

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4462023

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
SUN DRILLING PRODUCTS CORPORATION	05/25/2017

RECEIVING PARTY DATA

Name:	MIDCAP BUSINESS CREDIT LLC
Street Address:	433 SOUTH MAIN ST
City:	WEST HARTFORD
State/Country:	CONNECTICUT
Postal Code:	06110

PROPERTY NUMBERS Total: 38

Property Type	Number
Patent Number:	5114597
Patent Number:	5942467
Patent Number:	5843872
Patent Number:	5891832
Patent Number:	6451953
Patent Number:	6248838
Patent Number:	6348629
Patent Number:	6541579
Patent Number:	6138834
Patent Number:	RE38367
Patent Number:	5114598
Patent Number:	6395686
Patent Number:	7803740
Patent Number:	7803741
Patent Number:	7803742
Patent Number:	7902125
Patent Number:	8088718
Patent Number:	8455403
Patent Number:	8278373
Patent Number:	8466093

PATENT

Property Type	Number
Patent Number:	9359546
Patent Number:	9175209
Patent Number:	9034799
Patent Number:	9267071
Patent Number:	9394471
Patent Number:	9505974
Patent Number:	9630881
Patent Number:	8361934
Patent Number:	9006314
Patent Number:	8258083
Patent Number:	8461087
Patent Number:	8492316
Patent Number:	8006754
Patent Number:	9140111
Patent Number:	8006755
Application Number:	15495089
Application Number:	14860160
Application Number:	15525251

CORRESPONDENCE DATA

Fax Number: (617)742-2355
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: 6177424200
Email: trademark@riw.com
Correspondent Name: STACEY C. FRIENDS, ESQ.
Address Line 1: 255 STATE ST.
Address Line 2: RUBERTO, ISRAEL & WEINER, PC
Address Line 4: BOSTON, MASSACHUSETTS 02109

ATTORNEY DOCKET NUMBER:	09729-96
NAME OF SUBMITTER:	STACEY C. FRIENDS, ESQ.
SIGNATURE:	/stacey c.friends/
DATE SIGNED:	06/15/2017

Total Attachments: 13
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PATENT SECURITY AGREEMENT

THIS SECURITY AGREEMENT is entered into as of May 25, 2017, by and between Sun Drilling Products Corporation, a Louisiana corporation having its principal place of business at 503 Main Street, Belle Chasse, Louisiana 70037 (the "**Borrower**"), and MidCap Business Credit LLC, a Texas limited liability company with a usual place of business at 433 South Main Street, West Hartford, Connecticut 06110 ("**Lender**").

NOW THEREFORE, in consideration of the premises, Borrower hereby agrees with Lender as follows:

1. **Grant of Security Interest.** Borrower hereby grants to Lender a first priority security interest in, and conditionally assigns, but does not transfer title to Lender, all of Borrower's right, title and interest in and to the following (collectively, the "**Collateral**") to secure payment and performance of all obligations of Borrower to Lender whether such obligations are direct or indirect, absolute or contingent, due or to become due, now existing or hereafter arising, including, without limitation, those liabilities of Borrower to Lender pursuant to a Loan and Security Agreement (All Assets) of even date, between Lender and Borrower, et al. (the "**Loan Agreement**") (collectively, the "**Obligations**").

The Collateral shall consist of the following:

(a) Each of the patents and patent applications which are presently, or in the future may be, owned, issued, acquired or used (whether pursuant to a license or otherwise) by Borrower, in whole or in part, and all patent rights with respect thereto throughout the world, including all proceeds thereof (including license royalties and proceeds of infringement suits), foreign filing rights and rights to extend such patents and patent rights;

(b) All of Borrower's right, title and interest, in and to the patents and patent applications listed on Schedule A attached hereto, as the same may be updated hereafter from time to time;

(c) All of Borrower's right, title and interest in all patentable inventions, and to file applications for patent under federal patent law or regulation of any foreign country, and to request reexamination and/or reissue of the patents, the right (without obligation) to sue or bring interference proceedings in the name of Borrower or in the name of Lender for past, present and future infringements of the patents, and all rights (but not obligations) corresponding thereto in the United States and any foreign country;

(d) All general intangibles relating to the Collateral; and

(e) All proceeds of any and all of the foregoing (including, without limitation, license royalties and proceeds of infringement suits) and, to the extent not otherwise included, all payments under insurance, or any indemnity, warranty or guaranty payable by reason of loss or damage to or otherwise with respect to the Collateral.

2. **Warranties and Representations.** Borrower hereby warrants and represents to Lender the following:

(a) A true and complete schedule setting forth all patents and patent applications owned or controlled by Borrower or licensed to Borrower, together with a summary description and full information in respect of the filing or issuance thereof and expiration dates is set forth on Schedule A;

(b) Each of the patents is valid and enforceable, and Borrower is not presently aware of any past, present or prospective claim by any third party that any of the patents are invalid or unenforceable, or that the use of any patents violates the rights of any third person, or of any basis for any such claims;

(c) Borrower is the sole and exclusive owner of the entire and unencumbered right, title and interest in and to each of the patents and patent applications, free and clear of any liens, charges and encumbrances, including, without limitation, pledges, assignments, licenses, shop rights and covenants by Borrower not to sue third persons;

(d) Borrower has used and will continue to use proper statutory notice in connection with its use of each of the patents;

(e) Except for the filing of financing statements with the Parish Clerk of Courts, Plaquemines Parish, Louisiana, under the Uniform Commercial Code and filings with the United States Patent and Trademark Office necessary to perfect the security interests created hereunder, no authorization, approval or other action by, and no notice to or filing with, any governmental authority or regulatory body is required either for the grant by Borrower of the security interest hereunder or for the execution, delivery or performance of this Agreement by Borrower or for the perfection of or the exercise by Lender of its rights hereunder to the Collateral in the United States.

3. After-Acquired Patent Rights. If Borrower shall obtain rights to any new patentable inventions or become entitled to the benefit of any patent application or patent for any reissue, divisional or continuation, of any patent, the provisions of this Agreement shall automatically apply thereto. Borrower shall give prompt notice in writing to Lender with respect to any such new patents. Borrower shall bear any expenses incurred in connection with future applications for patent.

4. Litigation and Proceedings. Borrower shall commence and diligently prosecute in its own name, as the real party in interest, for its own benefit, and its own expense, such suits, administrative proceedings or other actions for infringement or other damages as are in its reasonable business judgment necessary to protect the Collateral. Borrower shall provide to Lender any information with respect thereto requested by Lender. Lender shall provide at Borrower's expense all necessary cooperation in connection with any such suit, proceeding or action, including, without limitation, joining as a necessary party. Following Borrower's becoming aware thereof, Borrower shall notify Lender of the institution of, or any adverse determination in, any proceeding in the United States Patent and Trademark Office, or any United States, state or foreign court regarding Borrower's claim of ownership in any of the patents, its right to apply for the same, or its right to keep and maintain such patent rights.

5. Power of Attorney. Borrower grants Lender power of attorney, having the full authority, and in the place of Borrower and in the name of Borrower, from time to time following the occurrence and during the continuance of an Event of Default in Lender's discretion to take any action and to execute any instrument which Lender may deem necessary or advisable to accomplish the purposes of this Agreement, including, without limitation, as may be subject to the provisions of the Loan Agreement:

(a) To endorse Borrower's name on all applications, documents, papers and instruments necessary for Lender to use or maintain the Collateral;

(b) To ask, demand, collect, sue for, recover, impound, receive and give acquittance and receipts for money due or to become due under or in respect of any of the Collateral;

(c) To file any claims or take any action or institute any proceedings that Lender may deem necessary or desirable for the collection of any of the Collateral or otherwise to enforce Lender's rights with respect to any of the Collateral and to assign, pledge, convey or otherwise transfer title in or dispose of the Collateral to any person.

7. **Events of Default.** The occurrence of an Event of Default as that term is defined in the Loan Agreement shall be an Event of Default.

8. **Specific Remedies.** Upon the occurrence and during the continuance of any Event of Default:

(a) Lender may cease advancing money or extending credit to or for the benefit of Borrower under the Loan Agreement or under any other agreement between Borrower and Lender.

(b) Lender may declare all Obligations to be due and payable immediately, whereupon they shall immediately become due and payable without presentment, demand, protest or notice of any kind, all of which are hereby expressly waived by Borrower;

(c) Lender may set off against the Obligations all Collateral, balances, credits, deposits, accounts or moneys of Borrower then or thereafter held with Lender, including amounts represented by certificates of deposit;

(d) Lender may notify licensees to make royalty payments on license agreements directly to Lender;

(e) Lender may sell or assign the Collateral at public or private sale for such amounts, and at such time or times as Lender deems advisable. Any requirement of reasonable notice of any disposition of the Collateral shall be satisfied if such notice is sent to Borrower ten (10) days prior to such disposition. Borrower shall be credited with the net proceeds of such sale only when they are actually received by Lender, and Borrower shall continue to be liable for any deficiency remaining after the Collateral is sold or collected;

(f) If the sale is to be a public sale, Lender shall also give notice of the time and place by publishing a notice one time at least ten (10) calendar days before the date of the sale in a newspaper of general circulation in the county in which the sale is to be held; and

(g) To the maximum extent permitted by applicable law, Lender may be the purchaser of any or all of the Collateral at any public sale and shall be entitled, for the purpose of bidding and making settlement or payment of the purchase price for all or any portion of the Collateral sold at any public sale, to use and apply all or any part of the Obligations as a credit on account of the purchase price of any Collateral payable by Lender at such sale.

9. **Governing Law.** All acts and transactions hereunder and the rights and obligations of the parties hereto shall be governed, construed and interpreted in accordance with the laws of the Commonwealth of Massachusetts.

*Remainder of Page Intentionally Omitted
Signature Page Follows]*

IN WITNESS WHEREOF, the Borrower and Lender have caused this Agreement to be executed by their duly authorized officers as of the date first above written.

SUN DRILLING PRODUCTS CORPORATION

By: *D. Heller*
Douglas Heller
President and Chief Executive Officer

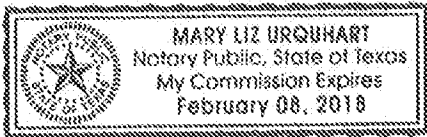
MIDCAP BUSINESS CREDIT LLC

By: _____
Steven A. Samson, President

STATE OF LOUISIANA- *Texas*

Houston, Texas, ss. Harris County

On this *25th* day of May, 2017, before me, the undersigned notary public, personally appeared Douglas Heller, as President and Chief Executive Officer of Sun Drilling Products Corporation, proved to me to be the person whose name is signed on the preceding or attached document, through satisfactory evidence of identification, namely, a driver's license bearing the photographic image of the face and signature of Douglas Heller, and acknowledged to me that he signed it voluntarily for its stated purpose.



Mary Liz Urquhart
Notary Public
My Commission Expires: *Feb. 8, 2018*

STATE OF CONNECTICUT

Hartford, ss. West Hartford

On this _____ day of December, 2016, before me, the undersigned notary public, personally appeared Steven A. Samson, as President of MidCap Business Credit LLC, a limited liability company, proved to me to be the person whose name is signed on the preceding or attached document, through satisfactory evidence of identification, namely, a driver's license issued by the State of Connecticut bearing the photographic image of the face and signature of Steven A. Samson, and acknowledged to me that he signed it voluntarily for its stated purpose.

Notary Public
My Commission Expires:

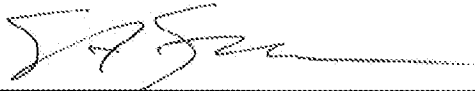
[Signature Page to Patent Security Agreement]

IN WITNESS WHEREOF, the Borrower and Lender have caused this Agreement to be executed by their duly authorized officers as of the date first above written.

SUN DRILLING PRODUCTS CORPORATION

By: _____
Douglas Heller
President and Chief Executive Officer

MIDCAP BUSINESS CREDIT LLC

By:  _____
Steven A. Samson, President

STATE OF LOUISIANA

_____, ss. _____

On this _____ day of May, 2017, before me, the undersigned notary public, personally appeared Douglas Heller, as President and Chief Executive Officer of Sun Drilling Products Corporation, proved to me to be the person whose name is signed on the preceding or attached document, through satisfactory evidence of identification, namely, a driver's license bearing the photographic image of the face and signature of Douglas Heller, and acknowledged to me that he signed it voluntarily for its stated purpose.

Notary Public
My Commission Expires:

STATE OF CONNECTICUT

Hartford, ss. West Hartford

On this 25th day of May, 2017 ~~December, 2016~~, before me, the undersigned notary public, personally appeared Steven A. Samson, as President of MidCap Business Credit LLC, a limited liability company, proved to me to be the person whose name is signed on the preceding or attached document, through satisfactory evidence of identification, namely, a driver's license issued by the State of Connecticut bearing the photographic image of the face and signature of Steven A. Samson, and acknowledged to me that he signed it voluntarily for its stated purpose.

 _____
Notary Public
My Commission Expires:

[Signature Page to Patent Security Agreement]

Lois D. Pisan
NOTARY PUBLIC
State of Connecticut
My Commission Expires 4/30/2018

**SCHEDULE A
TO A PATENT SECURITY AGREEMENT
BETWEEN
SUN DRILLING PRODUCTS CORPORATION (Borrower)
AND
MIDCAP BUSINESS CREDIT LLC (Lender)
DATED: MAY 25, 2017**

ISSUED PATENTS (USA)

Patent Number	Issue Date	Title
5,114,597	May 19, 1992	METHOD OF MAKING A DRILLING FLUID CONTAINING CARBON BLACK IN A DISPERSED STATE
5,942,467	August 24, 1999	DRILLING FLUID SYSTEM CONTAINING A COMBINATION OF HYDROPHILIC CARBON BLACK/ASPHALITE AND A FISH OIL/GLYCOL MIXTURE AND RELATED METHODS
5,843,872	December 1, 1998	DRILLING FLUID SYSTEM AND RELATED METHODS
5,891,832	April 6, 1999	DRILLING FLUID ADDITION CONTAINING A FISH OIL/GLYCOL MIXTURE AND RELATED METHODS
6,451,953	September 17, 2002	CHAIN ENTANGLEMENT CROSSLINKED POLYMERS
6,248,838	June 19, 2001	CHAIN ENTANGLEMENT CROSSLINKED PROPPANTS AND RELATED USES
6,348,629	February 19, 2002	FREE RADICAL INHIBITORS FOR QUENCHING AQUEOUS PHASE POLYMER GROWTH AND RELATED METHODS

Patent Number	Issue Date	Title
6,541,579	April 1, 2003	FREE RADICAL INHIBITORS FOR QUENCHING AQUEOUS PHASE POLYMER GROWTH AND RELATED METHODS
6,138,834	October 31, 2000	RECOVERY APPARATUS FOR DRILLING AND EXCAVATION APPLICATION AND RELATED METHODS
RE38,367	December 30, 2003	RECOVERY APPARATUS FOR DRILLING AND EXCAVATION APPLICATION AND RELATED METHODS
5,114,598	May 19, 1992	METHOD OF MAKING DRILLING FLUID CONTAINING ASPHALTITE IN A DISPERSED STATE
6,395,686	July 19, 2001	HIGH PRESSURE, HIGH TEMPERATURE (HPHT) FLUID LOSS CONTROL AID FOR DRILLING PRODUCTS
7,803,740	September 28, 2010	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
7,803,741	September 28, 2010	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
7,803,742	September 28, 2010	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS

Patent Number	Issue Date	Title
7,902,125	March 8, 2011	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
8,088,718	January 3, 2012	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
8,455,403	June 4, 2013	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
8,278,373	October 2, 2012	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
8,466,093	June 18, 2013	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
9,359,546	June 7, 2016	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS

Patent Number	Issue Date	Title
9,175,209	November 3, 2015	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
9,034,799	May 19, 2015	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
9,267,071	February 23, 2016	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
9,394,471	July 19, 2016	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
9,505,974	November 29, 2016	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
9,630,881	April 25, 2017	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS

Patent Number	Issue Date	Title
8,361,934	January 29, 2013	THERMOSET PARTICLES WITH ENHANCED CROSSLINKING, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
9,006,314	April 14, 2015	THERMOSET PARTICLES WITH ENHANCED CROSSLINKING, PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
8,258,083	September 4, 2012	A METHOD FOR THE FRACTURE STIMULATION OF A SUBTERRANEAN FORMATION HAVING A WELLBORE BY USING IMPACT-MODIFIED THERMOSET POLYMER NANOCOMPOSITE PARTICLES AS PROPPANTS
8,461,087	June 11, 2013	A METHOD FOR THE FRACTURE STIMULATION OF A SUBTERRANEAN FORMATION HAVING A WELLBORE BY USING IMPACT-MODIFIED THERMOSET POLYMER NANOCOMPOSITE PARTICLES AS PROPPANTS
8,492,316	July 23, 2013	A METHOD FOR THE FRACTURE STIMULATION OF A SUBTERRANEAN FORMATION HAVING A WELLBORE BY USING IMPACT-MODIFIED THERMOSET POLYMER NANOCOMPOSITE PARTICLES AS PROPPANTS
8,006,754	August 30, 2011	PROPPANTS CONTAINING DISPERSED PIEZOELECTRIC OR MAGNETOSTRICTIVE FILLERS OF MIXTURES THEREOF, TO ENABLE THEIR TRACKING AND MONITORING IN A DOWNHOLE ENVIRONMENT

Patent Number	Issue Date	Title
9,140,111	September 22, 2015	PROPPANTS CONTAINING DISPERSED PIEZOELECTRIC OR MAGNETOSTRICTIVE FILLERS OR MIXTURES THEREOF, TO ENABLE PROPPANT TRACKING AND MONITORING IN A DOWNHOLE ENVIRONMENT
8,006,755	August 30, 2011	PROPPANTS COATED BY PIEZOELECTRIC OR MAGNETOSTRICTIVE MATERIALS, OR BY MIXTURES OR COMBINATIONS THEREOF, TO ENABLE THEIR TRACKING AND MONITORING IN A DOWNHOLE ENVIRONMENT

PENDING PATENT APPLICATIONS (USA)

Application Number	Filing Date	Title
15/495,089	April 24, 2017	THERMOSET NANOCOMPOSITE PARTICLES, PROCESSING FOR THEIR PRODUCTION, AND THEIR USE IN OIL AND NATURAL GAS DRILLING APPLICATIONS
14/860,160	September 21, 2015	PROPPANTS CONTAINING DISPERSED PIEZOELECTRIC OR MAGNETOSTRICTIVE FILLERS OR MIXTURES THEREOF, TO ENABLE PROPPANT TRACKING AND MONITORING IN A DOWNHOLE ENVIRONMENT

15/525,251

May 8, 2017

THERMOPLASTIC NANOCOMPOSITE
PARTICLES, PROCESSES FOR THEIR
PRODUCTION, AND THEIR USE IN THE
FABRICATION OF ARTICLES