

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4601535

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	RELEASE OF SECURITY INTEREST
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
WELLS FARGO BANK, NATIONAL ASSOCIATION	09/19/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	LIBERTY OILFIELD SERVICES LLC
<b>Street Address:</b>	950 17TH STREET, SUITE 2400
<b>City:</b>	DENVER
<b>State/Country:</b>	COLORADO
<b>Postal Code:</b>	80202
<b>Name:</b>	LOS ACQUISITION CO I LLC
<b>Street Address:</b>	950 17TH STREET, SUITE 2400
<b>City:</b>	DENVER
<b>State/Country:</b>	COLORADO
<b>Postal Code:</b>	80202
<b>PROPERTY NUMBERS Total: 13</b>	
<b>Property Type</b>	<b>Number</b>
Patent Number:	7749946
Patent Number:	8193127
Patent Number:	8347965
Patent Number:	7559373
Patent Number:	8061427
Patent Number:	9228424
Application Number:	14720277
Application Number:	62133065
Application Number:	62151737
Application Number:	62371678
Application Number:	14106194
Application Number:	14158167
Application Number:	14090928
<b>CORRESPONDENCE DATA</b>	

**Fax Number:**

*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:** 3128637141

**Email:** kristen.lange@goldbergkohn.com

**Correspondent Name:** KRISTEN N. LANGE, PARALEGAL

**Address Line 1:** GOLDBERG KOHN, LTD. 55 E. MONROE ST.

**Address Line 2:** SUITE 3300

**Address Line 4:** CHICAGO, ILLINOIS 60603

<b>ATTORNEY DOCKET NUMBER:</b>	1989.526
<b>NAME OF SUBMITTER:</b>	KRISTEN N. LANGE
<b>SIGNATURE:</b>	/kristenlange/
<b>DATE SIGNED:</b>	09/19/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

<b>NAME OF SUBMITTER:</b>	KRISTEN N. LANGE
<b>SIGNATURE:</b>	/kristenlange/
<b>DATE SIGNED:</b>	09/19/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

<b>SIGNATURE:</b>	/kristenlange/
<b>DATE SIGNED:</b>	09/19/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

<b>DATE SIGNED:</b>	09/19/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

	This document serves as an Oath/Declaration (37 CFR 1.63).
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**Total Attachments: 7**

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**RELEASE OF SECURITY INTEREST IN PATENTS AND TRADEMARKS**

This RELEASE OF PATENTS AND TRADEMARKS SECURITY INTEREST (“Release”) is made and effective as of September 19, 2017 and granted by Wells Fargo Bank, National Association, a national banking association, as administrative agent (in such capacity, the “Administrative Agent”) under the Credit Agreement referred to below (the “Lenders”), in favor of Liberty Oilfield Services LLC, a Delaware limited liability company, (the “Original Borrower”), LOS Acquisition CO I LLC, a Delaware limited liability company, (the “Designated Borrower” and together with the Original Borrower, the “Borrowers” and individually, a “Borrower”), certain Affiliates of the Borrowers party hereto from time to time (collectively with the Borrowers, the “Grantors” and individually, a “Grantor”) and their successors, assigns and legal representatives.

WHEREAS, pursuant to that certain Credit Agreement dated as of October 21, 2013 (the “Credit Agreement”) among the Original Borrower, the Administrative Agent and the lenders party thereto, the Grantors executed and delivered to the Administrative Agent (i) that certain Amended and Restated Pledge and Security Agreement, by and among the Grantors and the Administrative Agent dated as of June 15, 2017 (the “Pledge and Security Agreement”) and (ii) that certain Patent and Trademark Security Agreement by and among the Grantors and the Administrative Agent dated as of June 15, 2017 (the “Patent and Trademark Security Agreement” and, together with the Pledge and Security Agreement, the “Security Agreements”);

WHEREAS, pursuant to the Patent and Trademark Security Agreement, each Grantor pledged and granted to the Administrative Agent for the ratable benefit of the Lenders a security interest in and to all of the right, title and interest of such Grantor in, to and under the Patent and Trademark Collateral (as defined below);

WHEREAS, the Patent and Trademark Security Agreement was recorded with the United States Patent and Trademark Office at Reel 042738, Frame 0675 on June 16, 2017 and Reel 6086, Frame 0015 June 16, 2017;

**WHEREAS**, Administrative Agent desires to release its security interest in and lien on the Patent and Trademark Collateral (as defined below), including but not limited to, the patents and patent applications and trademarks and trademark applications set forth on Schedule I hereto;

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Administrative Agent hereby states as follows:

1. Definition. The term “Patent and Trademark Collateral”, as used herein, shall mean all of each Grantor’s right, title and interest in the following (collectively, the “Patent and Trademark Collateral”

- a. all of such Grantor’s right, title and interest in and to (i) all inventions and discoveries, whether patentable or not, all letters patent and applications for letters patent throughout the world, including those patents and patent applications referred to in Schedule I hereto, (ii) all reissues, divisions, continuations, continuations in part, extensions, renewals and reexaminations

Schedules to  
Release of Security Interest in Patents and Trademarks

**PATENT**  
**REEL: 043631 FRAME: 0023**

of any of the items described in clause (i), (iii) all patent licenses, and other agreements providing any Grantor with the right to use any items of the type referred to in clauses (i) and (ii) above, and (iv) all proceeds of, and rights associated with, the foregoing (including licenses, royalties income, payments, claims, damages and proceeds of infringement suits), the right to sue third parties for past, present or future infringements of any patent or patent application, and for breach or enforcement of any patent license; and

- b. all of such Grantor's right, title and interest in and to (i) (A) all trademarks, trade names, corporate names, company names, business names, fictitious business names, trade styles, service marks, certification marks, collective marks, logos and other source or business identifiers, and all goodwill of the business associated therewith, now existing or hereafter adopted or acquired, including those trademarks referred to in Schedule I hereto, whether currently in use or not, all registrations and recordings thereof and all applications in connection therewith, whether pending or in preparation for filing, including registrations, recordings and applications in the United States Patent and Trademark Office or in any office or agency of the United States of America, or any State thereof or any other country or political subdivision thereof or otherwise, and all common-law rights relating to the foregoing, and (B) the right to obtain all reissues, extensions or renewals of the foregoing (collectively referred to as the "Trademarks" and each, a "Trademark"), (ii) all Trademark licenses for the grant by or to any Grantor of any right to use any Trademark, (iii) all of the goodwill of the business connected with the use of, and symbolized by the items described in, clause (i), and to the extent applicable clause (ii), (iv) the right to sue third parties for past, present and future infringements of any Trademark Collateral described in clause (i) and, to the extent applicable, clause (ii), and (v) all Proceeds of, and rights associated with, the foregoing, (including licenses, royalties, income, payments, claims, damages and proceeds of infringement suits), the right to sue third parties for past, present or future infringement or dilution of any Trademark, Trademark registration or Trademark license, or for any injury to the goodwill associated with the use of any such Trademark or for breach or enforcement of any Trademark license and all rights corresponding thereto throughout the world.

2. Release of Security Interest. Administrative Agent, on behalf of itself and the Lenders, their successors, legal representatives and assigns, hereby terminates the Patent and Trademark Security Agreement and terminates, releases and discharges any and all security interest in and lien on the Patent and Trademark Collateral hereto and reassigns to each Grantor all right, title and interest it may have in, to and under the Patent and Trademark Collateral.

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Schedules to  
Release of Security Interest in Patents and Trademarks

**PATENT**  
**REEL: 043631 FRAME: 0024**

Executed to be effective as of the 19th day of September, 2017.

WELLS FARGO BANK, NATIONAL  
ASSOCIATION, as Administrative Agent

By: [Signature]  
Name: Corbin M. Womac  
Title: Director

State of Texas §  
County of Harris §

This instrument was acknowledged before me on this 15th day of September, 2017, by Corbin M. Womac as Director of Wells Fargo Bank, National Association, a national banking association, on behalf of said entity.

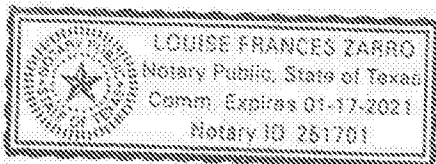
[Signature]

Notary Public in and for

The State of TEXAS

Name: LOUISE ZARRO

My Commission Expires: 01/17/2021



Schedules to  
Release of Security Interest in Patents and Trademarks

**PATENT**  
**REEL: 043631 FRAME: 0025**

SCHEDULES:

Schedule I      Item A- Patent Collateral

Item B-Trademark Collateral

## Schedule I

### Item A – Patent Collateral

#### Issued Patents

Technology	Jurisdiction	Owner	Application No.	Patent No.	Filing Date	Grant Date
Crosslinking Composition for Fracturing Fluids	Canada	LOS Acquisition Co I LLC	2,598,147	2,598,147	8/20/07	4/2/13
Crosslinking Composition for Fracturing Fluids	Canada	LOS Acquisition Co I LLC	2,802,841 (division of 2,598,147)	2,802,841	8/20/07	5/21/03
Crosslinking Composition for Fracturing Fluids	US	LOS Acquisition Co I LLC	11/841,401	7,749,946	8/20/07	7/6/10
Low Residue Fluid Fracturing System and Method of Use	Canada	LOS Acquisition Co I LLC	2,652,489	2,652,489	2/4/09	6/3/14
Low Residue Fluid Fracturing System and Method of Use	US	LOS Acquisition Co I LLC	12/365,586	8,193,127	2/4/09	6/5/12
Apparatus and Method for Creating Pressure Pulses in a Wellbore (Shockfrac)	Canada	LOS Acquisition Co I LLC	2,689,038	2,689,038	12/23/09	9/13/11
Apparatus and Method for Creating Pressure Pulses in a Wellbore (Shockfrac)	US	LOS Acquisition Co I LLC	12/646,826	8,347,965	12/23/09	1/8/13
Well Product Recovery Process (Cyclefrac)	Canada	LOS Acquisition Co I LLC and Fairborne Energy Ltd.	2,517,497	2,517,497	8/29/05	7/15/08
Process for Fracturing a Subterranean Formation (Cyclefrac)	US	LOS Acquisition Co I LLC and Fairborne Energy Ltd.	11/421,030	7,559,373	5/30/06	7/14/09
Well Product Recovery Process (Cyclespal)	Canada	LOS Acquisition Co I LLC	2,517,494	2,517,494	8/29/05	3/9/10
Well Product Recovery Process (Cyclespal)	US	LOS Acquisition Co I LLC	11/421,034	8,061,427	5/30/06	11/22/11
Method of Treating the Near-Wellbore Zone of	US	LOS Acquisition Co I LLC	13/149,558	9,228,424	5/31/11	1/5/16

Pending Patent Applications

Technology	Jurisdiction	Owner	Application No.	Filing Date
Thermo-Gas- Generating Systems and Methods for Oil and Gas Well Stimulation	Canada	LOS Acquisition Co I LLC	2834374	11/26/13
Method of Treating the Near-Wellbore Zone of the Reservoir	Canada	LOS Acquisition Co I LLC	2,744,556	6/27/11
Hydrocarbon Stimulation by Energetic Chemistry	US	LOS Acquisition Co I LLC	14/720,277 US20150337638	5/22/15
Hydrocarbon Stimulation by Energetic Chemistry	Canada	LOS Acquisition Co I LLC	2892343	5/22/15
Method for chemically controlling delay time for breaking polymers (Friction Reducer Breaker)	US	LOS Acquisition Co I LLC	62/133,065	3/13/15
Boron Sequestration	US	LOS Acquisition Co I LLC	62/151,737	4/23/15
Reduced Noise Hydraulic Fracturing System	US	LOS Acquisition Co I LLC	62371678	3/13/15
Surfactant System as a Self-Diverted Acid for Well Stimulation	CA	LOS Acquisition Co I LLC	2,836,221	
Apparatus and Method for Continuously Mixing Fluids Using Dry Additives	CA	LOS Acquisition Co I LLC	2,839,611	

Abandoned Patent Applications

Technology	Jurisdiction	Owner	Application No.
Well Product Recovery Process	Canada	LOS Acquisition Co I LLC	2,518,692
Surfactant System as a Self-Diverted Acid for Well Stimulation	US	LOS Acquisition Co I LLC	14/106,194
Apparatus and Method for Continuously Mixing Fluids Using Dry Additives	US	LOS Acquisition Co I LLC	14/158,167
Thermo-Gas- Generating Systems and Methods for Oil and Gas Well	US	LOS Acquisition Co I LLC	14/090,928

Patent Applications in Preparation

None.

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<sup>1</sup> Issued Patent



## **Item B – Trademark Collateral**

### **Trademarks, Service Marks, Trademark Licenses**

<b>Credit Party</b>	<b>Jurisdiction</b>	<b>Trademark</b>	<b>Application/Registration Number</b>
Liberty Oilfield Services LLC	US	Liberty Oilfield Services	87480891
Liberty Oilfield Services LLC	US	Liberty	87480903
Liberty Oilfield Services LLC	US	L in our signature circle, black and white	87481307
Liberty Oilfield Services LLC	US	L in our signature circle, color	87481362
Liberty Oilfield Services LLC	US	Liberty Quiet Fleet	87480720
Liberty Oilfield Services LLC	US	Liberty Quiet	87480835
Liberty Oilfield Services LLC	US	Quiet Fleet	87480770
Liberty Oilfield Services LLC	US	Liberty Spirit	87480999
LOS Acquisition Co I LLC	CA	Shockfrac	1463937
LOS Acquisition Co I LLC	US	Shockfrac	77902727/4107221
LOS Acquisition Co I LLC	CA	CYCLEFRAC	1253386
LOS Acquisition Co I LLC	CA	SANSPAL	1253387

Schedules to  
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