

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5418066

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
STANLEY VERNON STEPHENSON	11/15/2016
PHILIP D NGUYEN	11/11/2016
JIM BASUKI SURJAATMADJA	11/11/2016
NORMAN RAYMOND WARPINSKI	12/07/2016
RONALD GLEN DUSTERHOFT	11/11/2016
<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>	16332739
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(703)712-5050
<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>	703-712-5000
<b>Email:</b>	tbutler@mcguirewoods.com
<b>Correspondent Name:</b>	HALLIBURTON C/O MCGUIREWOODS LLP
<b>Address Line 1:</b>	1750 TYSONS BOULEVARD
<b>Address Line 2:</b>	SUITE 1800
<b>Address Line 4:</b>	TYSONS, VIRGINIA 22102-4215
<b>ATTORNEY DOCKET NUMBER:</b>	2069464-0723PTUS
<b>NAME OF SUBMITTER:</b>	TIFFANY BUTLER
<b>SIGNATURE:</b>	/Tiffany Butler/
<b>DATE SIGNED:</b>	03/12/2019
This document serves as an Oath/Declaration (37 CFR 1.63).	

**Total Attachments: 10**

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source=Declaration\_Assignment#page10.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:

**ENHANCING SUBTERRANEAN FORMATION STIMULATION AND  
PRODUCTION USING TARGET DOWNHOLE WAVE SHAPES**

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, I, 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.

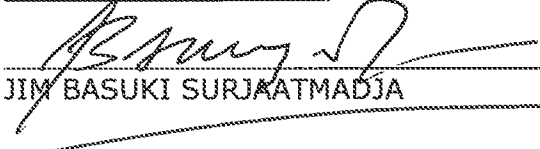
**DECLARATION AND ASSIGNMENT**

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, at Assignee's expense.

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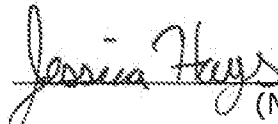
Executed this 11<sup>th</sup> day of November, 2016

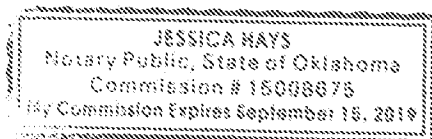
  
JIM BASUKI SURJAATMADJA

STATE OF Oklahoma )  
COUNTY OF Stephens )

Before me personally appeared said JIM BASUKI SURJAATMADJA and acknowledged the foregoing instrument to be a free act and deed this 11 day of November, 2016.

Seal

  
(Notary)



## DECLARATION AND ASSIGNMENT

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- ☒ The attached application to be filed as a United States application or PCT international application, or
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Executed this 15th day of November, 2016

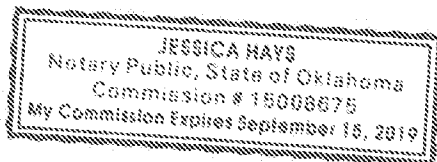
  
STANLEY VERNON STEPHENSON

STATE OF Oklahoma )  
COUNTY OF Stephens )

Before me personally appeared said STANLEY VERNON STEPHENSON and acknowledged the foregoing instrument to be a free act and deed this 15 day of November, 2016.

Seal

  
(Notary)



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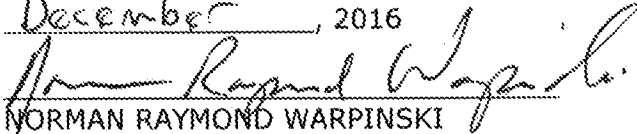
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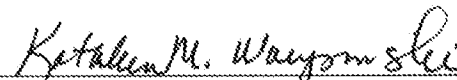
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Executed this 7<sup>th</sup> day of December, 2016  
  
NORMAN RAYMOND WARPINSKI

Witnessed this 7<sup>th</sup> day of December, 2016.

  
(Witness)

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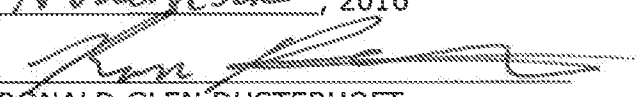
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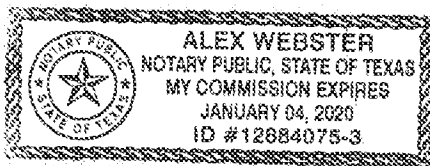
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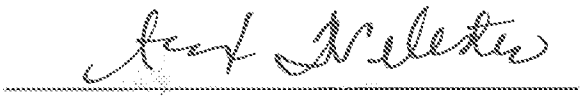
  
RONALD GLEN DUSTERHOFT

STATE OF Texas )  
COUNTY OF Harris )

Before me personally appeared said RONALD GLEN DUSTERHOFT and acknowledged the foregoing instrument to be a free act and deed this 11<sup>th</sup> day of November, 2016.

Seal



  
(Notary)

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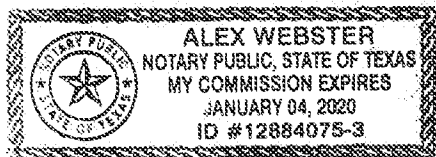
Executed this 11<sup>th</sup> day of November, 2016

Philip D. Nguyen  
PHILIP D. NGUYEN

STATE OF Texas )  
COUNTY OF Harris )

Before me personally appeared said PHILIP D. NGUYEN and acknowledged the foregoing instrument to be a free act and deed this 11<sup>th</sup> day of November, 2016.

Seal



Alex Webster  
(Notary)