

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4704098

<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>
ALPHA NATURAL RESOURCES, LLC			11/21/2017
<b>RECEIVING PARTY DATA</b>			
<b>Name:</b>	CANTOR FITZGERALD SECURITIES		
<b>Street Address:</b>	110 EAST 59TH STREET		
<b>City:</b>	NEW YORK		
<b>State/Country:</b>	NEW YORK		
<b>Postal Code:</b>	10022		
<b>PROPERTY NUMBERS Total: 3</b>			
<b>Property Type</b>	<b>Number</b>		
<b>Patent Number:</b>	6129483		
<b>Patent Number:</b>	6334738		
<b>Patent Number:</b>	7914249		
<b>CORRESPONDENCE DATA</b>			
<b>Fax Number:</b>	(800)494-7512		
<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>	202-370-4750		
<b>Email:</b>	ipteam@cogencyglobal.com		
<b>Correspondent Name:</b>	MELONY SOT		
<b>Address Line 1:</b>	1025 VERMONT AVE NW, SUITE 1130		
<b>Address Line 2:</b>	COGENCY GLOBAL INC.		
<b>Address Line 4:</b>	WASHINGTON, D.C. 20005		
<b>ATTORNEY DOCKET NUMBER:</b>	F173968 PT		
<b>NAME OF SUBMITTER:</b>	ALAN DELANEY		
<b>SIGNATURE:</b>	/Alan Delaney/		
<b>DATE SIGNED:</b>	11/27/2017		
<b>Total Attachments: 5</b>			
source=Patent Security Agreement#page2.tif			
source=Patent Security Agreement#page3.tif			
source=Patent Security Agreement#page4.tif			

source=Patent Security Agreement#page5.tif  
source=Patent Security Agreement#page6.tif

**PATENT SECURITY AGREEMENT**

**Patent Security Agreement**, dated as of November 21, 2017, by ALPHA NATURAL RESOURCES, LLC (the “**Grantor**”), in favor of CANTOR FITZGERALD SECURITIES, in its capacity as collateral agent pursuant to the Credit Agreement (in such capacity, the “**Collateral Agent**”).

W I T N E S S E T H:

WHEREAS, the Grantor is party to a Security Agreement dated as of October 23, 2017 (as amended, modified, refinanced and/or restated 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 Credit 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 (excluding any Excluded Assets) of such Grantor:

(a) All issued and applied for Patents of the Grantor, including those listed on Schedule I attached hereto.

SECTION 3. The 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. 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.

SECTION 4. Termination. Upon the termination of the Security Agreement in accordance with Section 7.12 thereof, the Collateral Agent shall, at the expense of the Grantor, execute, acknowledge, and deliver to the Grantor an instrument reasonably requested by the Grantor in writing in recordable form releasing the lien on and security interest in the Patents under this Patent Security Agreement.

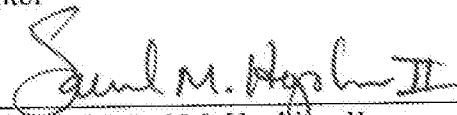
SECTION 5. Counterparts. This Patent Security Agreement may be executed in any number of counterparts, all of which shall constitute one and the same instrument, and any party hereto may execute this Patent Security Agreement by signing and

delivering one or more counterparts. Delivery of an executed signature page to this Patent Security Agreement by facsimile or other electronic transmission shall be effective as delivery of a manually signed counterpart of this Patent Security Agreement.

SECTION 6. Concerning the Collateral Agent. Cantor Fitzgerald Securities is entering into this Patent Security Agreement solely in its capacity as Collateral Agent under the Credit Agreement and not in its individual or corporate capacity. In acting hereunder, the Collateral Agent shall be entitled to all of the rights, privileges and immunities granted to it under the Security Agreement, the Credit Agreement and the other Loan Documents (as defined in the Credit Agreement), whether or not expressly stated herein.


[Signature pages follow.]

ALPHA NATURAL RESOURCES, LLC,  
as Grantor

By:   
Name: Samuel M. Hopkins, II  
Title: Chief Financial Officer

[Signature Page to Patent Security Agreement]

**CANTOR FITZGERALD SECURITIES,**  
as Collateral Agent

By:   
Name: James Bond  
Title: Chief Operating Officer



**Schedule I**  
**to**  
**PATENT SECURITY AGREEMENT**  
**PATENT REGISTRATIONS AND PATENT APPLICATIONS**

<b>PATENT #</b>	<b>PATENT</b>	<b>OWNER</b>
US PAT 6129483	Prefabricated Metal Overcast Having a Crushable Lower Section	Alpha Natural Resources, LLC
US PAT 6334738	Prefabricated Metal Overcast Having a Crushable Lower Section	Alpha Natural Resources, LLC
US PAT 7914249	Shoveling Apparatus with Multi- Positional Shovel	Alpha Natural Resources, LLC