

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT5397614

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
Shaohua Zhou	05/29/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SAUDI ARABIAN OIL COMPANY
<b>Street Address:</b>	1 EASTERN AVENUE
<b>City:</b>	DHAHRAN
<b>State/Country:</b>	SAUDI ARABIA
<b>Postal Code:</b>	31311
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16287746
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(877)769-7945
<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>	+1 (214) 760-6141
<b>Email:</b>	apsi@fr.com
<b>Correspondent Name:</b>	SUSHIL IYER
<b>Address Line 1:</b>	FISH & RICHARDSON P.C.
<b>Address Line 2:</b>	P.O.BOX 1022
<b>Address Line 4:</b>	MINNEAPOLIS, MINNESOTA 55440-1022
<b>ATTORNEY DOCKET NUMBER:</b>	38136-0184002
<b>NAME OF SUBMITTER:</b>	PAULA T. ROMEO
<b>SIGNATURE:</b>	/Paula T. Romeo/
<b>DATE SIGNED:</b>	02/28/2019
<b>Total Attachments: 2</b>	
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ASSIGNMENT

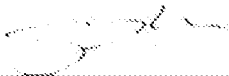
For valuable consideration, the receipt of which I acknowledge, and intending to be bound legally, I, SHAOHUA ZHOU, assign to SAUDI ARABIAN OIL COMPANY, a corporation formed under the laws of Saudi Arabia and having a principal place of business at 1 Eastern Avenue, Dhahran, Saudi Arabia 31311, and its successors, transferees, and assignees (collectively the "Assignee"), all of my right, title, and interest throughout the world in the subject matter (the "Subject Matter") of a patent application that names me as inventor, is titled "MITIGATING DRILLING CIRCULATION LOSS," and was filed in the United States Patent and Trademark Office on May 26, 2017, as application 15/606,501 (the "Application").

This Assignment assigns (a) the Application and all other applications that may be made for, and all patents, utility models, design registrations, and other rights of exclusion and inventors' certificates for, any of the Subject Matter (collectively the "Applications and Granted Rights") in every country or region, (b) the right to claim priority based on and the benefit of the filing date of any of the Applications and Granted Rights under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other applicable treaties or conventions, and (c) the right to pursue, collect, and retain in the Assignee's name or otherwise, damages and any other remedies arising from any past, present, or future infringement of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment.

I authorize the Assignee to apply for and pursue protection for any or all of the Subject Matter, the Applications and Granted Rights, and any other rights assigned by this Assignment in all countries, regions, and territories of the world, in my name or in the Assignee's name.

I represent and warrant that I have the right and power to make this Assignment and that I have not made and will not make any other assignment that conflicts with this Assignment.

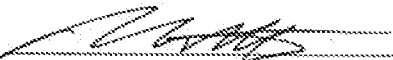
I will communicate to the Assignee (or at the request of the Assignee to other parties) all known facts in any form relating to the Subject Matter, will execute and provide all oaths and declarations, statements, testimony, assignments, powers of attorney, applications, and documents, and will perform all other lawful acts necessary or desirable to secure fully to the Assignee the rights, titles, and interests assigned by this Assignment.

  
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Shaohua Zhou

Date: May 29, 2017

The Assignee hereby acknowledges and accepts the foregoing assignment.

Assignee: SAUDI ARABIAN OIL COMPANY

Signature:   
.....

Date: May 29, 2017

Name: Melton E. Knotts

Title: Assistant Corporate Secretary

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