505291537 01/23/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
BO GAO	07/16/2015
LINDA XIN	07/27/2015
NICHOLAS BUDLER	07/28/2015

RECEIVING PARTY DATA

Name:	HALLIBURTON ENERGY SERVICES, INC.
Street Address:	3000 N. SAM HOUSTON PARKWAY E.
City:	HOUSTON
State/Country:	TEXAS
Postal Code:	77032-3219

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15571516

CORRESPONDENCE DATA

Fax Number: (202)508-5858

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: 2024819925

Email: mhorton@kilpatricktownsend.com

Correspondent Name: KILPATRICK TOWNSEND & STOCKTON LLP

Address Line 1: 1100 PEACHTREE STREET NE

Address Line 2: SUITE 2800

Address Line 4: ATLANTA, GEORGIA 30309

ATTORNEY DOCKET NUMBER:	061429-1065728
NAME OF SUBMITTER:	MARGARET HORTON
SIGNATURE:	/MHORTON/
DATE SIGNED:	01/23/2019

Total Attachments: 4

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PATENT 505291537 REEL: 048108 FRAME: 0476

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PATENT REEL: 048108 FRAME: 0477

ASSIGNMENT OF INTELLECTUAL PROPERTY RIGHTS IN PATENT APPLICATION

Whereas I, the undersigned inventor, have invented certain new and useful innovations as set forth in the patent application entitled:

SELF-CLEANING FILTER

the specification of which was filed with the U.S. Receiving Office of the PCT on July 14, 2015 and assigned application no. PCT/US2015/040272.

For one dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which I acknowledge, I:

- Agree to assign, transfer, convey, and sell, hereby assign, transfer, convey, and sell
 and have assigned, transferred, conveyed, and sold to Halliburton Energy Services,
 Inc., a corporation of the State of Texas having a principal place of business at 3000
 N. Sam Houston Parkway E., Houston, Texas 77032-3219 ("Assignee"), the entire
 right, title, and interest in and to:
 - (a) all intellectual property (including, without limitation, any innovation, information, invention, discovery, product, process, work or design) disclosed, embodied, shown, or claimed in the above-referenced patent application, implicitly or explicitly;
 - (b) the above-referenced patent application, the right to claim priority to the above-referenced patent application, all applications based in whole or in part upon the above-referenced patent application, including, without limitation, all applications that are a provisional, non-provisional, design, divisional, continuation, continuation-in-part, registration, utility model, industrial design, reissue, renewal, substitute, extension, reexamination, post-grant review, inter partes review, supplemental examination or non-U.S. patent application or application for other rights based in whole or in part on the above-referenced patent application;
 - (c) all patents (including, without limitation, all U.S. and non-U.S. patents, registrations, utility models, industrial designs, design patents, counterparts, continuations, continuations-in-part, divisionals, reissues, renewals, substitutes, extensions, reexaminations, post-grant reviews, inter partes reviews and supplemental examinations) that are granted or issued upon, or that claim priority to, any and all applications described in (b) of this paragraph or that disclose or claim intellectual property described in (a) of this paragraph, in whole or in part; and
 - (d) all claims for damages by reason of past infringement of any rights under the applications or patents described in (a), (b) or (c) of this paragraph

PATENT REEL: 048108 FRAME: 0478 Assignment of Intellectual Property Rights in Application Patent Application Entitled: Self-Cleaning Filter

June 5, 2016

Attorney Docket: 61429-946917

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(including provisional rights to reasonable royalties pursuant to 35 U.S.C. §154(d)) and the right to sue for and collect such damages and royalties for Assignee's own use.

- 2. Authorize and request the U.S. Patent and Trademark Office or any other U.S. or non-U.S. agency to issue to the Assignee any and all patent(s), or other rights or documents, resulting from the intellectual property, patent application(s) and patents described in paragraph 1 of this Assignment.
- 3. Agree to sign all papers and documents, including without limitation, applications, declarations, oaths and petitions, and, at the Assignee's expense, perform any other acts that are necessary in connection with prosecution of patent application(s) or intellectual property described in paragraph 1 of this Assignment and the enforcement of patent(s) or other rights resulting from such patent application(s) or intellectual property.
- 4. Agree that the terms, covenants, and conditions of this Assignment shall inure to the benefit of the Assignee, its successors, assigns and other legal representative, and shall be binding upon us, as well as our heirs, legal representatives, and assigns.
- 5. Promise and affirm that we have not entered, and will not enter, into any assignment, contract, or understanding that conflicts with this Assignment.

Dated:	07/16/2015	B. G.	? !o	Gas	
		Bo Gao			
STATE COUN	of <u>lexas</u> ryof <u>Havris</u>				
of J	Before me. a Notary Pub. 201 personal	onally appeared Bo Gao	o, wh	o being duly s	, on this $\mathcal{L} \underline{\phi}$ day worn, signed and
(Seal)		NOTARY P My Commis		•	
	PORSCHE JEANPIERRE My Commission Expires	1			

Assignment of Intellectual Property Rights in Application Patent Application Entitled: Self-Cleaning Filter

November 03, 2018

Attorney Docket: 61429-946917

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(including provisional rights to reasonable royalties pursuant to 35 U.S.C. §154(d)) and the right to sue for and collect such damages and royalties for Assignee's own use.

- 2. Authorize and request the U.S. Patent and Trademark Office or any other U.S. or non-U.S. agency to issue to the Assignee any and all patent(s), or other rights or documents, resulting from the intellectual property, patent application(s) and patents described in paragraph 1 of this Assignment.
- 3. Agree to sign all papers and documents, including without limitation, applications, declarations, oaths and petitions, and, at the Assignee's expense, perform any other acts that are reasonably necessary in connection with prosecution of patent application(s) or intellectual property described in paragraph 1 of this Assignment and the enforcement of patent(s) or other rights resulting from such patent application(s) or intellectual property. For clarification and avoidance of doubt, the extent of inventor assistance and collaboration described above, beyond signing all papers and documents, is contingent upon clearence and consent by legal counsel of the inventor's employer at the time of the request by the Assignee or lawful successor-for example, to avoid legal conflicts and/or prejudicial interference with the inventor's obligations to said employer.
- 4. Agree that the terms, covenants, and conditions of this Assignment shall inure to the benefit of the Assignee, its successors, assigns and other legal representative, and shall be binding upon me, as well as my heirs, legal representatives, and assigns.
- 5. Promise and affirm that I have not entered, and will not enter, into any assignment, contract, or understanding that conflicts with this Assignment.

Dated:	1: 7/27/2015 Linda Xih	
STATE	TE OF TEXAS	
COUNT	nty of <u>Harris</u>	
<u>ر ک</u> of	Before me, a Notary Public in and for the State of TCXAS Notary Public in and for the State of TCXAS Notary Public in and for the State of TCXAS Notary Public in and for the State of TCXAS Notary Public in and for the State of TCXAS Notary Public in and for the State of TCXAS Notary Public in and for the State of TCXAS Notary Public in and for the State of TCXAS	_, on this <u>27</u> day sworn, signed and
(Seal)	NOTARY PUBLIC My Commission Expires:	
B	HEATHER PENA Notary Public, State of Texas My Commission Expires	

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Dated: _7-25-15

STATE OF OKlahom COUNTY OF _Tul/)

Before me, a Notary Public in and for the State of OKlahoma, on this 28 day ..., 2015, personally appeared Nicholas Budler, who being duly swom, signed and acknowledged the foregoing Assignment as his free act and deed.

(Seal)

My Commission Expires: august 11,2018

Notary Public State of Oldahoma MISTY MADDUX Tulse County Commission # 14007139 Exp. August 11, 2018

> **PATENT REEL: 048108 FRAME: 0481**

RECORDED: 01/23/2019