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To the Director of the U.S. Patent and Trademark Office: Please	record the attached original documents or copy thereof.  2. Name and address of receiving party(ies):
1. Name of conveying party(ies):	Name: Halliburton Energy Services, Inc.
Gordon L. Moake	Street Address: 10200 Bellaire Blvd
ditional name(s) of conveying party(ies) attached?	City: Houston State: TX Zip: 77072
[ ]Yes [X]No	Country: United States of America
3. Nature of conveyance:	Additional name(s) & address(es) attached? [ ]Yes [X]No
[X] Assignment [ ] Merger [ ] Security Agreement [ ] Change of Name [ ] Other	
Execution Date: May 23, 2013	
<ul> <li>4. Application number(s) or patent number(s):</li> <li>If this document is being filed together with a new application, to an example of the A. Patent Application No.(s)</li> <li>Serial No. PCT/US2013/043320, filed May 30, 2013</li> <li>Additional numbers attached? [ ]Yes [X]No</li> </ul>	the execution date of the application is:  B. Patent No.(s)
5. Name and address of party to whom correspondence concerning document should be mailed:	<ul><li>6. Total number of applications and patents involved: 1</li><li>7. Total fee (37 CFR 3.41):\$ 40.00</li></ul>
Name: David R. Cochran  Address: Schwegman, Lundberg & Woessner, P.A. P.O. Box 2938 Minneapolis, MN 554020938	[]Enclosed [X]Authorized to be charged to deposit account 19-0743  8. Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743
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9. Statement and signature. To the best of my knowledge and belief, the foregoing information of the original document,  David R. Cochran/Reg. No. 46,632  Name of Person Signing  Total	5 June 2013 Signature Date number of pages including cover sheet: 3

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PATENT REEL: 030619 FRAME: 0355 Attorney Docket No. 1880.429WO1 Client Ref. No. 2012-IP-057043 PCT/E-Billing 2012-IPRO-057043

## **ASSIGNMENT**

WHEREAS, Gordon L. Moake (hereinafter the "Undersigned") has made one or more inventions and other subject matter (hereinafter collectively referred to as the "Invention") which are described in a patent application filed on <a href="May 30, 2013">May 30, 2013</a>, which application was assigned PCT patent application serial number <a href="PCT/US2013/043320">PCT/US2013/043320</a>, and which is titled NEUTRON TOOL WITH DUAL-PURPOSE DETECTOR.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency, and adequacy of which are hereby acknowledged by the Undersigned, the Undersigned do hereby irrevocably and unconditionally:

CONVEY, ASSIGN, AND TRANSFER to Halliburton Energy Services, Inc. (the "Assignee"), a corporation of the State of Delaware, having a place of business at 10200 Bellaire Blvd, Houston, TX 77072, the Undersigned's entire right, title, and interest for the United States and all foreign countries and jurisdictions in and to:

the Invention which is disclosed in the above-identified application or applications;

such application or applications, and all divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other applications for a patent or patents which have been or shall be filed in the United States (including all provisional and non-provisional applications), and in all foreign countries and jurisdictions based in whole or in part on any of such invention (including any application for a utility model or an innovation patent application);

all original and reissued patents which have been or shall be issued in the United States and all foreign countries and jurisdictions based in whole or in part on any of such invention;

including the right to claim priority to the above-identified patent application or applications in relation to subject matter based in whole or in part on the above-identified patent application or applications and any of the foregoing including the right to file foreign applications under the provisions of any convention or treaty;

and including the right to all causes of action, remedies, and other enforcement rights related to the above-identified application or applications, including without limitation the right to sue for past, present, or future infringement, misappropriation, or violation of any and all rights related to the above-identified patent application or applications and any of the foregoing, including the right to obtain and collect damages for past, present, or future infringement;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such invention to the Assignee;

AUTHORIZE AND REQUEST that any attorney associated with U.S. Patent and Trademark Office (USPTO) Customer No. 46042 may (directly or through his/her designee) delete, insert, or alter any

PATENT REEL: 030619 FRAME: 0356 Assignment

Assignors: Gordon L, Moake
Title: NEUTRON TOOL WITH DUAL-PURPOSE DETECTOR

Docket No: 1880.429WOI Client Ref. No. 2012-IP-057043 PCT/E-Billing 2012-IPRO-057043

Assignor:

(Signature);\_\_

Name: Gordon L. Moake

City/State: Houston, TX

Date: May 23, 2013

**PATENT REEL: 030619 FRAME: 0357** 

**RECORDED: 06/05/2013**