

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
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EPAS ID: PAT4501828

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
LONGYEAR TM, INC.	04/26/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	WILMINGTON TRUST, NATIONAL ASSOCIATION
<b>Street Address:</b>	50 SOUTH SIXTH ST., SUITE 1290
<b>City:</b>	MINNEAPOLIS
<b>State/Country:</b>	MINNESOTA
<b>Postal Code:</b>	55402
<b>PROPERTY NUMBERS Total: 15</b>	
<b>Property Type</b>	<b>Number</b>
Patent Number:	9399898
Patent Number:	9404311
Patent Number:	9421671
Patent Number:	9446503
Patent Number:	9500036
Patent Number:	9506298
Patent Number:	9528337
Application Number:	15232452
Application Number:	15303668
Application Number:	15311592
Application Number:	15378992
Application Number:	15379016
Application Number:	62358653
Application Number:	62425230
PCT Number:	US2016053703
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<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>	7043778156

**Email:** jcarusone@robinsonbradshaw.com  
**Correspondent Name:** JENNIFER CARUSONE  
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**Address Line 2:** ROBINSON, BRADSHAW & HINSON, P.A.  
**Address Line 4:** CHARLOTTE, NORTH CAROLINA 28246

<b>ATTORNEY DOCKET NUMBER:</b>	19133.00050 TERM LOAN A
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<b>NAME OF SUBMITTER:</b>	JENNIFER CARUSONE
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<b>SIGNATURE:</b>	/Jennifer Carusone/
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<b>DATE SIGNED:</b>	07/13/2017
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**Total Attachments: 5**

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## *Patent Security Agreement*

This Patent Security Agreement, dated as of April 26, 2017, is made by Longyear TM, Inc. (the "Grantor"), in favor of Wilmington Trust, National Association, in its capacity as collateral agent pursuant to the Term Loan A Securities Agreement (in such capacity, the "Collateral Agent").

### W I T N E S S E T H:

WHEREAS, the Grantor is party to a U.S. Security and Pledge Agreement dated as of October 22, 2014 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "Security Agreement") in favor of the Collateral Agent pursuant to which the Grantor is required to execute and deliver this Patent Security Agreement;

NOW, THEREFORE, in consideration of the premises and to induce the Collateral Agent, for the benefit of the Secured Parties, to enter into the Term Loan A Securities Agreement, the Grantor hereby agrees with the Collateral Agent as follows:

SECTION 1. Defined Terms. Unless otherwise defined herein, terms defined in the Security Agreement and used herein have the meaning given to them in the Security Agreement.

SECTION 2. Grant of Security Interest in Patent Collateral. The Grantor hereby pledges and grants to the Collateral Agent for the benefit of the Secured Parties a lien on and security interest in and to all of its right, title and interest in, to and under all the following Collateral of the Grantor (other than Excluded Assets), which shall include:

- (a) all Patents listed on Schedule I attached hereto; and
- (b) all Proceeds of any and all of the foregoing.

SECTION 3. Security Agreement. The security interest granted pursuant to this Patent Security Agreement is granted in conjunction with the security interest granted to the Collateral Agent pursuant to the Security Agreement and the Grantor hereby acknowledges and affirms that the rights and remedies of the Collateral Agent with respect to the security interest in the Patents made and granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein. In the event that any provision of this Patent Security Agreement is deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall control unless the Collateral Agent shall otherwise determine.

SECTION 4. Counterparts. This Patent Security Agreement may be executed in any number of counterparts, all of which shall constitute one and the same instrument, and any party hereto may execute this Patent Security Agreement by signing and delivering one or more counterparts.

SECTION 5. Subject to Intercreditor Agreement. Notwithstanding anything herein to the contrary, the liens and security interests granted to Wilmington Trust, National Association, as Collateral Agent, pursuant to this Patent Security Agreement and the exercise of any right or remedy by Wilmington Trust, National Association, as Collateral Agent hereunder, are subject to the provisions of the Intercreditor Agreement. In the event of any conflict between the terms of the Intercreditor Agreement and the terms of this Agreement, the terms of the Intercreditor Agreement shall govern and control.

[signature page follows]

IN WITNESS WHEREOF, the Grantor has caused this Patent Security Agreement to be executed and delivered by its duly authorized officer as of the date first set forth above.

Longyear TM, Inc.

By: 

Name: Fabrizio Rasetti

Title: President

[Signature Page to Patent Security Agreement Term Loan A]

## Schedule I

### Patents

<u>Patent No.</u>	<u>Country</u>	<u>Title</u>	<u>Owner</u>	<u>Issue Date</u>
9,399,898	US	Core Drilling Tools with Retractable Lockable Driven Latch Mechanisms	Longyear TM, Inc.	26-Jul-16
9,404,311	US	Fiber-Containing Diamond-Impregnated Cutting Tools and Methods for Forming and Using Same	Longyear TM, Inc.	02-Aug-16
9,421,671	US	Infiltrated Diamond Wear Resistant Bodies and Tools	Longyear TM, Inc.	23-Aug-16
9,446,503	US	High Strength, High Hardness Binders and Drilling Tools Formed from Using the Same	Longyear TM, Inc.	20-Sep-16
9,500,036	US	Single-Waterway Drill Bits and Systems for Using Same	Longyear TM, Inc.	22-Nov-16
9,506,298	US	Drill Bits Having Blind-Hole Flushing and System for Using Same	Longyear TM, Inc.	29-Nov-16
9,528,337	US	Up Hole Bushing and Core Barrel Head Assembly Comprising Same	Longyear TM, Inc.	27-Dec-16

### Patent Applications

<u>Patent Serial No.</u>	<u>Country</u>	<u>Title</u>	<u>Owner</u>	<u>Application Filing Date</u>
15/232,452	US	Infiltrated Diamond Wear Resistant Bodies and Tools	Longyear TM, Inc.	09-Aug-16
15/303,668	US	Drill Bits Having Flushing	Longyear TM, Inc.	12-Oct-16
15/311,592	US	Wireline System and Methods of Using Same	Longyear TM, Inc.	16-Nov-16
15/378,992	US	Fiber-Containing Diamond-Impregnated Cutting Tools and Methods for Forming and Using Same	Longyear TM, Inc.	14-Dec-16

15/379,016	US	Handling and Recovery Devices for Tubular Members and Associated Methods	Longyear TM, Inc	14-Dec-16
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**Provisional Patent Applications**

<b><u>Patent Serial No.</u></b>	<b><u>Country</u></b>	<b><u>Title</u></b>	<b><u>Owner</u></b>	<b><u>Application Filing Date</u></b>
62/358,652	US	Core Tube Handling System and Method for Using the Same	Longyear TM, Inc.	06-Jul-16
62/425,230	US	Wireless Data Acquisition Adapter for Drilling String Impulse Sensing	Longyear TM, Inc.	22-Nov-16

**PCT Patent Applications**

<b><u>Patent Serial No.</u></b>	<b><u>PCT Filing Date</u></b>	<b><u>Title</u></b>	<b><u>Owner</u></b>	<b><u>30 Mo. Natl Date</u></b>
PCT/US2016/53703	09/26/16	Braking Devices for Drilling Operations and Systems and Methods of Using the Same	Longyear TM, Inc.	03/30/18