505951923 03/05/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5998628

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CASEY LEE COX	03/03/2020
RUSSELL JAMES PADALECKI	03/03/2020
NATHAN TAYLOR CRAWFORD	03/03/2020
KENNETH LEE BORGEN	09/16/2019

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:	16809379

CORRESPONDENCE DATA

Fax Number:

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: 2819624503

Email: ctumey@ctumeylawgroup.com

Correspondent Name: C. TUMEY LAW
Address Line 1: P.O BOX 890226

Address Line 4: HOUSTON, TEXAS 77062-9998

ATTORNEY DOCKET NUMBER:	1560-113900
NAME OF SUBMITTER:	COREY TUMEY
SIGNATURE:	/Corey Tumey/
DATE SIGNED:	03/05/2020

Total Attachments: 5

source=2019-IPM-103711U1-US_Assignment-signed#page1.tif source=2019-IPM-103711U1-US_Assignment-signed#page2.tif source=2019-IPM-103711U1-US_Assignment-signed#page3.tif

PATENT 505951923 REEL: 052027 FRAME: 0177

 $source = 2019\text{-}IPM\text{-}103711\text{-}US_Assignment\text{-}signed\#page4.tif} \\ source = 2019\text{-}IPM\text{-}103711\text{-}US_Assignment\text{-}signed\#page5.tif} \\$

ASSIGNMENT

Whereas, We, Casey Lee Cox of Midland, Texas, Russell James Padalecki of Midland, Texas, and Nathan Taylor Crawford of Midland, Texas, ("ASSIGNORS"), have invented CALCULATING ENERGY BASED NET PRESSURE AND CORRESPONDING DISCHARGE AREA OBSERVED DURING HYDRAULIC STIMULATION PROCESSES, together with co-inventor Kenneth Lee Borgen of Midland, Texas, and

Whereas, Halliburton Energy Services, Inc., a Delaware Corporation having a place of business at 3000 N. Sam Houston Parkway E., Houston, Texas 77032-3219, United States of America (sometimes hereinafter called "ASSIGNEE"), is desirous of acquiring an interest therein,

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, We do hereby ASSIGN, SELL and CONVEY to said **Halliburton Energy Services**, **Inc.**, its successors and assigns, the entire right, title and interest throughout the world in and to:

- 1. Said invention in CALCULATING ENERGY BASED NET PRESSURE AND CORRESPONDING DISCHARGE AREA OBSERVED DURING HYDRAULIC STIMULATION PROCESSES,
- 2. United States Patent application on said invention, Application No. 16/809,379, filed March 4, 2020, entitled CALCULATING ENERGY BASED NET PRESSURE AND CORRESPONDING DISCHARGE AREA OBSERVED DURING HYDRAULIC STIMULATION PROCESSES, Halliburton Reference No. 2019-IPM-103711U1 US; (The undersigned hereby grant(s) the firm of C. Tumey Law Group, PLLC. of 1150 Clear Lake City Blvd., Suite 201, Houston, Texas 77062 the power to insert on this assignment any further identification, including the application number and filing date, which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document);
- 3. All applications for patent or like protection on said invention that have now been or may in the future be made by me or my legal representatives, including any continuation, continuation-in-part and any other utility applications that may be based on this invention, whether in the United States of America or in any other country or place anywhere in the world;
- 4. All patents and like protection that have now been or may in the future be granted on said invention to me or my legal representatives, whether in the United States of America or in any other country or place anywhere in the world;
- 5. All substitutions for and divisions, continuations, continuations-in-part, renewals, reissues, extensions, and the like of said applications and patents and like grants, including without limitation, those obtained or permissible under past, present and future laws and statutes;
- 6. All rights of action on account of past, present and future unauthorized use of said invention and for infringement of said patents and like protection;

- 7. The right in ASSIGNEE to file in its name applications for patents and like protection for said invention in any country or countries foreign to the United States; and
- 8. All international rights of priority associated with said invention, applications, patents and like protection and we covenant that we, and our heirs, legal representatives, assigns, administrators, and executors, will, at the expense of ASSIGNEE, its successors and assigns, execute all papers and perform such other acts as may be reasonably necessary to give ASSIGNEE, its successors and assigns, the full benefit of this Assignment.

Executed this 3 day	y of March	. 2020
		and the state of t
STATE OF	`	Casey Lee Cox
STATE OF TEXAS) ss	
county of Midland)	

Before me personally appeared said Casey Lee Cox and acknowledged the foregoing instrument to be his free act and deed this 2 day of 2020.

Seal

EARON ALEXIS LIVELY

Notary Public, State of Texas

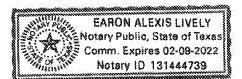
Comm. Expires 02-09-2022

Notary ID 131444739

Canon Hil

Page 3 of 4 CTLG Ref. No. 1560-113900 HES Ref. No. 2019-IPM-103711U1 US

Seal



Control Xil

Page 4 of 4 CTLG Ref. No. 1560-113900 HES Ref. No. 2019-IPM-103711U1 US

Before me personally appeared said **Nathan Taylor Crawford** and acknowledged the foregoing instrument to be his free act and deed this 2 day of 2020.

Seal

EABON ALEXIS LIVELY

Notary Public, State of Texas

Comm. Expires 02-09-2022

Notary ID 131444739

Zanon Gil

Halliburton Energy Services, Inc.

1

	Docket Number: 2019-IPM-103711U1		
Date:	(Assigned by the Law Department)		
	Method for Calculating Energy Based Net Pressure and Corresponding Discharge Area		
Title:	Observed During Hydraulic Stimulation Processes	Pro'ect #:	

COMBINED DECLARATION AND ASSIGNMENT OF ANY PATENT APPLICATIONS RELATING TO THIS INVENTION DISCLOSURE

The content of this disclosure is the property of Halliburton Energy Services, Inc., Landmark Graphics Corp, or Multi-Chem LLC (referred to at points herein as ASSIGNEE or collectively referred to herein as Halliburton) and the inventor(s) hereby agrees to and does hereby assign all right, title, and interest to Halliburton in any intellectual property contained herein, including but not limited to copyright, trade secrets and other confidential information, and patent-eligible subject matter by virtue of the formal Assignment and Declaration contained in this Invention Disclosure.

As a below named inventor, I hereby declare that the invention described in this Invention Disclosure was made or authorized to be made by me and that I believe that I am the original inventor or an original joint inventor of a claimed invention in an application resulting from this Invention Disclosure.

NOW, THEREFORE, in consideration of other good and valuable consideration acknowledged by the Assignors to have been received in full from the Assignees, I agree to and hereby assign and transfer unto said ASSIGNEE, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries (including the right to claim priority under the terms of the International Convention and other relevant International Treaties and Arrangements from the aforesaid application) and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territoial possessions and in any and all foreign countries and in and to any and all divisions, reissues, continuations, substitutions and renewals thereof. I hereby authorize and request the Patent Office Officials in the United States and its territorial possessions and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of my entire right, title and interest in and to the same, for the sole use and behoove of said ASSIGNEE, its successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me had this Assignment not been made. Further, I agree to cooperate with the Assignee to enable the Assignee to enjoy to the fullest extent the right, title and interest to the invention herein conveyed, such cooperating including prompt production of pertment facts and documents, execution of petitions, oaths, specifications, declarations or other papers and assistance for perfecting in the Assignee the right, title and interest herein conveyed, for prosecuting any applications for Letters Patent, and for legal proceedings involving the invention and any application therefor, including without limitation, opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by the Assignors in providing such cooperation shall be paid for by the Assignee.

I hereby acknowledge that any willful false statement made in this declaration is punisable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

2nd Inventor S' ighed(Inventor Name) 9-16-2019
Date

PATENT **REEL: 052027 FRAME: 0183**

RECORDED: 03/05/2020