

PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Youxiang Zuo</td> <td>05/16/2013</td> </tr> <tr> <td>Oliver C. Mullins</td> <td>05/15/2013</td> </tr> <tr> <td>Chengli Dong</td> <td>05/14/2013</td> </tr> <tr> <td>Dingan Zhang</td> <td>05/15/2013</td> </tr> <tr> <td>Cheng Gang Xian</td> <td>05/13/2013</td> </tr> </tbody> </table>		Name	Execution Date	Youxiang Zuo	05/16/2013	Oliver C. Mullins	05/15/2013	Chengli Dong	05/14/2013	Dingan Zhang	05/15/2013	Cheng Gang Xian	05/13/2013
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Youxiang Zuo	05/16/2013												
Oliver C. Mullins	05/15/2013												
Chengli Dong	05/14/2013												
Dingan Zhang	05/15/2013												
Cheng Gang Xian	05/13/2013												
RECEIVING PARTY DATA													
Name:	SCHLUMBERGER TECHNOLOGY CORPORATION												
Street Address:	300 SCHLUMBERGER DRIVE												
City:	SUGAR LAND												
State/Country:	TEXAS												
Postal Code:	77478												
PROPERTY NUMBERS Total: 1													
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13754549</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13754549								
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Application Number:	13754549												
CORRESPONDENCE DATA													
Fax Number:	7136892219												
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>													
Phone:	713-689-1137												
Email:	ncorona@slb.com												
Correspondent Name:	Mimi Corona												
Address Line 1:	10001 Richmond Avenue												
Address Line 2:	IP Administration Center of Excellence												
Address Line 4:	Houston, TEXAS 77042												
ATTORNEY DOCKET NUMBER:	IS11.0662-US-NP												
NAME OF SUBMITTER:	Mimi Corona												

CH \$40.00 13754549

Signature:	/Mimi Corona/
Date:	05/21/2013
Total Attachments: 8 source=IS110662USNP_20130521_Executed-Assignment#page1.tif source=IS110662USNP_20130521_Executed-Assignment#page2.tif source=IS110662USNP_20130521_Executed-Assignment#page3.tif source=IS110662USNP_20130521_Executed-Assignment#page4.tif source=IS110662USNP_20130521_Executed-Assignment#page5.tif source=IS110662USNP_20130521_Executed-Assignment#page6.tif source=IS110662USNP_20130521_Executed-Assignment#page7.tif source=IS110662USNP_20130521_Executed-Assignment#page8.tif	

Assignment

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

✓**Youxiang Zuo**, a citizen of Canada, residing at 2222 Settlers Way Blvd., Apt. 1726, Sugar Land, TX 77478, USA;

✓**Oliver C. Mullins**, a citizen of the United States of America, residing at 11 Hillsdale Avenue, Ridgefield, CT 06877, USA;

✓**Chengli Dong**, a citizen of the United States of America, residing at 1327 Shady Bend Drive, Sugar Land, TX 77479, USA;

✓**Dingan Zhang**, a citizen of Canada, residing at 710 Todd Landing NW, Edmonton, AB T6R 3C6, Canada;

And

✓**Cheng Gang Xian**, a citizen of China, residing at 1501, Alia Residence, Khalifa Street, P.O. Box 21, Abu Dhabi, AE ;

Has/have invented certain new and useful improvements in

METHODS AND APPARATUS FOR CHARACTERIZATION OF HYDROCARBON 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 January 30, 2013, Serial No. 13/754549, (Docket No IS11.0662-US-NP). **This assignment is effective as of January 30, 2013.**

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.

IN WITNESS WHEREOF I, **Youxiang Zuo**, have hereunto set my hand and seal this
16 day of May, 2013.

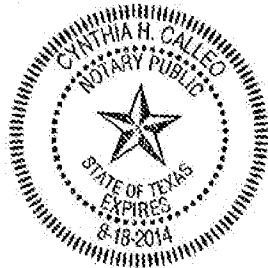


Youxiang Zuo

STATE OF Texas
COUNTY OF Fort Bend

BEFORE ME this 16 day of May, 2013, personally appeared **Youxiang Zuo**, to me 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.

Seal





Notary Public

Docket Number IS11.0662-US-NP

IN WITNESS WHEREOF I, I **Oliver C. Mullins**, have hereunto set my hand and seal this
15th day of May, 2013.

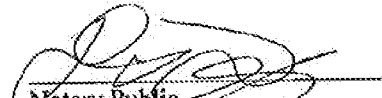

Oliver C. Mullins

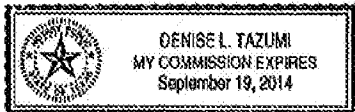
STATE OF Texas

COUNTY OF Harris

BEFORE ME this 15th day of May, 2013, 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 executed the same of his own free will for the purpose therein expressed.

Seal


Notary Public



Docket Number IS11.0662-US-NP

IN WITNESS WHEREOF I, **Chengli Dong**, have hereunto set my hand and seal this
14th day of MAY, 2013.



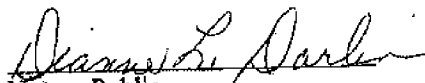
Chengli Dong

STATE OF TEXAS

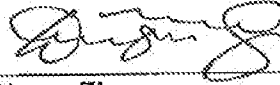
COUNTY OF HARRIS

BEFORE ME this 14th day of MAY, 2013, personally appeared **Chengli Dong**, to me 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.

Seal

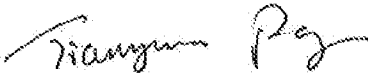

Notary Public

IN WITNESS WHEREOF I, **Dingan Zhang**, have hereunto set my hand and seal this
15 day of May, 2013.

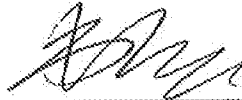


Dingan Zhang

BE IT KNOWN that **Dingan Zhang** is to me known to be the individual described in the foregoing assignment, that on this 15 day of May, 2013, I was personally present and did see him sign and execute the foregoing assignment; and, that he did acknowledge to me that he executed the same as his free act and deed for the uses and purposes therein set forth.



Witness



Witness

DBR Technology Centre

9450-17 Ave

Edmonton, AB Canada T6N 1M9

Post Office Address

DBR Technology Centre

9450-17 Ave

Edmonton, AB, Canada T6N 1M9

Post Office Address

IN WITNESS WHEREOF I, Cheng Gang Xian, have hereunto set my hand and seal this 13 day of May, 2013.

[Signature]
Cheng Gang Xian

BE IT KNOWN that Cheng Gang Xian, is to me known to be the individual described in the foregoing assignment, that on this 13 day of May, 2013, I was personally present and did see him sign and execute the foregoing assignment; and, that he did acknowledge to me that he executed the same as his free act and deed for the uses and purposes therein set forth.

QIAN HAIYAN
Witness Western Green Country Manager

[Signature]
Witness

Schlumberger China S.A.
ZhaoWei HuaDeng Building
#14 JiuXianQiao Road, Chaoyang
District, Beijing, China 100015
Post Office Address

Technical Advisor
Schlumberger China S.A.
ZhaoWei HuaDeng Building
Chaoyang District, Beijing 100015
Post Office Address

**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: 525-3rd Avenue S.W., Calgary, Alberta, Canada T2P 0G4

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 HOLDINGS LIMITED

Corporation of: British Virgin Islands

Located at: P.O. Box 71, Craigmuir Chambers, Road Town, 1110 Tortola, British Virgin Islands

Assignee for applications in: Japan, The Netherlands, United Kingdom

SCHLUMBERGER TECHNOLOGY B.V.

Corporation of: the Netherlands

Located at: Parkstraat 83-89, 2514 JG The Hague, The Netherlands

Assignee for applications in: GCC and all other countries.

PRAD RESEARCH AND DEVELOPMENT LIMITED

Corporation of: British Virgin Islands

Located at: P.O. Box 71, Craigmuir Chambers, Road Town, 1110 Tortola, British Virgin Islands

Assignee for applications in: Angola, Bahrain, Bangladesh, Benin, Cambodia, Cameroon, Chad, China, Congo, Gabon, Ghana, Guinea-Bissau, India, Ivory Coast, Jordan, Libya, Mauritania, Morocco, Mozambique, Myanmar, Namibia, Nigeria, Philippines, Senegal, Sudan, Syria, Taiwan, Togo, UAE, Vietnam, Zaire.