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PATENTS ONLY

Atty Ref/Docket No.: 1880.003WO1

Patent and Trademark Office

To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Carl A. Robbins

Additional name(s) of conveying party(ies) attached?

☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement ☐ Change of Name☐ OtherExecution Date: September 3, 2010

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

B. Patent No.(s)

Serial No. PCT/US10/36409, filed May 27, 2010

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Michael L. Lynch

Address:

Schwegman, Lundberg & Woessner, P.A.

P.O. Box 2938

Minneapolis, MN 55402-0938

6. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41): \$ 40.00☐ Enclosed☒ Authorized to be charged to deposit account
19-0743

8. Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743

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9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Michael L. Lynch/Reg. No. 30,871/Michael L. Lynch/Nov. 12, 2010

Name of Person Signing

Signature

Date

Total number of pages including cover sheet: 6

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks

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PATENT

REEL: 025304 FRAME: 0323

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CH \$40.00 190743 US1036409

Attorney Docket No. 1880.003WO1
Client Ref. No. 2003-IP-011234 PCT/EBilling 2009-IPRO-022599

ASSIGNMENT

WHEREAS, We, Paul F. Rodney, residing at 6134 Jadecrest Ct., Spring, TX 77389, and Chenkang David Chen, residing at 4904 Maple street, Bellaire, TX 77401, and Carl A. Robbins, residing at 915 Birdshall St, Houston, TX 77007, made certain new and useful inventions and improvements which are described in an application for PCT Letters Patent on May 27, 2010, which application was assigned PCT patent application serial number PCT/US10/36409, and is entitled VIBRATION DETECTION IN A DRILL STRING BASED ON MULTI-POSITIONED SENSORS;

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned do hereby:

SELL, 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 entire right, title and interest for the United States and all foreign countries in and to: any and all inventions and improvements which are disclosed in the identified application for PCT Letters Patent, and which may be further identified below; such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States (including all provisional and non-provisional applications), and in all foreign countries on any of such inventions and/or improvements (including any applications for utility models); all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions and/or improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and to claim priority based on the identified application;

AUTHORIZE AND REQUEST that any attorney associated with U.S. PTO Customer No. 21186 may (directly or through his/her designee) delete, insert, or alter any information identifying this application, or any related application, below, after execution of this Assignment;

Additional Application Information

U.S. Provisional Application Serial No. 61/181,385, filed on May 27, 2009.

No International or foreign claim for priority is being made at this time.

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

ASSIGNMENT

Docket No: 1880.003WO1

Client Ref. No. 2003-IP-011234 PCT/Hilling 2009-IPRO-022599

Assignors: Paul F. Rodney et al.

Serial Number: PCT/US10/36409

Title: VIBRATION DETECTION IN A DRILL STRING BASED ON MULTI-POSITIONED SENSORS

Page 2 of 5

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and/or property herein conveyed has been or will 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 will (1) execute all provisional, non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; (2) execute all rightful oaths, declarations, assignments, powers of attorney and other papers; (3) communicate to the Assignee all facts known to the undersigned relating to such improvements 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 such improvements; and (5) take such further actions as the Assignee shall reasonably consider necessary or desirable for vesting title to such improvements in the Assignee, or for securing, maintaining and enforcing proper patent protection for such improvements;

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:

PATENT**REEL: 025304 FRAME: 0325**

ASSIGNMENT

Docket No: 1880.003WO1

Client Ref. No. 2003-IP-011234 PCT/EBilling 2009-IPRO-022599

Serial Number: PCT/US10/36409

Assignors: Paul F. Rodney et al.

Title: VIBRATION DETECTION IN A DRILL STRING BASED ON MULTI-POSITIONED SENSORS

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IN TESTIMONY WHEREOF, I have hereunto set my hand this _____ day of

_____, 20____.

Paul F. Rodney

STATE OF _____)

)ss

COUNTY OF _____)

On this _____ day of _____, 20____ before me personally appeared Paul F. Rodney, 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

Docket No: 1880.003WO1

Client Ref. No. 2003-IP-011234 PCT/EBilling 2009-IPRO-022599

Serial Number: PCT/US10/36409

Assignors: Paul F. Rodney et al.

Title: VIBRATION DETECTION IN A DRILL STRING BASED ON MULTI-POSITIONED SENSORS

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IN TESTIMONY WHEREOF, I have hereunto set my hand this ____ day of

_____, 20____.

Chenkang David Chen

STATE OF _____)

)ss

COUNTY OF _____)

On this _____ day of _____, 20____ before me personally appeared Chenkang David Chen, 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

Docket No: 1880.003WO1

Client Ref. No. 2003-IP-011234 PCT/E/Billing 2009-IPRO-022599

Assignors: Paul F. Rodney et al.

Serial Number: PC17/US10/36409

Title: VIBRATION DETECTION IN A DRILL STRING BASED ON MULTI-POSITIONED SENSORS

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IN TESTIMONY WHEREOF, I have hereunto set my hand this 3rd day ofSEPTEMBER, 2010.

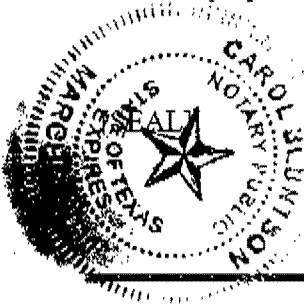
Carl A. Robbins

STATE OF TEXAS

)ss

COUNTY OF HARRIS

On this 3rd day of September, 2010 before me personally appeared Carl A. Robbins, 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.



Notary Public