

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4010255

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ZHIJUAN ZHANG	11/30/2015
WEIJUN GUO	11/13/2015
DONGWON LEE	11/15/2015
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	HALLIBURTON ENERGY SERVICES, INC.
<b>Street Address:</b>	3000 N. SAM HOUSTON PARKWAY E.
<b>City:</b>	HOUSTON
<b>State/Country:</b>	TEXAS
<b>Postal Code:</b>	77032-3219
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15113285
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Email:</b>	request@slwip.com
<b>Correspondent Name:</b>	SCHWEGMAN LUNDBERG & WOESSNER, P.A.
<b>Address Line 1:</b>	P.O. BOX 2938
<b>Address Line 4:</b>	MINNEAPOLIS, MINNESOTA 55402-0938
<b>ATTORNEY DOCKET NUMBER:</b>	1880.856US1
<b>NAME OF SUBMITTER:</b>	TYLYN J. MOORE
<b>SIGNATURE:</b>	/Tylyn J. Moore/
<b>DATE SIGNED:</b>	08/17/2016
<b>Total Attachments: 6</b>	
source=1880856US1RecordationCS#page1.tif	
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source=1880856US1RecordationCS#page5.tif	



RECORDATION FORM COVER SHEET  
PATENTS ONLY

Atty Ref/Docket No.: 1880.856US1

Patent and Trademark Office

To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Zhijuan Zhang, Weijun Guo, Dongwon Lee

Additional name(s) of conveying party(ies) attached?

[ ] Yes [X] No

3. Nature of conveyance:

[X] Assignment

[ ] Merger

[ ] Security Agreement [ ] Change of Name

[ ] Other

Execution Date: November 30, 2015, November 13,  
2015, November 15, 2015

2. Name and address of receiving party(ies):

Name: Halliburton Energy Services, Inc.

Street Address: 3000 N. Sam Houston Parkway E.

City: Houston State: TX Zip: 77032-3219

Country: United States of America

Additional name(s) & address(es) attached? [ ] Yes [X] No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

B. Patent No.(s)

Serial No. 15/113,285, filed July 21, 2016

Additional numbers attached? [ ] Yes [X] No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: David R. Cochran

Address:

Schwegman Lundberg & Woessner, P.A.

P.O. Box 2938

Minneapolis, MN 55402--0938

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$ 0.00

[ ] Enclosed

[ ] 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 is true and correct and any attached copy is a true copy of the original document.

David R. Cochran/Reg. No. 46,632

Name of Person Signing

David R. Cochran

Signature

16 August 2016

Date

Total number of pages including cover sheet: 6

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks

Mail Stop Assignment Recordation Services

P.O. Box 1450

Alexandria, VA 22313-1450

PATENT  
REEL: 039462 FRAME: 0699

### ASSIGNMENT

WHEREAS, Zhijuan Zhang, Weijun Guo and Dongwon Lee (hereinafter the "Undersigned") have 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 03-DEC-2015, which application was assigned PCT patent application serial number PCT/US15/63693, and which is titled STANDOFF DETERMINATION; which are described in a patent application filed on March 26, 2015, which application was assigned PCT application serial number PCT/US2015/022729, and which is titled CEMENT EVALUATION WITH X-RAY TOMOGRAPHY; which are described in a patent application filed on March 26, 2015, which application was assigned PCT application serial number PCT/US2015/022748, and which is titled DOWNHOLE TOOL APPARATUS, SYSTEM, AND METHODS.

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 3000 N. Sam Houston Parkway E., Houston, TX 77032-3219, 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 information related to the above-identified patent application or applications or any of the foregoing, after execution of this Assignment;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or shall be made to others by the Undersigned, and that the full right to convey the same as herein expressed is possessed by the Undersigned;

COVENANT, that when requested and without compensation, but at the expense of the Assignee, in order to carry out in good faith the intent and purpose of this Assignment, the Undersigned shall (1) execute all provisional, non-provisional, divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other patent applications for the Invention; (2) execute all rightful oaths, declarations, assignments, powers of attorney and other papers for the Invention; (3) communicate to the Assignee all facts known to the Undersigned relating to the Invention and the history thereof; (4) cooperate with the Assignee in any interference, reexamination, reissue, opposition, dispute, or litigation involving any of the applications or patents for the Invention; and (5) take such further actions as the Assignee shall reasonably consider necessary or desirable for vesting title to such Invention in the Assignee, or for securing, maintaining and enforcing proper patent protection for the Invention;

COVENANT, that should any provision of this agreement be held unenforceable by an authority of competent jurisdiction, such a ruling shall not affect the validity and enforceability of the remaining provisions. To the extent that any such provision is found to be unenforceable, the Undersigned, when requested and without compensation shall act in good faith to substitute for such provision a new provision with content and purpose as close as possible to the provision deemed unenforceable.

THIS AGREEMENT IS TO BE BINDING on the heirs, assigns, representatives, and successors of the Undersigned, and is to extend to the benefit of the successors, assigns, and nominees of the Assignee.

AGREED as of the date of my signature below:

Assignor:

(Signature):



Name: Zhiluan Zhang

City/State: Houston, TX

Date:

11/30/2015

Assignment

Assignors: Zhiqun Zhang et al.

Title: STANDOFF DETERMINATION

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Docket No: 1880856WO1

Client Ref. No. 2014-IPM-097748 U1 PCT/E-Billing 2015-IPRO-1047A3

Assignor:

(Signature):

Wei Jun Guo

Name: Wei Jun Guo

City/State: Houston, TX

Date:

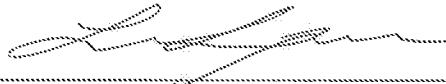
11/13/2015

Assignment  
Assignors: Zhijuan Zhang et al.  
Title: STANDOFF DETERMINATION  
Page 5 of 5

Docket No: 1880.856WO1  
Client Ref. No. 2014-IPM-097748 U1 PCT/E-Billing 2015-IPRO-104743

Assignor:

(Signature):



Name: Dongwon Lee

City/State: Kingwood, TX

Date:

11/15/2015