

## PATENT ASSIGNMENT

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 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>04/04/2012</td> </tr> <tr> <td>DENISE E. FREED</td> <td>04/04/2012</td> </tr> <tr> <td>OLIVER CLINTON MULLINS</td> <td>03/30/2012</td> </tr> <tr> <td>CHRISTOPHER HARRISON</td> <td>03/22/2012</td> </tr> </tbody> </table>		Name	Execution Date	YOUXIANG ZUO	04/04/2012	DENISE E. FREED	04/04/2012	OLIVER CLINTON MULLINS	03/30/2012	CHRISTOPHER HARRISON	03/22/2012
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YOUXIANG ZUO	04/04/2012										
DENISE E. FREED	04/04/2012										
OLIVER CLINTON MULLINS	03/30/2012										
CHRISTOPHER HARRISON	03/22/2012										
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>13394437</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13394437						
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Application Number:	13394437										
CORRESPONDENCE DATA											
Fax Number:	(713)689-2219										
Phone:	7136892273										
Email:	qmarques@slb.com										
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>											
Correspondent Name:	SCHLUMBERGER TECHNOLOGY CORPORATION										
Address Line 1:	10001 Richmond Avenue										
Address Line 2:	IP Administration Center of Excellence										
Address Line 4:	HOUSTON, TEXAS 77042										
ATTORNEY DOCKET NUMBER:	117.0055-US-PCT										
NAME OF SUBMITTER:	Querlyn Marques										

CH \$40.00 13394437

**Total Attachments: 7**

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**Assignment**

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

**Youxiang (Julian) Zuo**, a citizen of Canada, residing at 408 Byrne Crescent SW, Edmonton, Alberta, T6W 1C9, Canada;

**Denise E. Freed**, a citizen of the United States, residing at 15 Rogers Street, Newton Highlands, MA 02461, the United States;

**Oliver Clinton Mullins**, a citizen of the United States, residing at 11 Hillsdale Avenue, Ridgefield, CT 06877, the United States; and

**Christopher Harrison**, a citizen of the United States, residing at 80 Hancock Street, Auburndale, MA 02466, the United States;

Has/Have invented certain new and useful improvements in

**METHODS AND APPARATUS FOR CHARACTERIZATION OF PETROLEUM FLUID EMPLOYING ANALYSIS OF HIGH MOLECULAR WEIGHT COMPONENTS**

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 March 6, 2012, Application No. 13/394437, (Docket No. 117.0055-US-PCT).

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 consideration, the receipt and sufficiency of which are hereby acknowledged, 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.

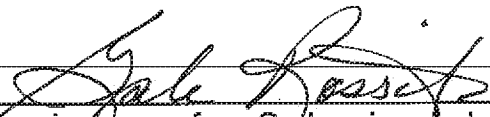
AND said Inventors do hereby authorize and request the issuing authority to issue any and all of said United States and foreign patents on said application or applications to said **COMPANIES**, their successors and assigns, as the assignee of the entire right, title and interest in and to the same,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

Sworn before me at the City of Edmonton, Province of Alberta, this 4 day of April, 2012, personally appeared YOUXIANG (JULIAN) 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.

IN WITNESS WHEREOF, I YOUXIANG (JULIAN) ZUO have hereunto executed the said Assignment this 4 day of April, 2012

  
Commissioner for Oaths in and for the Province of Alberta, Canada

  
YOUXIANG (JULIAN) ZUO

**GALE A. ROSSITER**  
A Commissioner for Oaths in and for the Province of Alberta  
My Commission Expires August 2, 2012  
#0727660

IN WITNESS WHEREOF I, DENISE E. FREED, have hereunto set my hand and seal  
this 4<sup>th</sup> day of April, 2012.

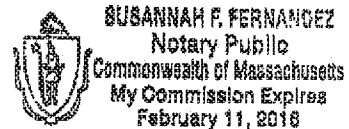
Denise E. Freed  
DENISE E. FREED

STATE OF Massachusetts  
COUNTY OF Middlesex

BEFORE ME this 4 day of April, 2012, personally appeared DENISE E. FREED, known to be the person who is described in and who executed the foregoing assignment instrument and acknowledged that he executed the same of his own free will for the purpose therein expressed.

Seal

Susan F. Fernandez  
Notary Public



IN WITNESS WHEREOF I, **OLIVER CLINTON MULLINS**, have hereunto set my hand and seal this 30 day of March, 2012.

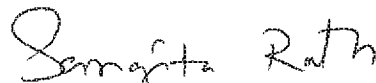
  
\_\_\_\_\_  
**OLIVER CLINTON MULLINS**

STATE OF Texas  
COUNTY OF Harris

BEFORE ME this 30 day of March, 2012, personally appeared **OLIVER CLINTON MULLINS**, known to be the person who is described in and who executed the foregoing assignment instrument and acknowledged that he executed the same of his own free will for the purpose therein expressed.



Seal

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

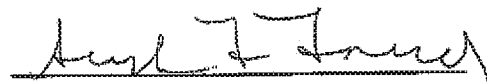
IN WITNESS WHEREOF I, CHRISTOPHER HARRISON, have hereunto set my hand and seal this 22 day of March, 2012.


  
CHRISTOPHER HARRISON

STATE OF Massachusetts  
COUNTY OF Middlesex

BEFORE ME this 22 day of March, 2012, personally appeared  
CHRISTOPHER HARRISON, known to be the person who is described in and who  
executed the foregoing assignment instrument and acknowledged that he executed the  
same of his own free will for the purpose therein expressed.

Seal

  
Notary Public

 SUSANNAH F. FERNANDEZ  
Notary Public  
Commonwealth of Massachusetts  
My Commission Expires  
February 11, 2016



**Schedule A  
"COMPANIES"**

**SCHLUMBERGER TECHNOLOGY CORPORATION**

Corporation of: United States of America (Texas)

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 (Ontario)

Located at: 525-3<sup>rd</sup> 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, Netherlands, Netherlands Antilles, United Kingdom, Saudi Arabia

**SCHLUMBERGER TECHNOLOGY B.V.**

Corporation of: the Netherlands

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

Assignee for applications in: Albania, Argentina, Australia, Azerbaijan, Brunei, Bulgaria, Chad, Colombia, Czech Republic, Denmark, Equatorial Guinea, Faroe Islands, Germany, Greece, Hungary, Indonesia, Ireland, Israel, Italy, Kazakhstan, Korea, Kuwait, Lithuania, Malaysia, Mexico, Myanmar, New Zealand, Norway, Oman, Pakistan, Poland, Qatar, Romania, Russia, Slovakia, Slovenia, South Africa, Thailand, Trinidad, Tunisia, Turkey, Turkmenistan, Uzbekistan, Venezuela

**PRAD RESEARCH AND DEVELOPMENT LIMITED**

Corporation of: the British Virgin Islands

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

Assignee for applications in: Countries not Otherwise Listed