# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3289188

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
ROBERT CORINA JACHMANN	08/23/2012
JIE YANG	09/07/2012
CHRISTOPHER JON CONRAD	11/07/2012

## **RECEIVING PARTY DATA**

Name:	HALLIBURTON ENERGY SERVICES, INC.		
Street Address: 10200 BELLAIRE BLVD			
City:	HOUSTON		
State/Country:	TEXAS		
Postal Code:	77072		

## **PROPERTY NUMBERS Total: 1**

Property Type	Number	
Application Number:	14432441	

## CORRESPONDENCE DATA

Fax Number: (612)339-3061

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.

Phone: 612-373-6900 Email: request@slwip.com

**Correspondent Name:** SCHWEGMAN LUNDBERG & WOESSNER / HALLIBUR

Address Line 1: P.O. BOX 2938

Address Line 4: MINNEAPOLIS, MINNESOTA 55402

ATTORNEY DOCKET NUMBER:	1880.393US1
NAME OF SUBMITTER:	DAVID R. COCHRAN
SIGNATURE:	/David R. Cochran/
DATE SIGNED:	03/30/2015

# **Total Attachments: 15**

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#### **ASSIGNMENT**

WHEREAS, Rebecca Corina Jachmann, Jie Yang, Christopher Jon Conrad (hereinafter the "Undersigned") has [have] made one or more inventions and other subject matter (hereinafter collectively referred to as the "Invention") which are described in a patent application filed on <a href="December 14, 2012">December 14, 2012</a>, which application was assigned PCT patent application serial number <a href="PCT/US2012/069678">PCT/US2012/069678</a>, and which is titled NUCLEAR MAGNETIC RESONANCE T2 RECOVERY PULSE.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency, and adequacy of which are hereby acknowledged by the Undersigned, the Undersigned do hereby irrevocably and unconditionally:

CONVEY, ASSIGN, AND TRANSFER to Halliburton Energy Services, Inc. (the "Assignee"), a corporation of the State of Delaware, having a place of business at 10200 Bellaire Blvd, Houston, TX 77072, the Undersigned's entire right, title, and interest for the United States and all foreign countries and jurisdictions in and to:

the Invention which is disclosed in the above-identified application or applications;

such application or applications, and all divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other applications for a patent or patents which have been or shall be filed in the United States (including all provisional and non-provisional applications), and in all foreign countries and jurisdictions based in whole or in part on any of such Invention (including any application for a utility model or an innovation patent application);

all original and reissued patents which have been or shall be issued in the United States and all foreign countries and jurisdictions based in whole or in part on any of such Invention;

including the right to claim priority to the above-identified patent application or applications in relation to subject matter based in whole or in part on the above-identified patent application or applications and any of the foregoing including the right to file foreign applications under the provisions of any convention or treaty;

and including the right to all causes of action, remedies, and other enforcement rights related to the above-identified application or applications, including without limitation the right to sue for past, present, or future infringement, misappropriation, or violation of any and all rights related to the above-identified patent application or applications and any of the foregoing, including the right to obtain and collect damages for past, present, or future infringement;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such Invention to the Assignee;

AUTHORIZE AND REQUEST that any attorney associated with U.S. Patent and Trademark Office (USPTO) Customer No. 21186 may (directly or through his/her designee) delete, insert, or alter any

Page 2 of 5

information related to the above-identified patent application or applications or any of the foregoing, after execution of this Assignment;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or shall be made to others by the Undersigned, and that the full right to convey the same as herein expressed is possessed by the Undersigned;

COVENANT, that when requested and without compensation, but at the expense of the Assignee, in order to carry out in good faith the intent and purpose of this Assignment, the Undersigned shall (1) execute all provisional, non-provisional, divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other patent applications for the Invention; (2) execute all rightful oaths, declarations, assignments, powers of attorney and other papers for the Invention; (3) communicate to the Assignee all facts known to the Undersigned relating to the Invention and the history thereof; (4) cooperate with the Assignee in any interference, reexamination, reissue, opposition, dispute, or litigation involving any of the applications or patents for the Invention; and (5) take such further actions as the Assignee shall reasonably consider necessary or desirable for vesting title to such Invention in the Assignee, or for securing, maintaining and enforcing proper patent protection for the Invention;

COVENANT, that should any provision of this agreement be held unenforceable by an authority of competent jurisdiction, such a ruling shall not affect the validity and enforceability of the remaining provisions. To the extent that any such provision is found to be unenforceable, the Undersigned, when requested and without compensation shall act in good faith to substitute for such provision a new provision with content and purpose as close as possible to the provision deemed unenforceable.

THIS AGREEMENT IS TO BE BINDING on the heirs, assigns, representatives, and successors of the Undersigned, and is to extend to the benefit of the successors, assigns, and nominees of the Assignee.

AGREED as of the date of my signature below:

Page 3 of 5

Assignor:

(Signature): Achter algorithms | Name: Rebecta Corina Jachmann |
City/State: Downingtown, PA

COUNTY OF Harris

On this 23 day of 4994 20 2 before me personally appeared Rebecca Corina Jachmann, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

MAYRA BRAVO
Notary Public, State of Texas
My Commission Expires
April 02, 2016

**Notary Public** 

Assignment

[SEAL]

Assignous: Rebecca Corino Jachmann et al.

**Notary Public** 

Docket No. 1880,393WO1

Client Ref. No. 2011-IP-053147 PCT/E-Billing 2011-IPRO-053147

Assignment
Assignors: Rebecca Corina Jachmann et al.

Docket No: 1880.393WO1 Client Ref. No. 2011-IP-053147 PCT/E-Billing 2011-IPRO-053147

Title: NUCLEAR MAGNETIC RESONANCE T2 RECOVERY PULSE

Page 5 of 5

Assignor: (Signature): Name: Christopher Jon Conrad City/State: Glen Mills, PA Date:\_\_\_\_\_ STATE OF \_\_\_\_\_\_) )ss COUNTY OF \_\_\_\_\_\_) On this day of , 20 before me personally appeared Christopher Jon Conrad, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth. [SEAL]

**Notary Public** 

#### ASSIGNMENT

WHEREAS, Rebecca Corina Jachmann, Jie Yang, Christopher Jon Conrad (hereinafter the "Undersigned") has [have] made one or more inventions and other subject matter (hereinafter collectively referred to as the "Invention") which are described in a patent application filed on <a href="December 14">December 14</a>, 2012 , which application was assigned PCT patent application serial number <a href="PCT/US2012/069678">PCT/US2012/069678</a>, and which is titled NUCLEAR MAGNETIC RESONANCE T2 RECOVERY PULSE.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency, and adequacy of which are hereby acknowledged by the Undersigned, the Undersigned do hereby irrevocably and unconditionally:

CONVEY, ASSIGN, AND TRANSFER to Halliburton Energy Services, Inc. (the "Assignee"), a corporation of the State of Delaware, having a place of business at 10200 Bellaire Blvd, Houston, TX 77072, the Undersigned's entire right, title, and interest for the United States and all foreign countries and jurisdictions in and to:

the Invention which is disclosed in the above-identified application or applications;

such application or applications, and all divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other applications for a patent or patents which have been or shall be filed in the United States (including all provisional and non-provisional applications), and in all foreign countries and jurisdictions based in whole or in part on any of such Invention (including any application for a utility model or an innovation patent application);

all original and reissued patents which have been or shall be issued in the United States and all foreign countries and jurisdictions based in whole or in part on any of such Invention;

including the right to claim priority to the above-identified patent application or applications in relation to subject matter based in whole or in part on the above-identified patent application or applications and any of the foregoing including the right to file foreign applications under the provisions of any convention or treaty;

and including the right to all causes of action, remedies, and other enforcement rights related to the above-identified application or applications, including without limitation the right to sue for past, present, or future infringement, misappropriation, or violation of any and all rights related to the above-identified patent application or applications and any of the foregoing, including the right to obtain and collect damages for past, present, or future infringement;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such Invention to the Assignee;

AUTHORIZE AND REQUEST that any attorney associated with U.S. Patent and Trademark Office (USPTO) Customer No. 21186 may (directly or through his/her designee) delete, insert, or alter any

Assignment Docket No: 1880.393WO1
Assignors: Rebecca Corina Jachmann et al. Client Ref. No. 2011-IP-053147 PCT/E-Billing 2011-IPRO-053147

Title: NUCLEAR MAGNETIC RESONANCE T2 RECOVERY PULSE

Page 2 of 5

information related to the above-identified patent application or applications or any of the foregoing, after execution of this Assignment;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or shall be made to others by the Undersigned, and that the full right to convey the same as herein expressed is possessed by the Undersigned;

COVENANT, that when requested and without compensation, but at the expense of the Assignee, in order to carry out in good faith the intent and purpose of this Assignment, the Undersigned shall (1) execute all provisional, non-provisional, divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other patent applications for the Invention; (2) execute all rightful oaths, declarations, assignments, powers of attorney and other papers for the Invention; (3) communicate to the Assignee all facts known to the Undersigned relating to the Invention and the history thereof; (4) cooperate with the Assignee in any interference, reexamination, reissue, opposition, dispute, or litigation involving any of the applications or patents for the Invention; and (5) take such further actions as the Assignee shall reasonably consider necessary or desirable for vesting title to such Invention in the Assignee, or for securing, maintaining and enforcing proper patent protection for the Invention;

COVENANT, that should any provision of this agreement be held unenforceable by an authority of competent jurisdiction, such a ruling shall not affect the validity and enforceability of the remaining provisions. To the extent that any such provision is found to be unenforceable, the Undersigned, when requested and without compensation shall act in good faith to substitute for such provision a new provision with content and purpose as close as possible to the provision deemed unenforceable.

THIS AGREEMENT IS TO BE BINDING on the heirs, assigns, representatives, and successors of the Undersigned, and is to extend to the benefit of the successors, assigns, and nominees of the Assignee.

AGREED as of the date of my signature below:

Assignment
Assignors: Rebecca Corina Jachmann et al.

Docket No: 1880.393WO1 Client Ref. No. 2011-IP-053147 PCT/E-Billing 2011-IPRO-053147

Title: NUCLEAR MAGNETIC RESONANCE T2 RECOVERY PULSE

Page 3 of 5

Assignor: (Signature): Name: Rebecca Corina Jachmann City/State: Downingtown, PA Date:\_\_\_\_\_ STATE OF \_\_\_\_\_\_) )ss COUNTY OF \_\_\_\_\_\_) On this \_\_\_\_\_\_ day of \_\_\_\_\_\_, 20 \_\_\_\_ before me personally appeared Rebecca Corina Jachmann, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth. [SEAL]

**Notary Public** 

Assignor:	
(Signature):	<u> </u>
Nan	ne: <u>Jie Yang</u>
City	/State: Paoli, PA
Date: <u> </u>	<u> </u>
STATE OF <u>PA</u>	)
	)ss
COUNTY OF	ester)
me known and knov and he/she duly ack set forth.	7day of <u>Sep f</u> , 20 <u>12</u> before me personally appeared <u>lie Yang,</u> to to me to be the person described in and who executed the foregoing instrument nowledged to me that he/she executed the same for the uses and purposes therein
NOTAF Mary Beth DeAl West Whiteland T	NAL SEAL preu, Notary Public typ., Chester County expires June 29, 2014
(SEAL)	Notary Public

Assignment

Docket No: 1880.393WO1 Client Ref. No. 2011-IP-053147 PCT/E-Billing 2011-IPRO-053147

Assignors: Rebecca Corina Jachmann et al.
Title: NUCLEAR MAGNETIC RESONANCE T2 RECOVERY PULSE
Page 5 of 5

Assignor:						
(Signature):						
	Name: Christopher	Jon Conrad				
	City/State: Glen Mi	lls, PA				
Date:						
STATE OF		_)				
		)ss				
COUNTY OF		_)				
Jon Conrad, to	s day of me known and know ument, and he/she d	n to me to be	the perso	n described	in and who ex	ecuted the
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[SEAL]						<del></del>

**Notary Public** 

### **ASSIGNMENT**

WHEREAS, Rebecca Corina Jachmann, Jie Yang, Christopher Jon Conrad (hereinafter the "Undersigned") has [have] made one or more inventions and other subject matter (hereinafter collectively referred to as the "Invention") which are described in a patent application filed on <a href="December 14, 2012">December 14, 2012</a>, which application was assigned PCT patent application serial number PCT/US2012/069678, and which is titled NUCLEAR MAGNETIC RESONANCE T2 RECOVERY PULSE.

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the invention which is disclosed in the above-identified application or applications;

such application or applications, and all divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other applications for a patent or patents which have been or shall be filed in the United States (including all provisional and non-provisional applications), and in all foreign countries and jurisdictions based in whole or in part on any of such invention (including any application for a utility model or an innovation patent application);

all original and reissued patents which have been or shall be issued in the United States and all foreign countries and jurisdictions based in whole or in part on any of such Invention;

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THIS AGREEMENT IS TO BE BINDING on the heirs, assigns, representatives, and successors of the Undersigned, and is to extend to the benefit of the successors, assigns, and nominees of the Assignee.

AGREED as of the date of my signature below:

**Notary Public** 

Assignment.

Assignors: Reboora Corina Jachmenn et al.

Tile: NUCLEAR MAGNETIC RESONANCE T2 RECOVERY PULSE

PATENT REEL: 035291 FRAME: 0080

Docket No. 1880/393WO1

Client Ref. No. 2011-IP-053147 PCT/E-Billing 2011-IPRO-053147

Assignment

[SEAL]

Assignous: Rebecca Corino Jachmann et al.

Notary Public

PATENT REEL: 035291 FRAME: 0081

Docket No. 1880,393WO1

Client Ref. No. 2011-IP-053147 PCT/E-Billing 2011-IPRO-053147

Dockst No. 1889,393WO1 Client Ref. No. 2011-IP-053147 PCT/E-Billing 2011-IPRO-053147

Assignor:

(Signature):

Name: Christopher Jon Conrad

City/State: Glen Mills, PA

Date: ///7/2012

STATE OF YEARS (VOICE)

}\$\$

COUNTY OF CHIESTER

On this \_\_\_\_\_ day of Nover\_\_\_\_, 20 \int \text{ before me personally appeared Christopher Jon Conrad, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

COMMONWEALTH OF PENNSYLVANIA

NOTARIAL SEAL ALYSHA (BIXCIA, PICER) Politic West Whiteland Twp., Christia County My Commission Expires June 4, 2013

(SEAL)

**Notary Public** 

PATENT REEL: 035291 FRAME: 0082

RECORDED: 03/30/2015