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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4330331

SUBMISSION TYPE:		NEW ASSIGNMENT	
NATURE OF CONVEYANCE:		ASSIGNMENT	
CONVEYING PARTY DA	ATA		
		Name	Execution Date
CYRUS A. IRANI			06/14/2016
RECEIVING PARTY DA	 TA		
Name:	HALLIBURTON ENERGY SERVICES, INC.		
Street Address:	3000 N. SAM HOUSTON PARKWAY E.		
City:	HOUSTON		
State/Country:	TEXAS	TEXAS	
Postal Code:	77032		
PROPERTY NUMBERS	Total: 1		
Property Type		Number	
Application Number: 1551		13098	
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Fax Number:		.)200-0853	
	e sent to the	e-mail address first; if that is unsuc that is unsuccessful, it will be sent v	
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Phone:	214-	-651-5000	
		-651-5000 cketing@haynesboone.com	
Email: Correspondent Name:	ipdo HAY	cketing@haynesboone.com ′NES AND BOONE, LLP	
Email: Correspondent Name: Address Line 1:	ipdo HAY 2323	cketing@haynesboone.com ′NES AND BOONE, LLP 3 VICTORY AVENUE, SUITE 700	
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Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4:	ipdo HAY 2323 IP S DAL	cketing@haynesboone.com 'NES AND BOONE, LLP 3 VICTORY AVENUE, SUITE 700 ECTION .LAS, TEXAS 75219	
Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4: ATTORNEY DOCKET NU	ipdo HAY 2323 IP S DAL	cketing@haynesboone.com 'NES AND BOONE, LLP 3 VICTORY AVENUE, SUITE 700 ECTION .LAS, TEXAS 75219 7523.780US01	
Email: Correspondent Name: Address Line 1: Address Line 2:	ipdo HAY 2323 IP S DAL	cketing@haynesboone.com NES AND BOONE, LLP 3 VICTORY AVENUE, SUITE 700 ECTION LAS, TEXAS 75219 7523.780US01 DELAUNDA N. LANFORD	
Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4: ATTORNEY DOCKET NU NAME OF SUBMITTER: SIGNATURE:	ipdo HAY 2323 IP S DAL	cketing@haynesboone.com NES AND BOONE, LLP 3 VICTORY AVENUE, SUITE 700 ECTION LAS, TEXAS 75219 7523.780US01 DELAUNDA N. LANFORD /Delaunda N. Lanford/	
Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4: ATTORNEY DOCKET NU NAME OF SUBMITTER: BIGNATURE: DATE SIGNED:	ipdo HAY 2323 IP S DAL	cketing@haynesboone.com NES AND BOONE, LLP 3 VICTORY AVENUE, SUITE 700 ECTION LAS, TEXAS 75219 7523.780US01 DELAUNDA N. LANFORD /Delaunda N. Lanford/ 03/22/2017	
Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4: ATTORNEY DOCKET NU NAME OF SUBMITTER: BIGNATURE: DATE SIGNED: Fotal Attachments: 3	ipdo HAY 2323 IP S DAL IMBER:	cketing@haynesboone.com (NES AND BOONE, LLP 3 VICTORY AVENUE, SUITE 700 ECTION LAS, TEXAS 75219 7523.780US01 DELAUNDA N. LANFORD /Delaunda N. Lanford/ 03/22/2017 age1.tif	

ASSIGNMENT

WHEREAS, Cyrus Aspi Irani (an "ASSIGNOR"), a citizen of the United States, residing at 7718 Stonesdale Drive, Houston, Texas 77095, United States of America, has developed and is the owner of certain inventions as embodied in and represented by the Intellectual Property, as defined below.

"Intellectual Property" shall collectively mean the technology developed by ASSIGNOR and generally titled:

GAS PHASE DETECTION OF DOWNHOLE FLUID SAMPLE COMPONENTS

as well as any application related thereto, including, without limitation, the application(s):

of even date filed herewith;

x filed on November 4, 2014 and assigned application number PCT/US14/63870.

WHEREAS, each ASSIGNOR is desirous of assigning all of his right in the Intellectual Property to Halliburton Energy Services, Inc. ("ASSIGNEE"), a corporation, doing business at 3000 N. Sam Houston Parkway E., Houston, Texas 77032, United States of America.

NOW, THEREFORE, subject to the terms, conditions, covenants and provisions of this Assignment, and in consideration of Ten Dollars (\$10.00) and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by each ASSIGNOR, the parties hereto, intending legally to be bound, agree as follows:

Each ASSIGNOR hereby sells, assigns and transfers to ASSIGNEE, its successors and assigns, said ASSIGNOR'S entire right, title, and interest in the Intellectual Property, including, without limitation, (i) all United States and foreign rights therein, whether patentable or not, and in and to aforesaid patents, patent applications and any divisions or continuations thereof, and any patents or similar registrations obtained for the Intellectual Property in the United States and foreign countries, or issuing out of said application or any such division or continuation thereof, and any reissues or extensions of any such patents, as well as all rights to claim priority to any of the foregoing and (ii) all causes of action, past, present, and future, for infringement, unfair competition or otherwise with respect to the Intellectual Property and all disclosures of ideas, whether or not patentable and all pending applications.

Each ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States, and any official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

Each ASSIGNOR hereby covenants that (i) he believes himself to be the original and first inventor of the subject matter of the Intellectual Property; (ii) he has the full right to convey his

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PATENT REEL: 041680 FRAME: 0378 entire right, title and interest in said Intellectual Property, and (iii) he has not executed and will not execute any agreement in conflict herewith.

Each ASSIGNOR further covenants that he will not undertake any activity to erode or challenge the ASSIGNEE'S rights in the Intellectual Property assigned hereunder.

Each ASSIGNOR further covenants that he will, at any time, upon ASSIGNEE'S request, execute and deliver any and all papers that may be necessary or desirable to perfect the title in the Intellectual Property, or any patents that may be granted therefore, in the ASSIGNEE, its successors and assigns, and if ASSIGNEE, or its assignee, desires to make a substitute, divisional or continuation application for said Intellectual Property, or to secure a reissue or extension of any Letters Patent, to file disclaimer relating thereto, or an application for a corresponding patent in any foreign country, or undertake any other act to secure and protect the ASSIGNEE'S rights in the Intellectual Property, that he will upon request, sign all papers, make all rightful oaths, and do all lawful acts requisite for the said purposes, but at the expense of the ASSIGNEE.

Each ASSIGNOR hereby acknowledges that the entire beneficial interest in the Intellectual Property and to which the above application relates is irrevocably vested in the ASSIGNEE including the right to make the application for protection in all countries abroad and to claim priority under the International Convention for such applications and hereby assents to the making of any such applications, with or without priority claims, and of any divisional application resulting therefrom.

Each ASSIGNOR further covenants that he will at all times communicate to the ASSIGNEE, its successors, assigns or legal representatives, all facts relating to the Intellectual Property, or the history thereof, known to him, and testify as the same in interferences or other litigation, when requested so to do.

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Executed and delivered this 14 day of June 20 16

Inventor: Cyrus Aspi Irani

Dated: 6/14/2016

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Witness Signature

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Cho HAUABARTON Address

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RECORDED: 03/22/2017

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