

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
GEOFFREY WEDELL GULLICKSON	05/05/2017
WILLIAM OWEN ALEXANDER RUHLE	11/16/2016
JOHN DEAN STABENAU	09/01/2016
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:	16097802
CORRESPONDENCE DATA	
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ATTORNEY DOCKET NUMBER:	140846-041002US
NAME OF SUBMITTER:	ESTHER MORÓN
SIGNATURE:	/ESTHER MORÓN/
DATE SIGNED:	10/30/2018
Total Attachments: 9	
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ASSIGNMENT

For good and valuable consideration given to me by Halliburton Energy Services, Inc., and any other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, Geoffrey Wedell Gullickson ("ASSIGNOR"), having jointly or solely made an invention in "Systems and Methods for Fracturing a Subterranean Formation" ("INVENTION"), while in the employ or hire either as an employee or consultant of Halliburton Energy Services, Inc., a Corporation organized and existing under the laws of the State of Delaware, doing business at 3000 North Sam Houston Parkway East, Houston, Texas 77032-3219 ("ASSIGNEE"), do hereby assign, sell, and convey to ASSIGNEE, its successors, and assigns, ASSIGNOR's entire right, title, and interest throughout the world in and to:

1. Said INVENTION in "Systems and Methods for Fracturing a Subterranean Formation;"
2. Patent Cooperation Treaty patent application on said INVENTION entitled, "Fracturing a Subterranean Formation," filed as:¹
PCT Patent Application No. PCT/US2016/036070 on June 6, 2016
Attorney's Reference No. 140846-041000WO
3. Patent Cooperation Treaty patent application on said INVENTION entitled, "Flow Constraint Material and Slurry Compositions," filed as:²
PCT Patent Application No. PCT/US2016/036082 on June 6, 2016
Attorney's Reference No. 140846-041100WO
4. United States of America utility patent application on said INVENTION entitled, "Systems and Methods for Fracturing a Subterranean Formation," filed as:¹
U.S. Patent Application No. 15/253,607 on August 31, 2016
Attorney's Reference No. 140846-041001US
5. All applications for patent or like protection on the INVENTION that have now been or may in the future be made anywhere in the world, including any continuation, continuation-in-part, and any other utility applications;

¹ ASSIGNOR further authorizes the handling attorneys to insert the serial number and filing date of the patent application identified by the listed file number as soon as it is known as well as to attach and update a schedule of any further application serial numbers or patent numbers related to the INVENTION as they become known.

² ASSIGNOR further authorizes the handling attorneys to insert the serial number and filing date of the patent application identified by the listed file number as soon as it is known as well as to attach and update a schedule of any further application serial numbers or patent numbers related to the INVENTION as they become known.

6. All patents and like protection that have now been or may in the future be granted on the INVENTION anywhere in the world;
7. All substitutions, divisions, continuations, continuations-in-part, renewals, reissues, extensions, and the like of the applications and patents and like grants, including without limitation, those obtained or permissible under past, present, and future laws and statutes;
8. All rights of action on account of past, present, and future unauthorized use of the INVENTION and for infringement of the patents and like protection anywhere in the world;
9. The right in ASSIGNEE to file in its name applications for patents and like protection for the INVENTION in any country or countries in the world; and
10. All rights of priority associated with the INVENTION, applications, patents, and like protection anywhere in the world.

ASSIGNOR covenants that ASSIGNOR, its 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. Further, ASSIGNOR warrants that the INVENTION is not encumbered by another assignment or obligation of assignment to a third-party and that ASSIGNOR has the full ability and authority to assign and encumber the INVENTION.

ASSIGNOR: [Signature]
Name: Geoffrey Wedell Gullickson

Date: 5/5/2017

THE STATE OF: COLORADO

COUNTY OF: Denver

Before me, the undersigned authority, on this day personally appeared Geoffrey Wedell Gullickson, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office, this the 5th day of May, 2016 2017.

[Signature]
Notary Public in and for the State of Colorado

PAMELA M. JOHNSON
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 19874101186
MY COMMISSION EXPIRES MAY 01, 2018

My commission expires: May 01, 2018

[SEAL]

ASSIGNMENT

For good and valuable consideration given to me by Halliburton Energy Services, Inc., and any other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, William Owen Alexander Ruhle ("ASSIGNOR"), having jointly or solely made an invention in "Systems and Methods for Fracturing a Subterranean Formation" ("INVENTION"), while in the employ or hire either as an employee or consultant of Halliburton Energy Services, Inc., a Corporation organized and existing under the laws of the State of Delaware, doing business at 3000 North Sam Houston Parkway East, Houston, Texas 77032-3219 ("ASSIGNEE"), do hereby assign, sell, and convey to ASSIGNEE, its successors, and assigns, ASSIGNOR's entire right, title, and interest throughout the world in and to:

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Attorney's Reference No. 140846-041000WO
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Attorney's Reference No. 140846-041100WO
4. United States of America utility patent application on said INVENTION entitled, "Systems and Methods for Fracturing a Subterranean Formation," filed as:¹
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7. All substitutions, divisions, continuations, continuations-in-part, renewals, reissues, extensions, and the like of the applications and patents and like grants, including without limitation, those obtained or permissible under past, present, and future laws and statutes;
8. All rights of action on account of past, present, and future unauthorized use of the INVENTION and for infringement of the patents and like protection anywhere in the world;
9. The right in ASSIGNEE to file in its name applications for patents and like protection for the INVENTION in any country or countries in the world; and
10. All rights of priority associated with the INVENTION, applications, patents, and like protection anywhere in the world.

ASSIGNOR covenants that ASSIGNOR, its 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. Further, ASSIGNOR warrants that the INVENTION is not encumbered by another assignment or obligation of assignment to a third-party and that ASSIGNOR has the full ability and authority to assign and encumber the INVENTION.

ASSIGNOR: W. Ruhle
Name: William Owen Alexander Ruhle

Date: 11/16/2016

THE STATE OF: COLORADO

COUNTY OF: Denver

Before me, the undersigned authority, on this day personally appeared William Owen Alexander Ruhle, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office, this the 16th day of November, 2016.

Pamela M. Johnson
Notary Public in and for the State of
Colorado

PAMELA M. JOHNSON
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 19874101186
MY COMMISSION EXPIRES MAY 01, 2018

My commission expires: May 01, 2018

[SEAL]

ASSIGNMENT

For good and valuable consideration given to me by Halliburton Energy Services, Inc., and any other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, John Dean Stabenau ("ASSIGNOR"), having jointly or solely made an invention in "Systems and Methods for Fracturing a Subterranean Formation" ("INVENTION"), while in the employ or hire either as an employee or consultant of Halliburton Energy Services, Inc., a Corporation organized and existing under the laws of the State of Delaware, doing business at 3000 North Sam Houston Parkway East, Houston, Texas 77032-3219 ("ASSIGNEE"), do hereby assign, sell, and convey to ASSIGNEE, its successors, and assigns, ASSIGNOR's entire right, title, and interest throughout the world in and to:

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Attorney's Reference No. 140846-041000WO
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PCT Patent Application No. PCT/US2016/036082 on June 6, 2016
Attorney's Reference No. 140846-041100WO
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U.S. Patent Application No. 15/253,607 on August 31, 2016
Attorney's Reference No. 140846-041001US
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7. All substitutions, divisions, continuations, continuations-in-part, renewals, reissues, extensions, and the like of the applications and patents and like grants, including without limitation, those obtained or permissible under past, present, and future laws and statutes;
8. All rights of action on account of past, present, and future unauthorized use of the INVENTION and for infringement of the patents and like protection anywhere in the world;
9. The right in ASSIGNEE to file in its name applications for patents and like protection for the INVENTION in any country or countries in the world; and
10. All rights of priority associated with the INVENTION, applications, patents, and like protection anywhere in the world.

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ASSIGNOR: John Dean Stab
Name: John Dean Stabenau

Date: September 1, 2016

THE STATE OF: COLORADO

COUNTY OF: Denver

Before me, the undersigned authority, on this day personally appeared John Dean Stabenau, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office, this the 1st day of September, 2016.

Pamela M. Johnson
Notary Public in and for the State of
Colorado

My commission expires: May 01, 2018

[SEAL]

PAMELA M. JOHNSON
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 19874101186
MY COMMISSION EXPIRES MAY 01, 2018