505355873 03/04/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 EPAS ID: PAT5402661

Stylesheet Version v1.2

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JADE PETTERSEN	02/25/2019
EMMA MCPHAIL	02/25/2019
JEFF GORE	02/25/2019

RECEIVING PARTY DATA

Name:	DYNO NOBEL ASIA PACIFIC PTY LIMITED	
Street Address:	LEVEL 8	
Internal Address:	FRESH WATER PLACE	
City:	SOUTHBANK, VICTORIA	
State/Country:	AUSTRALIA	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16242836

CORRESPONDENCE DATA

Fax Number: (801)578-6999

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: 801-328-3131

Email: cristi.bills@stoel.com STOEL RIVES LLP - SLC **Correspondent Name:**

Address Line 1: 201 SOUTH MAIN STREET, SUITE 1100

Address Line 2: ONE UTAH CENTER

Address Line 4: SALT LAKE CITY, UTAH 84111

ATTORNEY DOCKET NUMBER: 68334/201 NAME OF SUBMITTER: MATTHEW S. BETHARDS SIGNATURE: /Matthew S. Bethards/ **DATE SIGNED:** 03/04/2019

Total Attachments: 2

source=201_Assignment#page1.tif source=201_Assignment#page2.tif

> **PATENT** REEL: 048492 FRAME: 0496 505355873

ASSIGNMENT

WHEREAS, Jade Pettersen, of Mt. Thorley Technical Centre, 83 Woodland Road, PMB 17, Singleton, NSW, AU 2330, Emma McPhail, of Mt. Thorley Technical Centre, 83 Woodland Road, PMB 17, Singleton, NSW, AU 2330, and Jeff Gore, of Mt. Thorley Technical Centre, 83 Woodland Road, PMB 17, Singleton, NSW, AU 2330 (each hereinafter "ASSIGNOR"), have made inventions described in a United States patent application entitled EXPLOSIVE COMPOSITIONS FOR USE IN REACTIVE GROUND AND RELATED METHODS, filed with the United States Patent and Trademark Office on January 8, 2019, and allotted Application No. 16/242,836; and

WHEREAS, ASSIGNOR believes himself or herself to be the original inventor or an original joint inventor of the subject matter claimed in said patent application; and

WHEREAS, Dyno Nobel Asia Pacific Pty Limited, an Australia corporation, having a place of business at Level 8, Freshwater Place. Southbank, Victoria, Australia ("ASSIGNEE"), is desirous of acquiring an interest therein:

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR, hereby assigns and transfers to ASSIGNEE the full and exclusive right, title, and interest in and to said inventions, said patent application, and any and all patent rights and letters patent for said inventions in the United States of America and elsewhere throughout the world, including provisional rights, foreign patent priority rights, and the right to apply for patents in ASSIGNOR's name or in the name of ASSIGNEE and further including all divisions and continuations of said application and of any foreign patent applications, and all reissues and extensions of patent rights and letters patent for said inventions, all to be held and enjoyed by ASSIGNEE for its own use and benefit, and by its successors and assigns for their own use and benefit, for the full duration of the terms for which patent rights and letters patent may be granted in this or any foreign country, and covenants that ASSIGNOR has full right so to do, and agrees that ASSIGNOR will communicate to ASSIGNEE and its successors and assigns, any facts known to ASSIGNOR respecting said inventions, and testify in any legal proceeding, sign all lawful papers, execute all lawful divisional, continuation, and reissue applications, make all rightful declarations or oaths, and do everything lawfully possible to aid ASSIGNEE and its successors and assigns, to obtain and enforce proper patent protection for said inventions in the United States of America and elsewhere throughout the world.

100193723.1 0068334-00201

PATENT REEL: 048492 FRAME: 0497

	the respective filing date(s) set forth above.
Executed at MAThorky, NSW	this Still day of February 20%
Ŭ.	an (.
	Jade Pettersen
Executed at NAS TWO 100	Six on this 25th day of formance 201
The state of the s	why, this 25th day of February 20)
	En Phail
	Emma McPhail
- Executed at MAThodew AS	(A) , this 25th day of Februsser, 20
	Jeff Gore

STOEL RIVES LLP
One Utah Center Suite 1100
201 S Main Street
Salt Lake City, UT 84111-4904
Telephone: (801) 328-3131
Facsimile: (801) 578-6999

Attorney Docket No.: 68334/201

RECORDED: 03/04/2019