

<b>PATENT ASSIGNMENT COVER SHEET</b>
--------------------------------------

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4699040

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ZHAO DENG	04/17/2015
JAY PAUL DEVILLE	04/01/2015
PHILIP WAYNE LIVANEC	04/01/2017
<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>	77032-3219
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15560154
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(949)851-9348
<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>	(949)851-0633
<b>Email:</b>	arichardson@mwe.com, dstokes@mwe.com, ipdocketmwe@mwe.com
<b>Correspondent Name:</b>	MCDERMOTT WILL & EMERY LLP
<b>Address Line 1:</b>	4 PARK PLAZA
<b>Address Line 2:</b>	SUITE 1700
<b>Address Line 4:</b>	IRVINE, CALIFORNIA 92614
<b>ATTORNEY DOCKET NUMBER:</b>	098273-1918
<b>NAME OF SUBMITTER:</b>	MARK J. ITRI, REG. NO. 36,171
<b>SIGNATURE:</b>	/Mark J. Itri/
<b>DATE SIGNED:</b>	11/21/2017
<b>Total Attachments: 4</b>	
source=2014-IP-092748 U1 US - Executed documents - 098273-1918#page1.tif	
source=2014-IP-092748 U1 US - Executed documents - 098273-1918#page2.tif	

source=2014-IP-092748 U1 US - Executed documents - 098273-1918#page3.tif

source=2014-IP-092748 U1 US - Executed documents - 098273-1918#page4.tif

**DECLARATION AND ASSIGNMENT**

As the below named inventor, I hereby declare that:

This declaration is directed to:

- The attached application to be filed as a United States application or PCT International application, or
- United States application or PCT International application number \_\_\_\_\_ filed on \_\_\_\_\_; and,

entitled "METHODS FOR QUANTIFYING NITROGEN-CONTAINING COMPOUNDS IN SUBTERRANEAN TREATMENT FLUIDS." Regarding that application, I declare the following:

- The above-identified application was made, or authorized to be made, by me.
- I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.
- I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Moreover, Whereas, HALLIBURTON ENERGY SERVICES, INC., a Delaware Corporation, having a place of business at 3000 N. Sam Houston Parkway E., Houston, TX 77032-3219 (hereinafter "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, by these presents do sell, assign and transfer and convey unto Assignee, its successors and assigns, the full and exclusive right, for the United States of America and its territorial possessions and for any and all foreign countries, in and to the said invention, described in the Patent Application identified above, and any national phase, divisional, continuing, continuation-in-part, or reissue application based on the present application preparatory to obtaining Letters Patent of the United States therefore; said invention, application and any and all Letters Patent issuing there from to be held and enjoyed by Assignee, for its own use and benefit, and for its legal representatives, 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 and had this assignment and sale not been made.

And I do further agree to sign all papers, make all rightful oaths and do all requisite acts for the filing of any disclaimer or for the filing and assignment of any divisional, continuing or reissue application or applications for patent based on the present application, as well as for any other U.S. or foreign application for patent which relates to the said invention.

And I do further agree to communicate to Assignee, its successors, assign or other legal representatives, such facts relating to the invention disclosed in the present application or Letters Patent issuing thereon as may be known to me, and to testify as to such facts in any interference or other litigation.

Executed this 17<sup>th</sup> day of April, 2015

Zhao Deng  
ZHAO DENG

STATE OF TX )  
COUNTY OF Harris )

Before me personally appeared said ZHAO DENG and acknowledged the foregoing instrument to be a free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 2015.

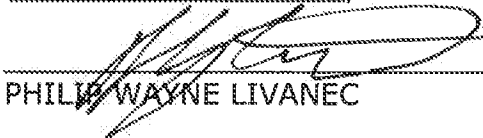
Seal

\_\_\_\_\_  
(Notary)

Letters Patent may be granted, as fully and entirely as the same would have been held by me and had this assignment and sale not been made.

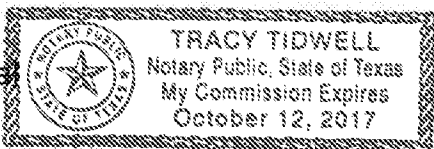
And I do further agree to sign all papers, make all rightful oaths and do all requisite acts for the filing of any disclaimer or for the filing and assignment of any divisional, continuing or reissue application or applications for patent based on the present application, as well as for any other U.S. or foreign application for patent which relates to the said invention.

And I do further agree to communicate to Assignee, its successors, assign or other legal representatives, such facts relating to the invention disclosed in the present application or Letters Patent issuing thereon as may be known to me, and to testify as to such facts in any interference or other litigation.

Executed this 15<sup>th</sup> day of April, 2015  
  
PHILIP WAYNE LIVANEC

STATE OF Texas )  
COUNTY OF Harris )

Before me personally appeared said PHILIP WAYNE LIVANEC and acknowledged the foregoing instrument to be a free act and deed this 1<sup>st</sup> day of April, 2015.

Seal 

  
\_\_\_\_\_  
(Notary)

Letters Patent may be granted, as fully and entirely as the same would have been held by me and had this assignment and sale not been made.

And I do further agree to sign all papers, make all rightful oaths and do all requisite acts for the filing of any disclaimer or for the filing and assignment of any divisional, continuing or reissue application or applications for patent based on the present application, as well as for any other U.S. or foreign application for patent which relates to the said invention.

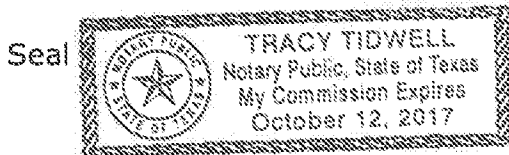
And I do further agree to communicate to Assignee, its successors, assign or other legal representatives, such facts relating to the invention disclosed in the present application or Letters Patent issuing thereon as may be known to me, and to testify as to such facts in any interference or other litigation.

Executed this 1<sup>st</sup> day of April, 2015

Jay Paul Deville  
JAY PAUL DEVILLE

STATE OF Texas )  
  )  
COUNTY OF Harris )

Before me personally appeared said JAY PAUL DEVILLE and acknowledged the foregoing instrument to be a free act and deed this 1<sup>st</sup> day of April, 2015.



Tracy Tidwell  
(Notary)