#### 504280709 03/20/2017

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT4327390

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	<b>Execution Date</b>	
ADITYA B. NAYAK	02/20/2015	
JAMES M. PRICE	01/22/2015	
DAVID L. PERKINS	02/20/2015	

## **RECEIVING PARTY DATA**

Name:	HALLIBURTON ENERGY SERVICES, INC.		
Street Address: 3000 N. SAM HOUSTON PARKWAY E.			
City:	HOUSTON		
State/Country:	TEXAS		
Postal Code:	77032-3219		

## **PROPERTY NUMBERS Total: 1**

Property Type	Number	
Application Number:	15505070	

## CORRESPONDENCE DATA

Fax Number: (949)851-9348

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.

Phone: 949-851-0633

Email: kcarraway@mwe.com, mweipdocket@mwe.com

MCDERMOTT WILL & EMERY LLP **Correspondent Name:** 

Address Line 1: 4 PARK PLAZA Address Line 2: **SUITE 1700** 

Address Line 4: IRVINE, CALIFORNIA 92614-2559

ATTORNEY DOCKET NUMBER:	098273-1552
NAME OF SUBMITTER:	MARK J. ITRI, REG. NO. 36,171
SIGNATURE:	/Mark J. Itri/
DATE SIGNED:	03/20/2017

### **Total Attachments: 6**

source=098273-1552\_Assignment#page1.tif source=098273-1552\_Assignment#page2.tif source=098273-1552 Assignment#page3.tif

> **PATENT** REEL: 041649 FRAME: 0471 504280709

source=098273-1552\_Assignment#page4.tif source=098273-1552\_Assignment#page5.tif source=098273-1552\_Assignment#page6.tif

> PATENT REEL: 041649 FRAME: 0472

# 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 AND SYSTEMS USING PHOTONIC CRYSTAL-BASED INTEGRATED COMPUTATIONAL ELEMENTS." 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

1 of 2

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	; <u>20</u> th	_day of, 2015	
		来起	
		ADITYA B. NAYAK	***
STATE OF	Texas		
COUNTY OF	Harris		

Seal

STEFANIE JOHNSON
Notary Public, State of Texas
My Commission Expires
December 15, 2018

#### **DECLARATION AND ASSIGNMENT**

AS	s the below named inventor, I hereby declare that:
Th	nis declaration is directed to:
$\boxtimes$	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 AND SYSTEMS USING PHOTONIC CRYSTAL-BASED
INTEGRA	NTED COMPUTATIONAL ELEMENTS." Regarding that application, I declare
the follo	wing:

- 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

1 of 2

# 2014-IP-094339 U1 PCT (095184-0592)

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 _	<u> </u>	of <u>Januar</u>	, 2015
			of the state of th
		JAMES M. PRICE	
STATE OF	)		
COUNTY OF	)		

Before me personally appeared said JAMES M. PRICE and acknowledged the foregoing instrument to be a free act and deed this  $\frac{22}{4}$  day of  $\frac{1}{4}$  and  $\frac{1}{4}$  are  $\frac{1}{4}$  are  $\frac{1}{4}$  and  $\frac{1}{4}$  are  $\frac{1}{4}$  and  $\frac{1}{4}$  are  $\frac{1}{4}$  are  $\frac{1}{4}$  are  $\frac{1}{4}$  are  $\frac{1}{4}$  are  $\frac{1}{4}$  and  $\frac{1}{4}$  are  $\frac{1}{4}$  and  $\frac{1}{4}$  are  $\frac{1}{4}$  are  $\frac{1}{4}$  are  $\frac{1}{4}$  are  $\frac{1}{4}$  and  $\frac{1}{4}$  are  $\frac{1}{4}$  are

Seal

STEFANIE JOHNSON
Notary Public, State of Texas
My Commission Expires
December 15, 2018

(Notary

## DECLARATION AND ASSIGNMENT

,	As the	below	named in	ventor, I he	reby deci	lare that:			
	This d	eclaratio	on is direc	ted to:					
[	$\boxtimes$	The att	ached ap	plication to	be filed	as a Uni	ted State	s applic	ation or
		PCT int	ernationa	l application	, or				
		United	States a	pplication	or PCT	internatio	nal appi	lication	number
			filed	on	; an	d,			
entitled	۷" b	1ETHOD	S AND	SYSTEMS	USIN	G РНОТ	ONIC (	CRYSTAL	BASED
INTEGI	RATEL	COMP	UTATION	AL ELEMENT	'S." Reç	garding th	nat applic	ation, I	declare
the foll	lowing	1:							

- 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

1 of 2

# 2014-IP-094339 U1 PCT (095184-0592)

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 <u>40</u> day o

2015

DĂVID L. PERKINS

STATE OF X

COUNTY OF HUNS

Before me personally appeared said DAVID L. PERKINS and acknowledged the foregoing instrument to be a free act and deed this <u>20</u> day of <u>February</u>, 2015.

Seal

STEFANIE JOHNSON
Notary Public, State of Texas
My Commission Expires
December 15, 2018