

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT3031006

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
STEVEN E. MOORE	09/16/2014
JOHN A. ARRELL JR.	09/16/2014
RECEIVING PARTY DATA	
Name:	ALLIANT TECHSYSTEMS INC.
Street Address:	7480 FLYING CLOUD DRIVE
City:	MINNEAPOLIS
State/Country:	MINNESOTA
Postal Code:	55344
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	14491246
CORRESPONDENCE DATA	
Fax Number:	(801)531-9168
<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:	801-532-1922
Email:	djpfeil@traskbritt.com
Correspondent Name:	TRASKBRITT, P.C./ ALLIANT TECH SYSTEMS
Address Line 1:	P.O. BOX 2550
Address Line 4:	SALT LAKE CITY, UTAH 84110
ATTORNEY DOCKET NUMBER:	2507-12497US (22972-US)
NAME OF SUBMITTER:	JOSEPH A. WALKOWSKI
SIGNATURE:	/Joseph A. Walkowski/
DATE SIGNED:	09/19/2014
Total Attachments: 3	
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ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned ASSIGNOR does hereby:

SELL, ASSIGN AND TRANSFER to Alliant Techsystems Inc. ("ASSIGNEE"), a corporation of the state of Delaware, having a place of business at 7480 Flying Cloud Drive, Minneapolis, Minnesota 55344, the entire right, title and interest for the United States and all foreign countries in and to any and all improvements which are disclosed in the Application for United States Letters Patent, which has been executed by each undersigned ASSIGNOR concurrently herewith entitled **METHODS AND APPARATUS FOR DOWNHOLE PROPELLANT-BASED STIMULATION WITH WELLBORE PRESSURE CONTAINMENT**, such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent or the legal equivalent thereof that have been or may be filed in the United States and all foreign countries relating to any of such improvements; all original, reexamined and reissued patents that have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application made in the United States;

AUTHORIZE the ASSIGNEE to apply for and receive any and all United States and foreign patents relating to such improvements in its own name;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to and in the name of the ASSIGNEE;

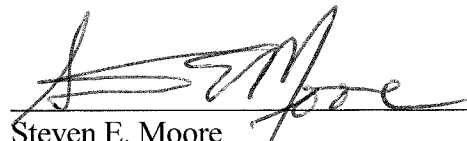
WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement or encumbrance affecting the rights and property herein conveyed has been or will be made or entered into by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the ASSIGNEE, to carry out in good faith the intent and purpose of this Assignment, to execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications relating to any and all such improvements; to execute all rightful oaths, declarations, assignments, powers of attorney and other papers; to communicate to the ASSIGNEE all facts and provide to the ASSIGNEE all documents and things known and accessible to the undersigned relating to such improvements and the history thereof, and testify as to the same in any interference, litigation or other proceeding relating thereto; and generally to do everything possible that the ASSIGNEE shall

consider desirable for vesting title to such improvements in the ASSIGNEE, and to secure, maintain, defend and enforce valid and enforceable patent protection for such improvements;

AGREE AND ACKNOWLEDGE that the SALE, ASSIGNMENT AND TRANSFER of rights and property set forth herein is and shall be IRREVOCABLE and BINDING upon the heirs, assigns, representatives and successors of each undersigned ASSIGNOR and EXTEND to the successors, assigns and nominees of the ASSIGNEE.

ASSIGNOR:




Steven E. Moore
Residing at: 102 Patton Way, Elkton, MD 21921

Date: 16 Sep 14

COUNTY OF Cecil)
: ss.
STATE OF Maryland)

On this 16 day of Sept., 2014, before me personally appeared STEVEN E. MOORE, to me known to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same.



Notary Public in and for said County and State

My Commission Expires:

10/19/2017

ASSIGNOR:



John A. Arrell, Jr.

Residing at: 57 Pickwick Lane, Lincoln University, PA 19352

Date: 9/16/14

COUNTY OF Cecil)
: ss.
STATE OF MARYLAND)

On this 16 day of Sept., 2014, before me personally appeared JOHN A. ARRELL, JR., to me known to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he/she executed the same.



Notary Public in and for said County and State

My Commission Expires:

10/19/2017
