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| <b>PATENT ASSIGNMENT COVER SHEET</b> |
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4171286

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|---|--|
| <b>SUBMISSION TYPE:</b>   | CORRECTIVE ASSIGNMENT  |
| <b>NATURE OF CONVEYANCE:</b>  | Corrective Assignment to correct the RECEIVING PARTY DATA: CITY previously recorded on Reel 040503 Frame 0103. Assignor(s) hereby confirms the ASSIGNMENT. |
| <b>CONVEYING PARTY DATA</b>   |  |
| <b>Name</b>   | <b>Execution Date</b>  |
| BENJAMIN EDWARD LABLANC   | 10/03/2014   |
| ENRIQUE ANTONIO REYES   | 10/01/2014   |
| ALYSSA LYNN SMITH   | 10/02/2014   |
| AARON MICHAEL BEUTERBAUGH   | 10/02/2014   |
| <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>  | 15308937   |
| <b>CORRESPONDENCE DATA</b>  |  |
| <b>Fax Number:</b>  | (214)200-0853  |
| <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>Phone:</b>   | 214-651-5000   |
| <b>Email:</b>   | ipdocketing@haynesboone.com  |
| <b>Correspondent Name:</b>  | HAYNES AND BOONE, LLP IP SECTION   |
| <b>Address Line 1:</b>  | 2323 VICTORY AVENUE  |
| <b>Address Line 2:</b>  | SUITE 700  |
| <b>Address Line 4:</b>  | DALLAS, TEXAS 75219  |
| <b>ATTORNEY DOCKET NUMBER:</b>  | 7523.786US01   |
| <b>NAME OF SUBMITTER:</b>   | AMBER RODGERS  |
| <b>SIGNATURE:</b>   | /amber rodgers/  |
| <b>DATE SIGNED:</b>   | 12/06/2016   |
| <b>Total Attachments: 5</b>   |  |

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| <b>PATENT ASSIGNMENT COVER SHEET</b> |
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4116260

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|---|-----------------------------------|
| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT                    |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                        |
| <b>CONVEYING PARTY DATA</b>   |                                   |
| <b>Name</b>   | <b>Execution Date</b>             |
| ANANT KANHOBA GHUMARE   | 06/12/2014                        |
| MONALISA MALLICK  | 06/12/2014                        |
| MALLIKARJUNA SHROFF RAMA  | 06/12/2014                        |
| <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>  | <del>HOUSTON</del> HOUSTON        |
| <b>State/Country:</b>   | TEXAS                             |
| <b>Postal Code:</b>   | 77032                             |
| <b>PROPERTY NUMBERS Total: 1</b>  |                                   |
| <b>Property Type</b>  | <b>Number</b>                     |
| Application Number:   | 15307104                          |
| <b>CORRESPONDENCE DATA</b>  |                                   |
| <b>Fax Number:</b>  | (214)200-0853                     |
| <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>Phone:</b>   | 214-651-5000                      |
| <b>Email:</b>   | ipdocketing@haynesboone.com       |
| <b>Correspondent Name:</b>  | HAYNES AND BOONE, LLP IP SECTION  |
| <b>Address Line 1:</b>  | 2323 VICTORY AVENUE               |
| <b>Address Line 2:</b>  | SUITE 700                         |
| <b>Address Line 4:</b>  | DALLAS, TEXAS 75219               |
| <b>ATTORNEY DOCKET NUMBER:</b>  | 7523.786US01                      |
| <b>NAME OF SUBMITTER:</b>   | AMBER RODGERS                     |
| <b>SIGNATURE:</b>   | /amber rodgers/                   |
| <b>DATE SIGNED:</b>   | 10/27/2016                        |
| <b>Total Attachments: 3</b>   |                                   |
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EPAS ID: PAT4116260

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| <b>CONVEYING PARTY DATA</b>   |                                   |
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| ANANT KANHOBA GHUMARE   | 06/12/2014                        |
| MONALISA MALLICK  | 06/12/2014                        |
| MALLIKARJUNA SHROFF RAMA  | 06/12/2014                        |
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| <b>City:</b>  | HOUTSON                           |
| <b>State/Country:</b>   | TEXAS                             |
| <b>Postal Code:</b>   | 77032                             |
| <b>PROPERTY NUMBERS Total: 1</b>  |                                   |
| <b>Property Type</b>  | <b>Number</b>                     |
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| <b>CORRESPONDENCE DATA</b>  |                                   |
| <b>Fax Number:</b>  | (214)200-0853                     |
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| <b>Address Line 4:</b>  | DALLAS, TEXAS 75219               |
| <b>ATTORNEY DOCKET NUMBER:</b>  | 7523.786US01                      |
| <b>NAME OF SUBMITTER:</b>   | AMBER RODGERS                     |
| <b>SIGNATURE:</b>   | /amber rodgers/                   |
| <b>DATE SIGNED:</b>   | 10/27/2016                        |
| <b>Total Attachments: 3</b>   |                                   |
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**ASSIGNMENT OF INVENTION**

For good and valuable consideration, the receipt of which is hereby acknowledged,  
I, an ASSIGNOR named below,

Anant Kanhoba Ghumare of Nashik, Maharashtra, India;

Monalisa Mallick of Kolkata, West Bengal, India; and

Mallikarjuna Shroff Rama of Pune, Maharashtra, India.

hereby sell, assign and transfer to

ASSIGNEE: Halliburton Energy Services, Inc.  
10200 Bellaire Blvd.  
Houston, Texas 77072  
United States of America

its successors, assigns and legal representatives, my entire right, title and interest throughout the world,  
including all rights to claim priority, in and to the invention(s) disclosed in:

- U.S. Patent Application executed on or about the date of this Assignment.
- U.S. Patent Application executed on \_\_\_\_\_, or
- U.S. Patent Application No.: \_\_\_\_\_, filed on \_\_\_\_\_
- International Application No.: PCT/IN2014/041345, filed on June 9, 2014

ENTITLED: **AMIDO-AMINE BASED CATIONIC GEMINI SURFACTANTS FOR CLAY INHIBITION**, and naming as

INVENTOR(S): **Anant Kanhoba Ghumare, Monalisa Mallick, and Mallikarjuna Shroff Rama**

including without limitation, my entire right, title and interest in and to any and all United States and foreign applications (including any and all provisional, international, regional and foreign national applications) for said invention(s), including divisions, continuations, continuations-in-part, renewals, substitutes and extensions thereof, and in and to any and all patents of every country or region that may be granted or have been granted for said invention(s), including any reissues and reexaminations thereof.

For avoidance of doubt and to the extent that I am subject to a prior agreement to transfer right, title or interest in the disclosed invention(s) to ASSIGNEE, this Assignment confirms that transfer and further effectuates the transfer of any and all of the aforementioned rights, title and interests that, on the date of my execution of this Assignment, are not already vested in ASSIGNEE.

This Assignment may also serve as an oath or declaration in accord with 37 C.F.R. § 1.63(e) and, as such, as an inventor executing below, I do hereby state that I believe I am the original inventor or an original joint inventor of an invention claimed in any above-identified U.S. Patent Application or International Application designating the United States and do hereby state that such application is and was made or authorized to be made by me.

I authorize ASSIGNEE to apply for patents of foreign countries for said invention(s), and to claim all rights of priority without further authorization from me.

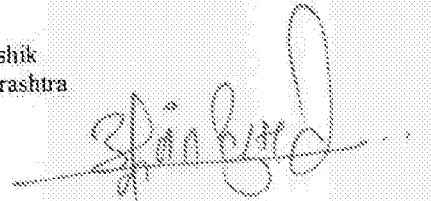
I agree to execute any and all papers useful in connection with any and all U.S. and foreign applications (including international, regional, and foreign national applications), and generally to do everything possible to aid ASSIGNEE, its successors, assigns and nominees, at their request and reasonable expense, in obtaining and enforcing patents for said invention(s) in all countries.

I hereby covenant that no assignment, sale, license, agreement, or encumbrance has been or will be made or entered into that would conflict with this Assignment.

I authorize and request the Commissioner of Patents and Trademarks to issue any U.S. Letters Patent that may be granted for said invention(s) to ASSIGNEE, its successors or assigns.

First Inventor Name: Anant Karhoba  
Residence Address: Somthane, Sinnar, Nashik  
422103 Nashik, Maharashtra  
India

Dated: 12/06/2014



Inventor Signature

Dated: 12<sup>th</sup> June 2014



Witness Signature

Witness Name: Mangikumar Achalpurkar

Second Inventor Name: Monalisa Mallick  
Residence Address: 203/13/1/C I.C. Road, Chowdhury Para Rahara  
700118 Kolkata, West Bengal  
India

Dated: 12/06/2014



Inventor Signature

Dated: 12<sup>th</sup> June 2014



Witness Signature

Witness Name: Mangikumar Achalpurkar

Third inventor Name: Mallikarjuna Shroff Rama  
Residence Address: C1-301 Citadel Enclave, B.T. Kawade Road  
411001 Pune, Maharashtra  
India

Dated: 12/06/2014

M. S. Mallikarjuna  
Inventor Signature

Dated: 12<sup>th</sup> June 2014

M. Manoj Kumar Achalputkar  
Witness Signature  
Witness Name: \_\_\_\_\_

Manoj Kumar Achalputkar