2. claims: 24-38, 48-52

- Independant claim 24 claims a spotting fluid comprising graphite particles having an average particle size of 120 mesh or greater.
 - Independant claim 34 relates to a graphite particle mixture comprising graphite particles having an average particle size of 120 mesh or greater.
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/US2004/010650

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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