#### 502379804 06/11/2013

# PATENT ASSIGNMENT

# Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:	ASSIGNMENT		

#### **CONVEYING PARTY DATA**

Name	Execution Date
Zachary Ryan Murphree	06/07/2013
Michael Linley Fripp	06/07/2013
Zachary William Walton	06/07/2013
Feng Liang	06/11/2013
Dwight Fulton	06/07/2013

#### **RECEIVING PARTY DATA**

Name:	Halliburton Energy Services, Inc.	
Street Address:	10200 Bellaire Boulevard	
City:	Houston	
State/Country:	TEXAS	
Postal Code:	77072	

# PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13907336

## **CORRESPONDENCE DATA**

Fax Number: 2027568087

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 202 756 8000

Email: mweipdocket@mwe.com

Correspondent Name: McDermott Will & Emery LLP

Address Line 1: The McDermott Building

Address Line 2: 500 North Capitol Street, N.W.

Address Line 4: Washington, DISTRICT OF COLUMBIA 20001

ATTORNEY DOCKET NUMBER:	091721-0410
NAME OF SUBMITTER:	Debbie Allen
	PATENT

502379804 REEL: 030587 FRAME: 0745

13907336

CH \$40.00

Signature:	/Debbie Allen/
Date:	06/11/2013
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 10 source=0917210410DeclAssign#page1.tif source=0917210410DeclAssign#page2.tif source=0917210410DeclAssign#page3.tif source=0917210410DeclAssign#page4.tif source=0917210410DeclAssign#page5.tif source=0917210410DeclAssign#page6.tif source=0917210410DeclAssign#page7.tif source=0917210410DeclAssign#page8.tif source=0917210410DeclAssign#page9.tif source=0917210410DeclAssign#page9.tif	

PATENT REEL: 030587 FRAME: 0746

As th	e below named inventor, I hereby declare that:				
This	declaration is directed to:				
	The attached application to be filed as a United States application of				
	PCT international application, or				
$\boxtimes$	United States application or PCT international application number				
13/907,336 filed on May 31, 2013; and,					

entitled "DEGRADABLE BALLS FOR USE IN SUBTERRANEAN APPLICATIONS." 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.
- I have reviewed and understand the subject matter of the above-identified application, including the claims.
- I am aware of and acknowledge my duty to disclose to the United States
  Patent and Trademark Office all information known to me to be material to
  patentability under 37 CFR 1.56; including, for continuation-in-part
  applications, material information that became available between the filing of
  the prior application and the filing of the continuation-in-part application.

Moreover, Whereas, HALLIBURTON ENERGY SERVICES, INC., a Delaware Corporation, having a place of business at 10200 Bellaire Boulevard, Houston, TX 77072 (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 divisional, continuing or reissue application based on the present application preparatory to obtaining Letters Patent

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 \_\_\_\_\_\_day of \_

2013

ZACHARY RYAN MURPHREE

STATE OF Texas

COUNTY OF DAIL

Before me personally appeared said ZACHARY RYAN MURPHREE and acknowledged the foregoing instrument to be a free act and deed this \_\_\_\_\_\_\_ day of \_\_\_\_\_\_\_\_, 2013.

RUTHINE LIEBMAN Notary Public, State of Texas My Commission Expires December 21, 2014

entheine Jebr

As t	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				
$\boxtimes$	United States application or PCT international application number				
	13/907,336 filed on May 31, 2013; and,				

entitled "DEGRADABLE BALLS FOR USE IN SUBTERRANEAN APPLICATIONS." 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.
- I have reviewed and understand the subject matter of the above-identified application, including the claims.
- I am aware of and acknowledge my duty to disclose to the United States
  Patent and Trademark Office all information known to me to be material to
  patentability under 37 CFR 1.56; including, for continuation-in-part
  applications, material information that became available between the filing of
  the prior application and the filing of the continuation-in-part application.

Moreover, Whereas, HALLIBURTON ENERGY SERVICES, INC., a Delaware Corporation, having a place of business at 10200 Bellaire Boulevard, Houston, TX 77072 (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 divisional, continuing or reissue application based on the present application preparatory to obtaining Letters Patent

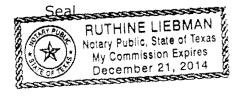
And I do further agree to sign all papers, make all rightful oaths and do all requisite acts for the filing of any disclaimer or for the filing and assignment of any divisional, continuing or reissue application or applications for patent based on the present application, as well as for any other U.S. 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 7<sup>TH</sup> day of JUNE, 2013

MICHAEL LINLEY PRIPP

STATE OF TEXAS
)



Buthing The (Notary)

As the	e below named inventor, I hereby declare that:						
This d	eclaration is directed to:						
	The attached application to be filed as a United States application or						
	PCT international application, or						
$\boxtimes$	United States application or PCT international application number						

entitled "DEGRADABLE BALLS FOR USE IN SUBTERRANEAN APPLICATIONS." Regarding that application, I declare the following:

13/907,336 filed on May 31, 2013; and,

- 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.
- I have reviewed and understand the subject matter of the above-identified application, including the claims.
- I am aware of and acknowledge my duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability under 37 CFR 1.56; including, for continuation-in-part applications, material information that became available between the filing of the prior application and the filing of the continuation-in-part application.

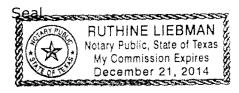
Moreover, Whereas, HALLIBURTON ENERGY SERVICES, INC., a Delaware Corporation, having a place of business at 10200 Bellaire Boulevard, Houston, TX 77072 (hereinafter "Assignee") is desirous of acquiring an interest therein;

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 divisional, continuing or reissue application based on the present application preparatory to obtaining Letters Patent

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	s	day of	
		All Was	
		ZACHARY WILLIAM WALTON	
STATE OF	1-1845	)	
COUNTY OF	pallas	)	



Buthine Lebma (Notary)

As	the	below	named	inventor,	Ι	hereby	declar	e 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 13/907,336 filed on May 31, 2013; and,

entitled "DEGRADABLE BALLS FOR USE IN SUBTERRANEAN APPLICATIONS." 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.
- I have reviewed and understand the subject matter of the above-identified application, including the claims.
- I am aware of and acknowledge my duty to disclose to the United States
  Patent and Trademark Office all information known to me to be material to
  patentability under 37 CFR 1.56; including, for continuation-in-part
  applications, material information that became available between the filing of
  the prior application and the filing of the continuation-in-part application.

Moreover, Whereas, HALLIBURTON ENERGY SERVICES, INC., a Delaware Corporation, having a place of business at 10200 Bellaire Boulevard, Houston, TX 77072 (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 divisional, continuing or reissue application based on the present application preparatory to obtaining Letters Patent

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	//day of	: June	, 2013	
		FENG LIANG	Liany	AMERICAN (SA SA S
anagaman y sa mu		TENO EL TITO	,	
STATE OF TEXAS	)			

Before me personally appeared said FENG LIANG and acknowledged the foregoing instrument to be a free act and deed this \_\_\_\_/\_ day of \_\_\_\_\_, 2013.

DORI LYNN DAVILA
HY COMMISSION EXPIRES
April 11, 2014

COUNTY OF HARRIS )

(Notary)

As the below named inventor, I hereby declare that:	
This d	leclaration 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 13/907,336 filed on May 31, 2013; and,

entitled "DEGRADABLE BALLS FOR USE IN SUBTERRANEAN APPLICATIONS." 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.
- I have reviewed and understand the subject matter of the above-identified application, including the claims.
- I am aware of and acknowledge my duty to disclose to the United States
  Patent and Trademark Office all information known to me to be material to
  patentability under 37 CFR 1.56; including, for continuation-in-part
  applications, material information that became available between the filing of
  the prior application and the filing of the continuation-in-part application.

Moreover, Whereas, HALLIBURTON ENERGY SERVICES, INC., a Delaware Corporation, having a place of business at 10200 Bellaire Boulevard, Houston, TX 77072 (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 divisional, continuing or reissue application based on the present application preparatory to obtaining Letters Patent

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 \_\_\_\_\_\_\_day of \_\_\_\_\_

2013

DWIGHT FULTON

STATE OF LEXAS

COUNTY OF HARRIS

Before me personally appeared said DWIGHT FULTON and acknowledged the foregoing instrument to be a free act and deed this \_\_\_\_\_ day of \_\_\_\_\_\_, 2013.

Seal

DORI LYNN DAVILA
MY COMMISSION EXPIRES
April 11, 2014

(Notary)