Title: APPARATUS AND METHODS FOR PREVENTING AXIAL MOVEMENT OF DOWNHOLE TOOL ASSEMBLIES

Abstract: A slip assembly apparatus (10) is adapted (i) to be deployed into a wellbore (1) via deployment means (7); (ii) to prevent axial movement of a downhole tool assembly (5) in the wellbore (1) when the slip assembly apparatus (10) is actuated and external forces are imposed on the downhole tool assembly (5); (ii) to allow fluid flow past the slip assembly apparatus (10) within the wellbore (1) when the slip assembly apparatus (10) is actuated or non-actuated; and (iii) to allow release of the slip assembly apparatus (10) by use of a release load that is less than the axial capacity of the deployment means (7).

Declared under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
— as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

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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

International application No.
PCT/US03/16548

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : E21B 23/01
US CL : 166/382, 120,125, 213

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. : 166/118, 120,123,125,172,177.3,181, 213,382,387

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 practicable, search terms used)

EAST: (slip$1 and cone$1 and springs$1) and (sleeve$1 mandrel$1 anchor$3) and (wiper$1 flute$1 packer$1)

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>X</td>
<td>US 4,854,386 A (BAKER et al.) 08 August 1989 (08.08.1989), see entire document, especially figs. 15-22.</td>
<td>1, 8-16, 19-21</td>
</tr>
<tr>
<td>A</td>
<td>US 4,709,758 A (PRESTON, JR.) 01 December 1987 (01.12.1987), see entire document.</td>
<td>1-21</td>
</tr>
</tbody>
</table>

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

Date of actual completion of the international search: 27 July 2003 (27.07.2003)

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