504957837 06/13/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JING JIN	01/21/2016
CHUNG CHANG	10/26/2015

RECEIVING PARTY DATA

Name:	HALLIBURTON ENERGY SERVICES, INC.	
Street Address:	3000 N. SAM HOUSTON PARKWAY E.	
City:	HOUSTON	
State/Country:	TEXAS	
Postal Code:	77032	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15317071

CORRESPONDENCE DATA

Fax Number: (713)658-2553

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.

Phone: 713-658-1818

Email: patents@chamberlainlaw.com

Correspondent Name: COLLIN A. ROSE
Address Line 1: 1200 SMITH STREET

Address Line 2: 14TH FLOOR

Address Line 4: HOUSTON, TEXAS 77002

ATTORNEY DOCKET NUMBER:	140846-032601US	
NAME OF SUBMITTER: JESSICA STRYKER, IP PARALEGAL		
SIGNATURE: /Jessica Stryker, IP Paralegal/		
DATE SIGNED:	06/13/2018	

Total Attachments: 4

source=2014-IPM-098056 U1 US_Signed Chang Assignment _140846-032601US#page1.tif source=2014-IPM-098056 U1 US_Signed Chang Assignment _140846-032601US#page2.tif source=2014-IPM-098056 U1 US_Signed Jin Assignment _140846-032601US#page1.tif source=2014-IPM-098056 U1 US_Signed Jin Assignment _140846-032601US#page2.tif

PATENT 504957837 REEL: 046071 FRAME: 0898

ASSIGNMENT

For good and valuable consideration given to me by Halliburton Energy Services, Inc., and any other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, Chung Chang ("ASSIGNOR"), having jointly or solely made an invention in "ACOUSTIC LOGGING TOOL UTILIZING FUNDAMENTAL RESONANCE ("INVENTION"), while in the employ or hire either as an employee or consultant of Halliburton Energy Services, Inc., a corporation organized and existing under the laws of the State of Delaware, doing business at 3000 N. Sam Houston Parkway E., Houston, Texas 77032-3219, US ("ASSIGNEE"), do hereby assign, sell, and convey to ASSIGNEE, its successors, and assigns, ASSIGNOR's entire right, title, and interest throughout the world in and to:

- 1. Said INVENTION in "ACOUSTIC LOGGING TOOL UTILIZING FUNDAMENTAL RESONANCE;"
- Utility patent application on said INVENTION entitled, "ACOUSTIC LOGGING TOOL UTILIZING FUNDAMENTAL RESONANCE," filed as:¹

PCT Patent Application No. PCT/US2015/054240

Date: October 06, 2015

Attorney's Reference No. 140846-032600WO;

- 3. All applications for patent or like protection on the INVENTION that have now been or may in the future be made anywhere in the world, including any continuation, continuation-in-part, and any other utility applications:
- 4. All patents and like protection that have now been or may in the future be granted on the INVENTION anywhere in the world;
- All substitutions, divisions, continuations, continuations-in-part, renewals, reissues, extensions, and the like of the applications and patents and like grants, including without limitation, those obtained or permissible under past, present, and future laws and statutes;

Page 1 of 3

¹ ASSIGNOR further authorizes the handling attorneys to insert the serial number and filing date of the patent application identified by the listed file numbed as soon as it is known as well as to attach and update a schedule of any further application serial numbers or patent numbers related to the INVENTION as they become known.

- All rights of action on account of past, present, and future unauthorized use
 of the INVENTION and for infringement of the patents and like protection
 anywhere in the world;
- 7. The right in ASSIGNEE to file in its name applications for patents and like protection for the INVENTION in any country or countries in the world; and
- 8. All rights of priority associated with the INVENTION, applications, patents, and like protection anywhere in the world.

ASSIGNOR covenants that ASSIGNOR, its heirs, legal representatives, assigns, administrators, and executors will, at the expense of ASSIGNEE, its successors, and assigns, execute all papers and perform such other acts as may be reasonably necessary to give ASSIGNEE, its successors, and assigns, the full benefit of this Assignment. Further, ASSIGNOR warrants that the INVENTION is not encumbered by another assignment or obligation of assignment to a third-party and that ASSIGNOR has the full ability and authority to assign and encumber the INVENTION.

ASSIGNOR: _______ Name: Chung Chang

Date: <u>OCt 26,2015</u>	
THE STATE OF: 122/25	
COUNTY OF: SYNS	
Before me, the undersigned authority, on this day personally appeared chang, known to me to be the person whose name is subscribed to the	
foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.	
Given under my hand and seal of office, this the 26 day of 000, 2015.	••••
Notary Public in and for the State of	
My commission expires: Dec. 15, 2018	
Page 2 of 3 STEFANIE JOHNSON	

My Commission Expires December 15, 2018

REEL: 046071 FRAME: 0900

ASSIGNMENT

For good and valuable consideration given to me by Halliburton Energy Services, Inc., and any other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, Jing Jin ("ASSIGNOR"), having jointly or solely made an invention in "ACOUSTIC LOGGING TOOL UTILIZING FUNDAMENTAL RESONANCE ("INVENTION"), while in the employ or hire either as an employee or consultant of Halliburton Energy Services, Inc., a corporation organized and existing under the laws of the State of Delaware, doing business at 3000 N. Sam Houston Parkway E., Houston, Texas 77032-3219, US ("ASSIGNEE"), do hereby assign, sell, and convey to ASSIGNEE, its successors, and assigns, ASSIGNOR's entire right, title, and interest throughout the world in and to:

- 1. Said INVENTION in "ACOUSTIC LOGGING TOOL UTILIZING FUNDAMENTAL RESONANCE;"
- Utility patent application on said INVENTION entitled, "ACOUSTIC LOGGING TOOL UTILIZING FUNDAMENTAL RESONANCE," filed as:¹

PCT Patent Application No. PCT/US2015/054240

Date: October 06, 2015

Attorney's Reference No. 140846-032600WO;

- 3. All applications for patent or like protection on the INVENTION that have now been or may in the future be made anywhere in the world, including any continuation, continuation-in-part, and any other utility applications;
- 4. All patents and like protection that have now been or may in the future be granted on the INVENTION anywhere in the world;
- All substitutions, divisions, continuations, continuations-in-part, renewals, reissues, extensions, and the like of the applications and patents and like grants, including without limitation, those obtained or permissible under past, present, and future laws and statutes;

Page 1 of 2

¹ ASSIGNOR further authorizes the handling attorneys to insert the serial number and filing date of the patent application identified by the listed file numbed as soon as it is known as well as to attach and update a schedule of any further application serial numbers or patent numbers related to the INVENTION as they become known.

- 6. All rights of action on account of past, present, and future unauthorized use of the INVENTION and for infringement of the patents and like protection anywhere in the world;
- The right in ASSIGNEE to file in its name applications for patents and like protection for the INVENTION in any country or countries in the world; and
- 8. All rights of priority associated with the INVENTION, applications, patents, and like protection anywhere in the world.

ASSIGNOR covenants that ASSIGNOR, its heirs, legal representatives, assigns, administrators, and executors will, at the expense of ASSIGNEE, its successors, and assigns, execute all papers and perform such other acts as may be reasonably necessary to give ASSIGNEE, its successors, and assigns, the full benefit of this Assignment. Further, ASSIGNOR warrants that the INVENTION is not encumbered by another assignment or obligation of assignment to a third-party and that ASSIGNOR has the full ability and authority to assign and encumber the INVENTION.

ASSIGNOR:		
Name: Jing Jin		
Date:21/01/16		
Witnessed By: Signature	Date:	21/01/16
Name of Witness		
Witnessed By:	Date:	71/01/16
Signature		2701710
Wei Bin Ewe		
Printed Name of Witness	60	
Page 2	of 2	

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RECORDED: 06/13/2018