

## 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>Anatoly Vladimirovich Medvedev</td> <td>11/16/2012</td> </tr> <tr> <td>Oleg Medvedev</td> <td>11/15/2012</td> </tr> <tr> <td>Alexander Vuacheslavovich Mikhaylov</td> <td>11/26/2012</td> </tr> <tr> <td>Christopher N. Fredd</td> <td>12/06/2012</td> </tr> <tr> <td>Kreso Kurt Butula</td> <td>11/15/2012</td> </tr> <tr> <td>John Lassek</td> <td>11/15/2012</td> </tr> <tr> <td>J. Ernest Brown</td> <td>11/15/2012</td> </tr> <tr> <td>Konstantin Mikhailovich Lyapunov</td> <td>11/19/2012</td> </tr> </tbody> </table>		Name	Execution Date	Anatoly Vladimirovich Medvedev	11/16/2012	Oleg Medvedev	11/15/2012	Alexander Vuacheslavovich Mikhaylov	11/26/2012	Christopher N. Fredd	12/06/2012	Kreso Kurt Butula	11/15/2012	John Lassek	11/15/2012	J. Ernest Brown	11/15/2012	Konstantin Mikhailovich Lyapunov	11/19/2012
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RECEIVING PARTY DATA																			
<table border="1"> <tr> <td>Name:</td> <td>Schlumberger Technology Corporation</td> </tr> <tr> <td>Street Address:</td> <td>300 Schlumberger Drive</td> </tr> <tr> <td>City:</td> <td>Sugar Land</td> </tr> <tr> <td>State/Country:</td> <td>TEXAS</td> </tr> <tr> <td>Postal Code:</td> <td>77478</td> </tr> </table>		Name:	Schlumberger Technology Corporation	Street Address:	300 Schlumberger Drive	City:	Sugar Land	State/Country:	TEXAS	Postal Code:	77478								
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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>13698042</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13698042														
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CORRESPONDENCE DATA																			
Fax Number:	7136896372																		
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>																			
Phone:	81427595321																		
Email:	kawashima1@exchange.slb.com																		
Correspondent Name:	Schlumberger - COE																		
Address Line 1:	WesternGeco 10001 Richmond Ave.																		
Address Line 2:	Room 3028																		
Address Line 4:	Houston, TEXAS 77042																		

CH \$40.00 13698042

ATTORNEY DOCKET NUMBER:	109.0080USPCT ASSIGNMENT
NAME OF SUBMITTER:	Setsuko Kawashima
<p>Total Attachments: 11</p> <p>source=1090080USPCT_Assignment#page1.tif</p> <p>source=1090080USPCT_Assignment#page2.tif</p> <p>source=1090080USPCT_Assignment#page3.tif</p> <p>source=1090080USPCT_Assignment#page4.tif</p> <p>source=1090080USPCT_Assignment#page5.tif</p> <p>source=1090080USPCT_Assignment#page6.tif</p> <p>source=1090080USPCT_Assignment#page7.tif</p> <p>source=1090080USPCT_Assignment#page8.tif</p> <p>source=1090080USPCT_Assignment#page9.tif</p> <p>source=1090080USPCT_Assignment#page10.tif</p> <p>source=1090080USPCT_Assignment#page11.tif</p>	

### Assignment

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

**Anatoly Vladimirovich Medvedev**, a citizen of Russian Federation, residing at Litovsky Bulvar, 46, Bldg 1, Apt 209, Moscow, 117588, Russian Federation;

**Oleg Medvedev**, a citizen of Ukraine, residing at Geroev Stalingrada str. 10a, apt. 66, Kyiv, 04210, Ukraine;

**Alexander Vuacheslavovich Mikhaylov**, a citizen of Russian Federation, residing at 2-G-62, Komsomolskaya str., Berdsk city, Novosibirsk, 633011, Russian Federation;

**Christopher N. Fredd**, a citizen of the United States of America, residing at 7300 East Route 20 Westfield, NY 14787 USA;

**Kreso Kurt Butula**, a citizen of Croatia, residing at 27 Vinogradska, Zagreb, 10000 Croatia;

**John Lassek**, a citizen of the United States of America, residing at 26811 Sandy Arbor Lane, Katy, TX 77494 USA;

**J. Ernest Brown**, a citizen of the United States of America, residing at 5151 East Boardwalk Drive, Unit V-1, Fort Collins Colorado 80525 USA;

and

**Konstantin Mikhailovich Lyapunov**, a citizen of Russian Federation, residing at 3-301, Rossijskaya str., Novosibirsk, 630117, Russian Federation;

Has/have invented certain new and useful improvements in

### Methods for Providing Proppant Slugs in Fracturing Treatments

as described and set forth in an application for Letters Patent of the United States of America, filed on November 14, 2012 under Attorney Docket No. 109.0080 US PCT assigned serial # 13/698,042.

**This assignment is effective as of May 17, 2010.**

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 TESTIMONY WHEREOF, I have duly executed this Assignment on this 16 day of  
NOVEMBER, 2012.

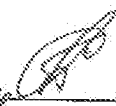
  
Name: Anatoly Vladimirovich  
Medvedev

Witnesses:

Signature

Name:

Address:

  
Iuliana Corduneanu  
415 Vyzhelepo St Apt. 217  
Novosibirsk 630022  
Russia


Date:

16 Nov 2012

Signature

Name:

Address:

  
Viktor Baradov  
8 Terechkhovoy St apt 202  
Novosibirsk 630055  
Russia


Date:

16 Nov 2012

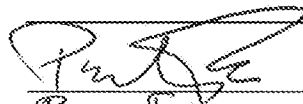
IN TESTIMONY WHEREOF, I have duly executed this Assignment on this 15 day of  
November, 2012.

  
Name: Oleg Medvedev

Witnesses:

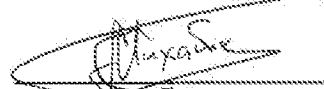
Signature   
Name: ROBERT FRIES  
Address: 5131 SOUTHERN DRIVE  
SHELVOOD PARK, AS

Date: 11/15/12

Signature   
Name: PAUL FRIES  
Address: 9450-17 AVE NW  
EDMONTON, AS  
T6N 1M9

Date: 11/15/12

IN TESTIMONY WHEREOF, I have duly executed this Assignment on this 26 day of November, 2012.



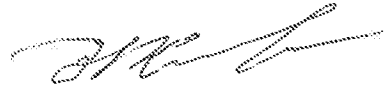
Name: **Alexander Vuacheslavovich Mikhaylov**

Witnesses:

Signature

Name:

Address:

  
ALEXEY ZHMODIK  
204-210 15th Ave S.E.  
CALGARY, ALBERTA  
CANADA, T2G 0B5


Date:

26th November 2012

Signature

Name:


Address:

  
Fred Boyko  
525- 3rd ave SW  
CALGARY, AB  
CANADA, T2P 0G4

Date:

26th November 2012

IN TESTIMONY WHEREOF, I have duly executed this Assignment on this 6<sup>th</sup> day of December, 2012.

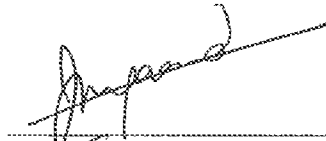
  
Name: Christopher N. Fredd

Witnesses:

Signature

Name:

Address:

  
JUNE NORGGAARD  
SCHUMBERGER  
CONVENTION TOWERS, LEVEL-4  
P.O. BOX 9261 - DUBAI

Date:

6<sup>th</sup> DEC, 2012

Signature

Name:

Address:

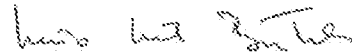
Sign. John  
Schumberger / SUJA  
Convention Towers  
P.O. Box 9261  
Dubai

Date:

6<sup>th</sup> Dec, 2012



IN TESTIMONY WHEREOF, I have duly executed this Assignment on this 15 day of  
NOVEMBER, 2012.



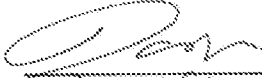
Name: Kreso Kurt Butula

Witnesses:

Signature

Name:

Address:



David B Gooch

Uk 21d 3

Beringradskoe Shosse

Moscow, Russia

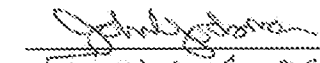
Date:

Nov 15, 2012

Signature

Name:

Address:



John G. Gooch

3000 Lark


Kirkland & Potrero

Stark Haven, Scotland

Date:

15th Nov 2012 (Moscow)

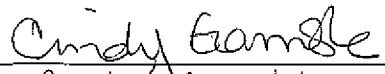
IN TESTIMONY WHEREOF, I have duly executed this Assignment on this 15<sup>th</sup> day of November, 2012.

  
Name: John Lassek

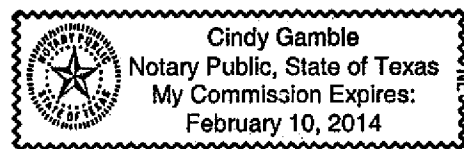
Witnesses:

State of Texas  
County of Fort Bend

Date: 11-15-12

  
Name: Cindy Gamble  
Notary Public

SEAL



IN TESTIMONY WHEREOF, I have duly executed this Assignment on this 15<sup>th</sup> day of November, 2012.



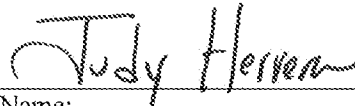
Name: J. Ernest Brown

Witnesses



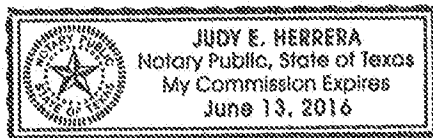
State of Texas  
County of Ft. Bend

Date: November 15, 2012



Name:  
Notary Public

SEAL



IN TESTIMONY WHEREOF, I have duly executed this Assignment on this 19 day of November, 2012.

Konstantin  
Name: Konstantin Mikhailovich  
Lyapunov

Witnesses:

Signature: [Signature]  
Name: Sergey Klyanov Date: 19 Nov 2012  
Address: 8 Tereshkova St, apt 89  
Novosibirsk, 630090, Russia

Signature: [Signature]  
Name: Svetlana Berdyagina Date: 19 Nov 2012  
Address: 41/5 Vysokobaga St, apt 2/4  
Novosibirsk, 630133, Russia

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: 525-3<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, 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: Albania, Argentina, Australia, Austria, Azerbaijan, Brunei, Bulgaria, Chile, Colombia, Croatia, Cyprus, Czech Republic, Denmark, Egypt, Equatorial Guinea, Falkland Islands, Faroe Islands, Georgia, Germany, Greece, Greenland, Hungary, Indonesia, Ireland, Israel, Italy, Kazakhstan, Kenya, Korea, Kuwait, Lithuania, Madagascar, Malaysia, Mexico, New Zealand, Norway, Oman, Pakistan, Poland, Qatar, Romania, Russia, Saudi Arabia, Slovakia, Slovenia, South Africa, Suriname, Switzerland, Tanzania, Thailand, Trinidad, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, Uruguay, Uzbekistan, Venezuela.

**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: Eurasia, Gulf Cooperation Council, and Countries not otherwise listed.