

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5844272

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
YANG LIU	07/05/2018
RALPH D'ANGELO	08/08/2018
SMAINE ZEROUG	07/12/2018
SANDIP BOSE	06/11/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SCHLUMBERGER TECHNOLOGY CORPORATION
<b>Street Address:</b>	300 SCHLUMBERGER DRIVE
<b>City:</b>	SUGAR LAND
<b>State/Country:</b>	TEXAS
<b>Postal Code:</b>	77478
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16495408
<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>	kdumas-scarber@slb.com
<b>Correspondent Name:</b>	KRISTINE DUMAS-SCARBER
<b>Address Line 1:</b>	10001 RICHMOND AVENUE
<b>Address Line 2:</b>	ROOM 4720
<b>Address Line 4:</b>	HOUSTON, TEXAS 77042
<b>ATTORNEY DOCKET NUMBER:</b>	IS17.0293-US-PCT
<b>NAME OF SUBMITTER:</b>	KRISTINE DUMAS-SCARBER
<b>SIGNATURE:</b>	/KRISTINE DUMAS-SCARBER/
<b>DATE SIGNED:</b>	12/02/2019
<b>Total Attachments: 7</b>	
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## Assignment

WHEREAS, the undersigned inventors hereinafter referred to as the "Inventors," each said Inventor being listed below:

Yang Liu, a citizen of China;

Ralph D'Angelo, a citizen of the United States of America;

Smaine Zeroug, a citizen of the United States of America; and

Sandip Bose, a citizen of India;

Has/have invented certain new and useful improvements in

### **GUIDED MODE BEAMFORMING FOR PROBING OPEN-HOLE AND CASED-HOLE WELL ENVIRONMENTS**

as described and set forth in an application identified as International Patent Application No. PCT/US2018/024247, (Docket No. IS17.0293-WO-PCT) filed March 26, 2018. This assignment is effective as of March 26, 2018.

AND WHEREAS, the "COMPANIES", listed in Schedule A, are desirous of acquiring or confirming their acquisition of the entire right, title and interest in and to said invention, inventions or improvements, and in and to said application, and in and to any and all patents, both of the United States and of all foreign countries, that may be obtained therefore as outlined in Schedule A;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, BE IT KNOWN, that the undersigned Inventors, for good and valuable considerations, the receipt and sufficiency of which hereby acknowledge, have sold, assigned, transferred and conveyed, and by this assignment do sell, assign, transfer and convey, unto said COMPANIES, their successors and assigns, the entire right, title and interest throughout the world, in and to the above-described invention, inventions or improvements described or set forth in said application, in any form or embodiment thereof, and in and to said application, and in and to any applications filed in any foreign country based thereon, including the right to file foreign applications under the provisions of any convention or treaty; and in and to any confirmation, divisional, continuation, continuation-in-part, or substitute application which may be filed on said invention, inventions or improvements in the United States or in any foreign country; and in and to any and all patents, certificates, utility models, reissues, extensions, additions or confirmations thereof which may be granted in the United States or in any foreign country upon said invention, inventions or improvements,

TO HAVE AND TO HOLD the same to the full end of the term or terms for which any and all such United States and foreign patents and grants may be issued on said invention, inventions or improvements.

AND said Inventors do hereby authorize and request the issuing authority to issue any and all of said United States and foreign patents on said application or applications to said **COMPANIES**, their successors and assigns, as the assignee of the entire right, title and interest in and to the same, for the sole use and benefit of said **COMPANIES**, their successors and assigns.

AND said Inventors do hereby covenant and warrant that said Inventors have full right to convey the entire right, title and interest herein assigned free and clear of all licenses, encumbrances and liens whatsoever, and that no said Inventors has executed and will execute any instruments in conflict herewith.

AND said Inventors, for the conditions aforesaid, do hereby covenant and agree to and with the said **COMPANIES**, their successors and assigns, that each Inventor, his or her executors, administrators, or other personal representatives, shall and will do all lawful acts and things, make all rightful oaths, and make, execute and deliver any and all other instruments in writing, and any and all further applications, papers, powers, affidavits, assignments, disclaimers and other documents, which in the opinion of counsel for said **COMPANIES**, their successors and assigns, may be required or necessary in this or in any foreign country more effectually to secure to and vest in said **COMPANIES**, their successors and assigns, the entire right, title and interest in and to said invention, inventions or improvements, application or applications, patents, rights, titles, benefits, privileges, and advantages hereby sold, assigned, confirmed, transferred and conveyed.

This Agreement is entered in contemplation of and shall be construed in accordance with the laws of the State of Texas, and may not be amended or modified unless in a subsequent writing executed by the **COMPANIES**.

IN WITNESS WHEREOF I, Yang Liu, have hereunto set my hand and seal this 05 day of July, 2018.

Yang Liu

COMMONWEALTH OF MASSACHUSETTS

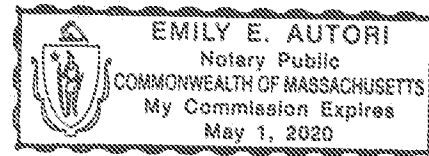
COUNTY OF MIDDLESEX

BEFORE ME this 5<sup>th</sup> day of July, 2018, personally appeared Yang Liu, to me known to be the person who is described in and who executed the foregoing assignment instrument and acknowledged to me that he/she executed the same of his/her own free will for the purpose therein expressed.

Seal



Emily E. Autori  
Notary Public



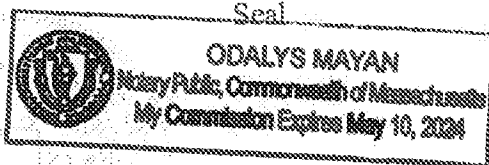
IN WITNESS WHEREOF I, **Ralph D'Angelo**, have hereunto set my hand and seal this  
8th day of August, 2018.

Ralph D'Angelo  
Ralph D'Angelo

COMMONWEALTH OF MASSACHUSETTS

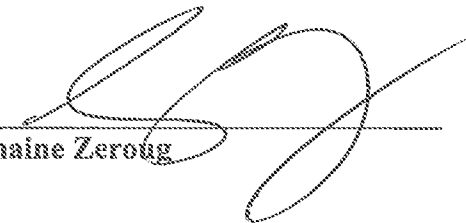
COUNTY OF MIDDLESEX

BEFORE ME this 8th day of August, 2018, personally appeared **Ralph D'Angelo**,  
to me known to be the person who is described in and who executed the foregoing assignment  
instrument and acknowledged to me that he/she executed the same of his/her own free will for  
the purpose therein expressed.



Odalys Mayan  
Notary Public

IN WITNESS WHEREOF I, Smaine Zeroug, have hereunto set my hand and seal this 12<sup>th</sup> day of July, 2018.

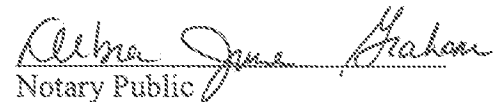
  
Smaine Zeroug

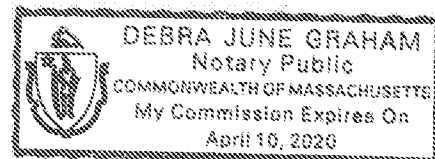
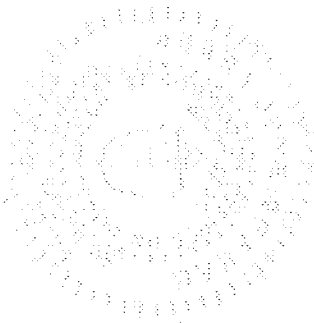
COMMONWEALTH OF MASSACHUSETTS

COUNTY OF MIDDLESEX

BEFORE ME this 12<sup>th</sup> day of July, 2018, personally appeared Smaine Zeroug, to me known to be the person who is described in and who executed the foregoing assignment instrument and acknowledged to me that he/she executed the same of his/her own free will for the purpose therein expressed.

Seal

  
Notary Public



IN WITNESS WHEREOF I, **Sandip Bose**, have hereunto set my hand and seal this 11<sup>th</sup> day of June, 2019.

*Sandip Bose*  
Sandip Bose

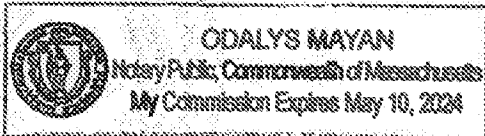
COMMONWEALTH OF MASSACHUSETTS

COUNTY OF MIDDLESEX

BEFORE ME this 11<sup>th</sup> day of June, 2019, personally appeared **Sandip Bose**, to me known to be the person who is described in and who executed the foregoing assignment instrument and acknowledged to me that he/she executed the same of his/her own free will for the purpose therein expressed.

Seal

*[Signature]*  
Notary Public





**Schedule A**  
**“COMPANIES”**

**SCHLUMBERGER TECHNOLOGY CORPORATION**

Corporation of: United States of America

Located at: 300 Schlumberger Drive, Sugar Land, Texas 77478 U.S.A.

Assignee for applications in: United States of America

**SCHLUMBERGER CANADA LIMITED**

Corporation of: Canada

Located at: 125 – 9 Avenue SE, Calgary, Alberta T2G 0P6

Assignee for applications in: Canada

**SERVICES PETROLIERS SCHLUMBERGER**

Corporation of: France

Located at: 42 rue Saint Dominique, 75007 Paris, France

Assignee for applications in: France

**SCHLUMBERGER TECHNOLOGY B.V.**

Corporation of: The Netherlands

Located at: Parkstraat 83, 2514 JG, The Hague, Netherlands

Assignee for applications in: All other countries not otherwise listed.