

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4249903

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST
CONVEYING PARTY DATA	
Name	Execution Date
MATRIX DESIGN GROUP, LLC	01/27/2017
ALLIANCE COAL, LLC	01/27/2017
RECEIVING PARTY DATA	
Name:	JPMORGAN CHASE BANK, N.A.
Street Address:	1111 FANNIN, 8TH FLOOR
City:	HOUSTON
State/Country:	TEXAS
Postal Code:	77002
PROPERTY NUMBERS Total: 7	
Property Type	Number
Patent Number:	9041546
Patent Number:	8289170
Patent Number:	7843348
Application Number:	15222542
Application Number:	15084801
Application Number:	15385440
Application Number:	15371296
CORRESPONDENCE DATA	
Fax Number:	(650)838-5109
<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>	
Phone:	650-838-3743
Email:	JLIK@SHEARMAN.COM
Correspondent Name:	MARC ELZWEIG
Address Line 1:	1460 EL CAMINO REAL, 2ND FLOOR
Address Line 2:	SHEARMAN & STERLING LLP
Address Line 4:	MENLO PARK, CALIFORNIA 94025
NAME OF SUBMITTER:	MARC ELZWEIG
SIGNATURE:	/MARC ELZWEIG/
DATE SIGNED:	01/30/2017

PATENT

Total Attachments: 5

source=0 - Alliance Patent Security Agreement#page1.tif

source=0 - Alliance Patent Security Agreement#page2.tif

source=0 - Alliance Patent Security Agreement#page3.tif

source=0 - Alliance Patent Security Agreement#page4.tif

source=0 - Alliance Patent Security Agreement#page5.tif

PATENT SECURITY AGREEMENT

This PATENT SECURITY AGREEMENT (this “Patent Security Agreement”) is made this 27th day of January, 2017, among the Grantors listed on the signature pages hereof (“Grantors” and each, a “Grantor”), and JPMORGAN CHASE BANK, N.A. (“JPMorgan”), in its capacity as Collateral Agent for the benefit of the Secured Parties (together with its permitted successors and assigns, the “Collateral Agent”).

W I T N E S S E T H:

WHEREAS, the Grantors agreed to grant a continuing security interest in and to the Collateral, including the Patent Collateral (as defined below), in order to secure the prompt and complete payment, observance and performance of, among other things, the Secured Obligations, pursuant to that certain Pledge and Security Agreement, dated as of January 27, 2017 among the Grantors and the Collateral Agent (including all annexes, exhibits or schedules thereto, as from time to time amended, restated, supplemented or otherwise modified, the “Security Agreement”); and

WHEREAS, pursuant to the Security Agreement, the Grantors are required to execute and deliver to the Collateral Agent, for the benefit of the Secured Parties, this Patent Security Agreement.

NOW, THEREFORE, for and in consideration of the recitals made above and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Grantors hereby agree as follows:

1. **DEFINED TERMS.** All capitalized terms used herein and not otherwise defined herein shall have the respective meanings assigned to such terms in the Security Agreement.

2. **GRANT OF SECURITY INTEREST IN PATENT COLLATERAL.** Each Grantor hereby unconditionally grants, collaterally assigns, and pledges to the Collateral Agent, for the benefit of the Secured Parties, to secure the Secured Obligations, a continuing security interest (referred to in this Patent Security Agreement as the “Security Interest”) in such Grantor’s right, title and interest in, to the following, whether now owned or hereafter acquired or arising and wherever located (collectively, the “Patent Collateral”):

(a) all of such Grantor’s patents and patent applications, including (i) the patents and patent applications listed on Schedule I; (ii) all renewals, continuations, divisionals, continuations-in-part, reissues and examinations thereof, (iii) all income, royalties, damages and payments now and hereafter due or payable under all licenses entered into in connection therewith and damages and payments for past, present or future infringements thereof, (iv) the right to sue for past, present and future infringements thereof, and (v) all rights corresponding thereto throughout the world; and

(b) all products and proceeds (as that term is defined in the UCC) of the foregoing, including any claim by such Grantor against third parties for past, present or future infringement or violations of any Patent or any Patent licensed under any Intellectual Property License.

3. **SECURITY FOR OBLIGATIONS.** The Security Interest created hereby secures the payment and performance of all the Secured Obligations, whether now existing or arising hereafter. Without limiting the generality of the foregoing, this Patent Security Agreement secures the payment of all amounts which constitute part of the Secured Obligations and would be owed by the Grantors, or any of them, to the Collateral Agent or any Secured Party whether or not they are unenforceable or not allowable due to the existence of a Bankruptcy Event involving any Grantor.

4. SECURITY AGREEMENT. The Security Interest granted pursuant to this Patent Security Agreement is granted in conjunction with the security interests granted to the Collateral Agent, for the benefit of the Secured Parties, pursuant to the Security Agreement. Each Grantor hereby acknowledges and affirms that the rights and remedies of the Collateral Agent with respect to the Security Interest in the Patent Collateral 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. To the extent there is any inconsistency between this Patent Security Agreement and the Security Agreement, the Security Agreement shall control.

5. AUTHORIZATION TO SUPPLEMENT. If any Grantor shall obtain rights to any new patentable invention or become entitled to the benefit of any patent application or patent for any continuations, divisionals, continuations-in-part, reissues, or reexaminations of the patents or patent applications listed on Schedule I, the provisions of this Patent Security Agreement shall automatically apply thereto. The Grantors shall give prompt notice in writing to Collateral Agent with respect to any such new patent rights as required by the Security Agreement. Without limiting Grantors' obligations under this Section, Grantors hereby authorize the Collateral Agent to unilaterally modify this Patent Security Agreement by amending Schedule I to include any such new patent rights of Grantors. Notwithstanding the foregoing, no failure to so modify this Patent Security Agreement or amend Schedule I shall in any way affect, invalidate or detract from the Collateral Agent's continuing security interest in all Collateral, whether or not listed on Schedule I.

6. TERMINATION. This Patent Security Agreement shall terminate upon termination of the Security Agreement.

7. COUNTERPARTS. This Patent Security Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but all such separate counterparts shall together constitute but one and the same instrument. In proving this Patent Security Agreement in any judicial proceedings, it shall not be necessary to produce or account for more than one such counterpart signed by the party against whom such enforcement is sought. Any signatures delivered by a party by facsimile transmission or by e-mail transmission shall be deemed an original signature hereto.

8. GOVERNING LAW. **THIS PATENT SECURITY AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF NEW YORK.**

9. INTERCREDITOR AGREEMENT. Notwithstanding any provision to the contrary contained herein, the terms of this Patent Security Agreement, the Liens created hereby and the rights and remedies of the Collateral Agent hereunder are subject to, and governed by, the terms of the Intercreditor Agreement. In the event of any conflict or inconsistency between the provisions of the Intercreditor Agreement and this Patent Security Agreement, the provisions of the Intercreditor Agreement shall control.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, each 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.

MATRIX DESIGN GROUP, LLC

By: Cary P. Marshall
Name: Cary P. Marshall
Title: Vice President - Corporate Finance & Treasurer

ALLIANCE COAL, LLC

By: Cary P. Marshall
Name: Cary P. Marshall
Title: Vice President - Corporate Finance & Treasurer

ACCEPTED AND ACKNOWLEDGED BY:

JPMORGAN CHASE BANK, N.A.,
as Collateral Agent

By: 
Name: Peter S. Pradun
Title: Executive Director

SCHEDULE I
TO
PATENT SECURITY AGREEMENT

Grantor	Title	Country	Patent No. / Date	App. No. / Filed
Matrix Design Group, LLC	SYSTEM AND METHOD FOR POSITION DETECTION	AU	N/A	386244 20140725
Matrix Design Group, LLC	SYSTEM AND METHOD FOR POSITION DETECTION	EP	N/A	885753 20140725
Matrix Design Group, LLC	SYSTEM AND METHOD FOR POSITION DETECTION	US	9041546 20150526	14/212668 20140314
Matrix Design Group, LLC	SYSTEM AND METHOD FOR POSITION DETECTION	WO	N/A	2014US48118 20140725
Alliance Coal, LLC	SYSTEM AND METHOD FOR PROXIMITY DETECTION	US	8289170 20121016	12/432238 20090429
Alliance Coal, LLC	SYSTEM AND METHOD FOR TRACKING PERSONNEL AND EQUIPMENT	AU	266007 20121004	266007 20080613
Alliance Coal, LLC	SYSTEM AND METHOD FOR TRACKING PERSONNEL AND EQUIPMENT	CA	2690752 20151103	2690752 20080613
Alliance Coal, LLC	SYSTEM AND METHOD FOR TRACKING PERSONNEL AND EQUIPMENT	CN	101765786 20120704	80100862 20080613
Alliance Coal, LLC	SYSTEM AND METHOD FOR TRACKING PERSONNEL AND EQUIPMENT	DE	112008001636 20100805	112008001636 20080613
Alliance Coal, LLC	SYSTEM AND METHOD FOR TRACKING PERSONNEL AND EQUIPMENT	IN	N/A	4401 20080613
Alliance Coal, LLC	SYSTEM AND METHOD FOR TRACKING PERSONNEL AND EQUIPMENT	US	7843348 20101130	12/139268 20080613
Alliance Coal, LLC	SYSTEM AND METHOD FOR TRACKING PERSONNEL AND EQUIPMENT	ZA	8779 20100728	8779 20080613
Matrix Design Group, LLC	SYSTEM AND METHOD OF UTILIZING RF SIGNALING TO DETERMINE RANGE AND RELATIVE COORDINATES	US	N/A	15/222542 07/28/2016
Matrix Design Group, LLC	SYSTEM FOR DETECTING ANGLE OF ARTICULATION ON AN ARTICULATING MINING MACHINE	US	N/A	15/084801 20160330
Alliance Coal, LLC	REMOTE COMMAND AND CONTROL CENTER FOR LONGWALL MINING SYSTEM	US	N/A	15/385440
Alliance Coal, LLC	DOUBLE HEADED DRILL BIT FOR CONTINUOUS MINING MACHINE	US	N/A	15/371296