

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
ROBERT P. MAHONEY	11/06/2012
DAVID S. SOANE	11/05/2012
MARIE K. HERRING	11/05/2012
KEVIN P. KINCAID	11/05/2012
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PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15340000
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SIGNATURE:	/ADAM SLEPECKY/
DATE SIGNED:	05/08/2017
Total Attachments: 4	
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PATENT ASSIGNMENT

This Patent Assignment (this "Assignment") is made effective this 30th day of April, 2013, by and between Soane Energy LLC, a limited liability company organized and existing under the laws of Delaware, and having a usual place of business at 35 Spinelli Place, Cambridge, Massachusetts, 02138 ("Assignor") and Self-Suspending Proppant LLC, a limited liability company organized and existing under the laws of Delaware, and having a usual place of business at 35 Spinelli Place, Cambridge, Massachusetts, 02138 ("Assignee").

WHEREAS, Assignee is a wholly-owned subsidiary of Assignor;

WHEREAS, Assignor possesses certain rights in and to the patent applications set forth on Exhibit A attached hereto and incorporated herein by reference (collectively, the "Patent Rights"); and

WHEREAS, Assignor wishes to assign, and Assignee desires to acquire the Patent Rights.

NOW, THEREFORE, in consideration of the premises set forth above and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged:

Assignor hereby transfers, assigns, conveys and delivers unto Assignee all of Assignor's right, title and interest in and to the Patent Rights, the same to be held and enjoyed by Assignee for its own use and behalf and for its successors, permitted assigns and legal representatives, together with income, royalties, damages or payments due on or after the date hereof, including, without limitation, all claims for damages or payments by reason of infringement or unauthorized use of the Patent Rights, along with the right to sue for past infringements and collect same for Assignee's sole use and enjoyment.

Assignor does hereby authorize the Director of the United States Patent & Trademark Office, and the empowered officials of all other governments whose duty it is to record patents, applications and title thereto, to record the Patent Rights and title thereto as the property of Assignee in accordance with the terms of this instrument.

Assignee and Assignor also agree that multiple copies of this Assignment may be executed, each of which shall be deemed an original, and each of which shall be valid and binding upon Assignee and Assignor.

[Signature Page Follows]

IN WITNESS WHEREOF, Assignor and Assignee have caused this Assignment to be executed by their duly authorized representatives as of the date first written above.

Assignor:

SOANE ENERGY LLC

By: David Soane

Name: DAVID SOANE

Title: CEO

Assignee:

SELF-SUSPENDING PROPPANT LLC

By: Soane Energy LLC, its Manager

By: Martha Groves

Name: MARTHA GROVES

Title: CFO

Signature page to Patent Rights Assignment

Exhibit A
PATENT RIGHTS

Filing date or National Stage Entry	Type (status) Serial Number(s)	TITLE Family (Priority claim(s) or relationships)
10/20/09	Provisional (expired) 61/253,350	PROPPANTS FOR HYDRAULIC FRACTURING TECHNOLOGIES Core/shell family
10/20/10	US (pending) 12/908411 (Publ. #20110120719)	PROPPANTS FOR HYDRAULIC FRACTURING TECHNOLOGIES Core/shell family (Priority from '350 provisional)
10/20/10	PCT/US10/53354 (expired)	PROPPANTS FOR HYDRAULIC FRACTURING TECHNOLOGIES Core/shell family (Priority from '350 provisional)
4/13/12	CA 2777748 (pending)	PROPPANTS FOR HYDRAULIC FRACTURING TECHNOLOGIES Core/shell family (National stage application of '354 PCT application, priority from '350 provisional)
8/31/11	Provisional (expired) 61/529,600	METHODS OF SUSPENDING PROPPANTS IN FRACTURING FLUIDS Self-suspending proppants family
4/19/12	Provisional (expired) 61/635,612	SELF-SUSPENDING PROPPANTS FOR HYDRAULIC FRACTURING Self-suspending proppants family (Related to '600 provisional)
6/21/12	Provisional (pending, expires June 21, 2013) 61/662,681	SELF-SUSPENDING PROPPANTS FOR HYDRAULIC FRACTURING Self-suspending proppants family (Related to '600 provisional and '612 provisional)
8/30/12	US and PCT (pending) 13/599,828 PCT/US12/53134	SELF-SUSPENDING PROPPANTS FOR HYDRAULIC FRACTURING Self-suspending proppants family (Priority from '600 provisional, '612 provisional, and '681 provisional)
11/13/12	Provisional (pending, expires Nov. 13, 2013) 61/725,751	SELF-SUSPENDING PROPPANTS FOR HYDRAULIC FRACTURING Self-suspending proppants family (Related to '612 provisional and '681 provisional)
2/14/13	Provisional (pending, expires Feb. 14, 2014) 61/764,792	SELF-SUSPENDING PROPPANTS FOR HYDRAULIC FRACTURING Self-suspending proppants family (Related to '612 provisional, '681 provisional, and '751 provisional)

Exhibit A – Notice of Patent Rights Assignment

Filing date or National Stage Entry	Type (status) Serial Number(s)	TITLE Family (Priority claim(s) or relationships)
3/15/13	PCT/US13/32435 (pending)	SELF-SUSPENDING PROPPANTS FOR HYDRAULIC FRACTURING Self-suspending proppants family (Priority from '612 provisional, '681 provisional, '751 provisional, and '792 provisional)
3/15/13	US 13/838,806 (pending)	SELF-SUSPENDING PROPPANTS FOR HYDRAULIC FRACTURING Self-suspending proppants family (Priority from '612 provisional, '681 provisional, '751 provisional, and '792 provisional, continuation-in-part of '828 US utility application)
3/15/13	PCT/US13/32424 (pending)	SELF-SUSPENDING PROPPANTS FOR HYDRAULIC FRACTURING Self-suspending proppants family (Priority from '612 provisional, '681 provisional, '751 provisional, and '792 provisional)

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