

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	ALASTAIR J. PATERSON	11/19/2015
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	JOY MM DELAWARE, INC.	
<b>Street Address:</b>	2751 CENTERVILLE ROAD	
<b>Internal Address:</b>	SUITE 342	
<b>City:</b>	WILMINGTON	
<b>State/Country:</b>	DELAWARE	
<b>Postal Code:</b>	19808	
<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	14473376
<b>CORRESPONDENCE DATA</b>		
<b>Fax Number:</b>	(414)271-6560	
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<b>ATTORNEY DOCKET NUMBER:</b>	051077-9244-US01	
<b>NAME OF SUBMITTER:</b>	MOLLY S. LAWSON	
<b>SIGNATURE:</b>	/molly s. lawson/	
<b>DATE SIGNED:</b>	11/23/2015	
<b>Total Attachments: 2</b>		
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source=18180239_051077-9244-US01_Executed_Assignment_-_as_filed#page2.tif		

## ASSIGNMENT

Pursuant to my obligation to Joy MM Delaware, Inc. (hereinafter referred to as "Assignee"), a Delaware corporation having its principal place of business at:

2751 Centerville Road, Suite 342  
Wilmington, DE 19808

and for other valuable and sufficient consideration, receipt whereof is hereby acknowledged, I:

Alastair J. Paterson  
50/59-67 Corrimal Street  
Wollongong, New South Wales 2500  
Australia

confirm my obligation to and hereby sell, assign and convey, unto Assignee, its successors and assigns, my entire right, title and interest -

(1) in and to inventions described in a patent application titled "DETECTING SUMP DEPTH OF A MINER" for which I filed United States Patent Application No. 14/473,376 (Atty. File No. 051077-9244-US01) (hereinafter the "U.S. utility patent application") which application claims the benefit of United States Provisional Patent Application No. 61/871,581, filed August 29, 2013, United States Provisional Patent Application No. 61/871,576, filed August 29, 2013, United States Provisional Patent Application No. 61/871,583, filed August 29, 2013 and United States Provisional Patent Application No. 61/871,588, filed August 29, 2013 (hereinafter the "U.S. provisional patent applications");

(2) in and to the U.S. utility patent application, and the U.S. provisional patent applications, in and to all other patent applications (including divisional, continuation, continuation-in-part, 35 U.S.C. §111(b) provisional, 35 U.S.C. §111(a), and reissue applications) based upon said inventions, and in and to the patent or patents to be granted thereon, to the full end of the term or terms for which said patent or patents may be granted;

(3) in and to all patent applications on said invention now or hereafter filed in countries foreign to the United States of America, and in and to any and all patents granted on said applications to the full end of the terms for which said patents may be granted; and

(4) under the International Convention in respect to the U.S. utility patent application and the U.S. provisional patent applications, and agree that any patent applications of any foreign countries which may be filed shall be filed in the name of my Assignee with a claim to priority based on either or both of the U.S. utility patent application and the U.S. provisional patent applications.

I hereby agree that I will, upon demand of Assignee, its successors or assigns, and without further consideration to me, execute any and all papers that may be necessary, or deemed by Assignee, its successors or assigns, to be necessary, to a complete fulfillment of the intent and purposes of this Assignment, it being understood that any expense incident to the execution of such papers shall be paid by Assignee, its successors and assigns, and not by me.

The Commissioner of Patents and Trademarks of the United States is hereby authorized and requested to issue said patent or patents to Assignee.

November 19th 2015  
Date

  
Alastair J. Paterson