Title: METHOD AND APPARATUS FOR DRILLING A BOREHOLE WITH A BOREHOLE LINER

Abstract: A method for drilling a borehole includes; providing a drill string (10) of drill pipe including a center bore (13), a distal end, a bit assembly (15) at the distal end; hanging a liner (18) from the drill string (10), thereby forming an annular space between the drill string (10) and the liner (18) and with the bit assembly (15) extending from a lower end of the liner (18); positioning the drill string (10) with the liner (18) attached thereto in a borehole such that a second annular space (21) is formed between the liner and the borehole wall; operating the bit assembly (15) to proceed with drilling the borehole; and circulating drilling fluid down through the center bore (13) of the drill string out through the bit assembly and down through the second annular space (21) between the liner and the borehole wall, the circulating fluid returning up through the annular space between the drill string and the liner. An apparatus for use in this method is also disclosed.
Declarations under Rule 4.17:
— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designation CA
— of inventorship (Rule 4.17(iv)) for US only

Published:
— with international search report

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : E21B 4/16
US CL : 175/57,171,257
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)
U.S. : 175/57,171,257,22,23,258

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>US 6,397,946 B1 (VAIL, III) 4 June 2002 (04/06/02), see entire document.</td>
<td>1-32</td>
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</tbody>
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Further documents are listed in the continuation of Box C.

See patent family annex.

Date of the actual completion of the international search
12 August 2004 (12.08.2004)

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28 Dec 2004

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Form PCT ISA 2/1U (second sheet) (July 1998)
Continuation of B. FIELDS SEARCHED Item 3:
EAST
search terms: liner same bit, drilling adj3 (casing or lining or liner)