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UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
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DECEMBER 11, 2018

PTAS

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UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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DOCKET NUMBER: 061429-1103763

ASSIGNOR:

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DOC DATE: 11/19/2018

ASSIGNOR:

PATIL, SANDIP PRABHAKAR

DOC DATE: 11/19/2018

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DOC DATE: 11/19/2018

ASSIGNEE:

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APPLICATION NUMBER:

FILING DATE: 11/09/2018

PATENT NUMBER:

ISSUE DATE:

PCT NUMBER: US1860007

TITLE: POLYSACCHARIDE LOST CIRCULATION MATERIALS FOR WELLBORE
OPERATIONS

ASSIGNMENT RECORDATION BRANCH
PUBLIC RECORDS DIVISION

**ASSIGNMENT OF INTELLECTUAL PROPERTY RIGHTS
IN PATENT APPLICATION**

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

POLYSACCHARIDE LOST CIRCULATION MATERIALS FOR WELLBORE OPERATIONS

the specification of which was filed with the U.S. Receiving Office of the PCT on November 9, 2018, and assigned application no. PCT/US2018/060007.

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

- 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

Assignment of Intellectual Property Rights in Application

Patent Application Entitled: *Polysaccharide Lost Circulation Materials for Wellbore Operations*

PCT Appl. No.: PCT/US2018/060007

Filed: November 9, 2018

Attorney Docket: 061429-1103763 (HES Ref: 2018-IPM-102579 U1 PCT)

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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: 19/11/2018

Tamal Kumar Sen
Tamal Kumar Sen

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Witness Printed Name: MATHELI ASHOK DUMBRE

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Assignment of Intellectual Property Rights in Application

Patent Application Entitled: *Polysaccharide Lost Circulation Materials for Wellbore Operations*

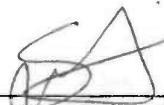
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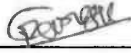
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Dated: 19/11/2018



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Assignment of Intellectual Property Rights in Application

Patent Application Entitled: *Polysaccharide Lost Circulation Materials for Wellbore Operations*

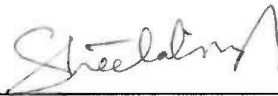
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