

<b>PATENT ASSIGNMENT COVER SHEET</b>
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 Stylesheet Version v1.2

EPAS ID: PAT4209573

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
WENSHAN YU	04/14/2011
YUMEI TANG	04/14/2011
MICHAEL S. BITTAR	04/11/2011
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	HALLIBURTON ENERGY SERVICES, INC.
<b>Street Address:</b>	3000 N. SAM HOUSTON PARKWAY E.
<b>City:</b>	HOUSTON
<b>State/Country:</b>	TEXAS
<b>Postal Code:</b>	77032
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15396722
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(512)670-8904
<i>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.</i>	
<b>Email:</b>	uspto@gilliamip.com
<b>Correspondent Name:</b>	GILLIAM IP PLLC
<b>Address Line 1:</b>	7200 NORTH MOPAC
<b>Address Line 2:</b>	SUITE 440
<b>Address Line 4:</b>	AUSTIN, TEXAS 78731
<b>ATTORNEY DOCKET NUMBER:</b>	164.2010-IP-037908 U1C1US
<b>NAME OF SUBMITTER:</b>	MELISSA R LUCAS
<b>SIGNATURE:</b>	/Melissa R. Lucas/
<b>DATE SIGNED:</b>	01/04/2017
<b>Total Attachments: 5</b>	
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**ASSIGNMENT**

WHEREAS, We, Wenshan Yu, residing at 9500 West Road Apt. 1710, Houston, TX 77064, and Yumei Tang, residing at 11714 Teal Hollow Lane, Tomball, TX 77377, and Michael S. Bittar, residing at 8711 Wheatland Drive, Houston, TX 77064, made certain new and useful inventions and improvements which are described in an application for PCT Letters Patent entitled METHOD FOR REAL-TIME DOWNHOLE PROCESSING AND DETECTION OF BED BOUNDARY FOR GEOSTEERING APPLICATION;

WHEREAS, We hereby authorize and request the attorneys, representing Halliburton Energy Services, Inc. on this application, at Schwegman, Lundberg & Woessner, P.A., located at 121 South Eighth Street, Suite 1600, Minneapolis, MN 55402, to insert here in parentheses (Ser. No. \_\_\_\_\_; Filing Date: \_\_\_\_\_) the filing date and application number of said application when known.

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*

*No Provisional claim for priority is being made at this time.*

*No U.S. Non-Provisional claim for priority is being made at this time.*

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

ASSIGNMENT

Docket No: 1889331WO1

Assignors: Wenjian Yu et al.

Title: METHOD FOR REAL-TIME DOWNHOLE PROCESSING AND DETECTION OF BED BOUNDARY FOR GEOSTEERING APPLICATION

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

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:

IN TESTIMONY WHEREOF, I have hereunto set my hand this 14<sup>th</sup> day of April, 2011.

*Wenshan Yu*

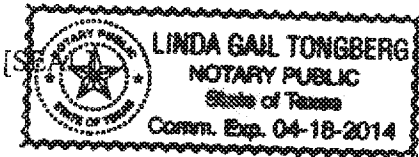
Wenshan Yu

STATE OF Texas )

)ss

COUNTY OF Harris )

On this 14<sup>th</sup> day of April, 2011 before me personally appeared Wenshan Yu, 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.



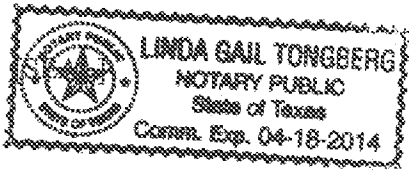
*Linda Gail Tongberg*  
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this 14<sup>th</sup> day of April, 2011.

[Signature]  
Yumei Tang

STATE OF Texas )  
 )ss  
COUNTY OF Harris )

On this 14<sup>th</sup> day of April, 2011 before me personally appeared Yumei Tang, 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.



[Signature]  
Notary Public

ASSIGNMENT

Docket No. 1880.331 WO1

Assignors: Wenshan Yu et al.

Title: METHOD FOR REAL-TIME DOWNHOLE PROCESSING AND DETECTION OF BED BOUNDARY FOR GEOSTEERING APPLICATION

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IN TESTIMONY WHEREOF, I have hereunto set my hand this 11<sup>th</sup> day of April, 2011.

*Michael S. Bitar*

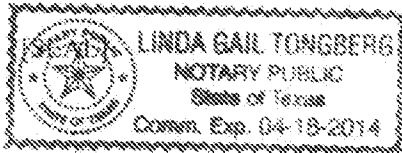
Michael S. Bitar

STATE OF Texas )

)ss

COUNTY OF Harris )

On this 11<sup>th</sup> day of April, 2011 before me personally appeared Michael S. Bitar, 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.



*Linda Gail Tongberg*

Notary Public