

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5603486

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
YOUXIANG ZUO	09/16/2016
SHU PAN	09/14/2016
KANG WANG	09/18/2016
YI CHEN	09/16/2016
OLIVER C. MULLINS	10/10/2018
<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>
<b>Application Number:</b>	15196128
<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>	IS16.0063-US-NP
<b>NAME OF SUBMITTER:</b>	KRISTINE DUMAS-SCARBER
<b>SIGNATURE:</b>	/KRISTINE DUMAS-SCARBER/
<b>DATE SIGNED:</b>	07/03/2019
<b>Total Attachments: 8</b>	
source=IS160063USNP_20190703_Signed_Assignment#page1.tif	

source=IS160063USNP\_20190703\_Signed\_Assignment#page2.tif  
source=IS160063USNP\_20190703\_Signed\_Assignment#page3.tif  
source=IS160063USNP\_20190703\_Signed\_Assignment#page4.tif  
source=IS160063USNP\_20190703\_Signed\_Assignment#page5.tif  
source=IS160063USNP\_20190703\_Signed\_Assignment#page6.tif  
source=IS160063USNP\_20190703\_Signed\_Assignment#page7.tif  
source=IS160063USNP\_20190703\_Signed\_Assignment#page8.tif

### Assignment

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

**Youxiang Zuo**, a citizen of Canada;

**Shu Pan**, a citizen of Canada;

**Yi Chen**, a citizen of China;

**Kang Wang**, a citizen of China; and

**Oliver C. Mullins**, a citizen of the United States of America;

Has/have invented certain new and useful improvements in

#### **ASPHALTENE PHASE INSTABILITY ANALYSIS IN GAS CHARGES INTO OIL RESERVOIRS**

as described and set forth in an application for Letters Patent of the United States of America, filed with the United States Patent and Trademark Office on **June 29, 2016**, Serial No. **15/196,128**, (Docket No. **IS16.0063-US-NP**). This assignment is effective as of **June 29, 2016**.

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.

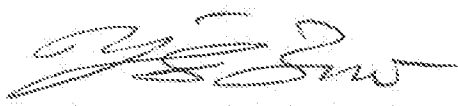
This Agreement is entered in contemplation of and shall be construed in accordance with the laws of the State of Texas, and may not be amended or modified unless in a subsequent writing executed by the **COMPANIES**.

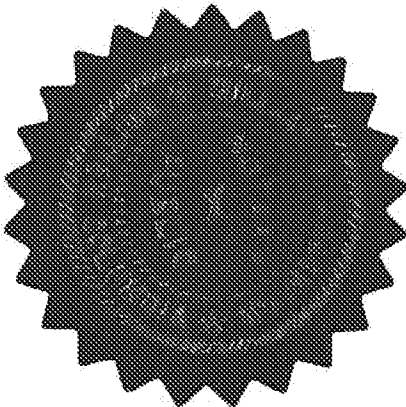
Sworn before me at the City of Burnaby, Province )  
of British Columbia, this 16 day of )  
September, 2016, personally appeared )  
Youxiang Zuo, known to be the person who is )  
described in and who executed the foregoing )  
assignment instrument and acknowledged to me )  
that he executed the same of his own free will for )  
the purpose therein expressed. )

  
\_\_\_\_\_  
Commissioner for Oaths in and for the Province of )  
British Columbia, Canada )

William G. Anderson  
Notary Public  
252 - 4820 Kingsway  
Burnaby, B.C. V5H 4P1  
Phone: 604-434-5935 Fax: 604-434-8599

IN WITNESS WHEREOF, I Youxiang  
Zuo have hereunto executed the said  
Assignment this 16 day of  
September, 2016.

  
\_\_\_\_\_  
**YOUXIANG ZUO**



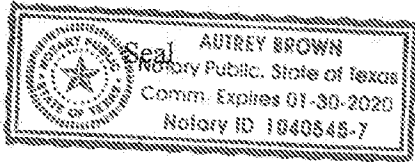
IN WITNESS WHEREOF I, **Shu Pan**, have hereunto set my hand and seal this 14 day  
of September, 2016.


  
\_\_\_\_\_  
**Shu Pan**

STATE OF TEXAS

COUNTY OF BRAZORIA

BEFORE ME this 14 day of September, 2016, personally appeared **Shu Pan**, 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.



  
\_\_\_\_\_  
Notary Public

IN WITNESS WHEREOF I, **Kang Wang**, have hereunto set my hand and seal this 18<sup>th</sup> day of September, 2016.

Kang Wang  
Kang Wang

BE IT KNOWN, that **Kang Wang** is known to us to be the individual described in this assignment, that on the aforementioned date, we were personally present and did see him/her sign and execute this assignment and that he/she acknowledged to us that he/she executed the same as his/her free act and deed for the uses and purposes therein set forth.

Hui Jin  
Witness

9th floor, Innovation Plaza,  
Tsinghua Science Park,  
Beijing 100084, China

Post Office Address

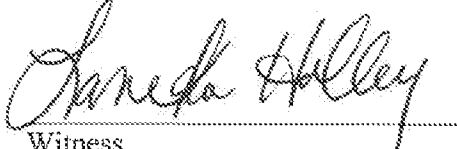
Kaohki Sheng  
Witness

9th A, Innovation Plaza  
Tsinghua Science Park  
Haidian district, Beijing  
100084, China  
Post Office Address

IN WITNESS WHEREOF I, **Yi Chen**, have hereunto set my hand and seal this 16 day of September, 2016.

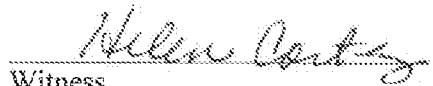
  
Yi Chen

BE IT KNOWN, that **Yi Chen** is known to us to be the individual described in this assignment, that on the aforementioned date, we were personally present and did see him/her sign and execute this assignment and that he/she acknowledged to us that he/she executed the same as his/her free act and deed for the uses and purposes therein set forth.

  
Witness

110 Schlumberger Dr  
Sugar Land TX 77478

Post Office Address


  
Witness

110 Schlumberger Dr.  
Sugar Land, TX 77478

Post Office Address



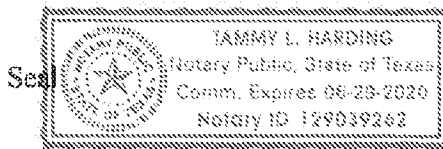
IN WITNESS WHEREOF I, **Oliver C. Mullins**, have hereunto set my hand and seal this 10<sup>th</sup> day of October, 2018.

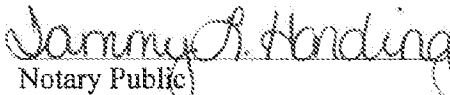
  
\_\_\_\_\_  
**Oliver C. Mullins**

STATE OF TEXAS

COUNTY OF HARRIS

BEFORE ME this 10 day of October, 2018, personally appeared **Oliver C. Mullins**, 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.



  
\_\_\_\_\_  
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 83-89, 2514 TJG, The Hague, The Netherlands

Assignee for applications in: GCC and all other countries not otherwise listed.