

# PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
Name	Execution Date
Qinglin Liu	07/12/2010
Kevin O'Connell	07/14/2010
<b>RECEIVING PARTY DATA</b>	
Name:	WesternGeco L.L.C.
Street Address:	10001 Richmond Avenue
City:	Houston
State/Country:	TEXAS
Postal Code:	77042
<b>PROPERTY NUMBERS Total: 1</b>	
Property Type	Number
Application Number:	12834286
<b>CORRESPONDENCE DATA</b>	
Fax Number:	(713)689-1977
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>	
Phone:	713-689-2747
Email:	rsmith31@slb.com
Correspondent Name:	Kevin McEnaney, IP Dept. WesternGeco L.
Address Line 1:	10001 Richmond Avenue
Address Line 4:	Houston, TEXAS 77042
ATTORNEY DOCKET NUMBER:	14.0539-US
NAME OF SUBMITTER:	Richard V. Wells
<p><b>Total Attachments: 6</b></p> <p>source=14.0539-US, 20100716, Signed Assignment#page1.tif</p> <p>source=14.0539-US, 20100716, Signed Assignment#page2.tif</p> <p>source=14.0539-US, 20100716, Signed Assignment#page3.tif</p>	

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**PATENT**  
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## **Assignment**

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

**Qinglin Liu**, a citizen of China, residing at H0204, LilleStranden 8, Oslo 0252, Norway, and

**Kevin O'Connell**, a citizen of Ireland, residing at PB 234, Asker 1372, Norway

Has/have invented certain new and useful improvements described in the invention disclosure entitled

### **DYNAMIC GROUPING SOURCES**

(WesternGeco Docket No. 14.0539-US) and/or as described and set forth in one or more associated patent applications (filed or to be filed). The Inventor(s) hereby authorize and request WesternGeco's legal department, to revise the address above, if needed, and/or to insert in the space provided in Schedule A the filing date(s), application number(s), and title(s) of said application(s) when known.

WHEREAS each of the undersigned persons warrants that no person other than these undersigned persons are inventors of the above-described invention;

AND WHEREAS, the "COMPANIES", listed in Schedule B, 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 B;

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; and entire right, title and interest in all the intellectual property in the invention including, but not limited to, any and all ideas, discoveries, writings (including software and its source code) and improvements in the invention, together with any and all domestic and foreign design rights, trademarks, trade secrets and copyrights in such ideas.

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.

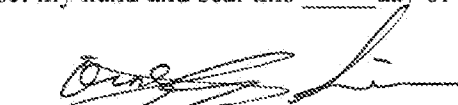
AND said Inventors do hereby authorize and request the issuing authority to issue any and all of said United States and foreign patents on said application or applications to said COMPANIES, their successors and assigns, as the assignee of the entire right, title and interest in and to the same, for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

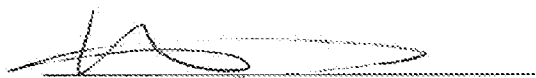
AND said Inventors, for the conditions aforesaid, do hereby covenant and agree to and with the said COMPANIES, their successors and assigns, that each Inventor, his or her executors, administrators, or other personal representatives, shall and will do all lawful acts and things, make all rightful oaths, 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.

WITNESSED:

IN WITNESS WHEREOF I, **Qinglin Liu**, have hereunto set my hand and seal this 12 day of July, 2010.

  
(Signature of Inventor)

BE IT KNOWN that **Qinglin Liu** is to me known to be the individual described in the foregoing assignment and that on the aforementioned date I was personally present and did see him/her sign and execute the foregoing assignment; and, that he/she did acknowledge to me that he/she executed the same as his/her free act and deed for the uses and purposes therein set forth.

  
Witness- Signature

Hongbo Wu

Witness- Printed Name

Gate 2, A1 ZhaoWei  
Huadeng Building, 14  
Jiu Xiangqiao Road, Beijing  
Post Office Address  
100015, P. R. China

  
Witness- Signature

Cong SHENG

Witness- Printed Name

Gate 2, A1 ZhaoWei Huadeng  
Building, 14 Jiu Xian Qiao Road  
Beijing 100015, P. R. China  
Post Office Address

WITNESSED:

IN WITNESS WHEREOF I, **Kevin O'Connell**, have hereunto set my hand and seal this  
11 day of July, 2010.

K O'Connell  
(Signature of Inventor)

BE IT KNOWN that **Kevin O'Connell** is to me known to be the individual described in the foregoing assignment and that on the aforementioned date I was personally present and did see him/her sign and execute the foregoing assignment; and, that he/she did acknowledge to me that he/she executed the same as his/her free act and deed for the uses and purposes therein set forth.

Thorleiv Knutsen

Witness- Signature

THORLEIV KNUTSEN

Witness- Printed Name

BLAKSTADLIA 29

1386 ASKER

NORWAY

Post Office Address

Lionel Beneveau

Witness- Signature

LIONEL BENEVEAU

Witness- Printed Name

TODDAS VEIEN 50

1352 KOLSAS

NORWAY

Post Office Address

**Schedule A**  
**“APPLICATIONS”**

Filing Date	Application No.	Title
July 12, 2010	12/834,286	Vibroseis Acquisition Technique and System Using Dynamic Source Control

**Schedule B**  
**“COMPANIES”**

**WESTERNGECO, L.L.C.**

Corporation of: Delaware, USA

Located at: 10001 Richmond Avenue, Houston, Texas 77042-4299, USA

Assignee for applications in: The United States of America

**GECO TECHNOLOGY B.V.**

Corporation of: The Netherlands

Located at: Gevers Deynootweg 61, 2586 BJ S Gravenhage, The Netherlands

Assignee for applications in: Albania, Algeria, Angola, Argentina, Australia, Austria, Azerbaijan, Brazil, Brunei, Bulgaria, China, Colombia, Czech Republic, Denmark, Ecuador, Egypt, Eurasia, Europe, Faroe Islands, France, Germany, Greece, Gulf Cooperation Council, Hungary, India, Indonesia, Ireland, Israel, Italy, Japan, Kazakhstan, Korea, Kuwait, Libya, Lithuania, Malaysia, Mexico, The Netherlands, New Zealand, Nigeria, Norway, Oman, Pakistan, Poland, Qatar, Romania, Russia, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, Spain, Thailand, Trinidad, Tunisia, Turkey, Turkmenistan, Ukraine, United Arab Emirates, United Kingdom, Uzbekistan, Venezuela, Vietnam, and Rest of World

**SCHLUMBERGER CANADA LIMITED**

Corporation of: Canada

Located at: 525 – 3<sup>rd</sup> Avenue S.W., Calgary, Alberta, T2P 0G4 Canada

Assignee for applications in: Canada