

10-19-1998

FORM PTO-1565

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HEET

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

100852049

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

PULSE SCIENCES, INC.  
600 McCormick Street  
San Leandro, CA 94577

## 2. Name and address of receiving party(ies):

Name: THE BANK OF NOVA SCOTIAas Administrative Agent

Internal Address: \_\_\_\_\_

Additional names(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

- ☐ Assignment ☐ Merger
- ☒ Security Agreement ☐ Change of Name
- ☐ Other \_\_\_\_\_

Execution Date: July 29, 1998Street Address: 600 Peachtree Street, Suite 2700City: Atlanta State: GA ZIP: 30308Additional name(s) & address(es) attached? ☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

Application Numbers:

08/623,133

Registration Numbers:

4,870,368 5,311,566 5,188,177

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Nora A. WhitescarverInternal Address: Mayer, Brown & PlattStreet Address: 2000 Pennsylvania Ave., NWSuite 3900City: Washington State: D.C. ZIP: 200066. Total number of applications and patents involved: 47. Total fee (37 CFR 3.41): \$160.00☒ Enclosed (Check No. 16144)☐ Authorized to be charged to deposit account

## 8. Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

10/19/1998 TTOM11 00000050 4870368

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160.00 DP

DO NOT USE THIS SPACE

## 9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Nora A. Whitescarver  
Name of Person Signing

  
Signature
October 14, 1998  
Date

Total number of pages including cover sheet, attachments and documents : 6

PATENT  
REEL: 9507 FRAME: 0222

PATENT SECURITY AGREEMENT

This PATENT SECURITY AGREEMENT (this "Agreement"), dated as of July 29, 1998, is made between PULSE SCIENCES, INC., a California corporation (the "Grantor"), and THE BANK OF NOVA SCOTIA ("Scotiabank"), in its capacity as Administrative Agent for each of the Secured Parties;

W I T N E S S E T H :

WHEREAS, pursuant to a Credit Agreement, dated as of July 29, 1998 (as amended, supplemented, amended and restated or otherwise modified from time to time, the "Credit Agreement"), among THE TITAN CORPORATION, a Delaware corporation (the "Borrower"), the various financial institutions as are or may become parties thereto (the "Lenders"), Scotiabank, as Administrative Agent, and Imperial Bank, as Documentation Agent, the Lenders and the Issuers have extended Commitments to make Credit Extensions to the Borrower;

WHEREAS, in connection with the Credit Agreement, the Grantor has executed and delivered a Subsidiary Security Agreement, dated as of July 29, 1998 (as amended, supplemented, amended and restated or otherwise modified from time to time, the "Security Agreement");

WHEREAS, as a condition precedent to the making of the Credit Extensions (including the initial Credit Extension) under the Credit Agreement, the Grantor is required to execute and deliver this Security Agreement;

WHEREAS, the Grantor has duly authorized the execution, delivery and performance of this Security Agreement; and

WHEREAS, it is in the best interests of the Grantor to execute this Security Agreement inasmuch as the Grantor will derive substantial direct and indirect benefits from the Credit Extensions made from time to time to the Borrower by the Lenders and the Issuers pursuant to the Credit Agreement;

NOW THEREFORE, for good and valuable consideration the receipt of which is hereby acknowledged, and in order to induce the Lenders and the Issuers to make Credit Extensions (including the initial Credit Extension) to the Borrower pursuant to the Credit Agreement, the Grantor agrees, for the benefit of each Secured Party, as follows.

SECTION 1. Definitions. Unless otherwise defined herein or the context otherwise requires, terms used in this Agreement, including its preamble and recitals, have the meanings provided (or incorporated by reference) in the Security Agreement.

SECTION 2. Grant of Security Interest. For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, to secure all of the Secured Obligations, the Grantor does hereby mortgage, pledge and hypothecate to the Administrative Agent, and grant to the Administrative Agent a security interest in, for its benefit and the benefit of each Secured Party, all of the following property (the "Patent Collateral"), whether now owned or hereafter acquired or existing by it:

(a) all letters patent and applications for letters patent throughout the world, including all patent applications in preparation for filing anywhere in the world and including each patent and patent application referred to in Attachment 1 attached hereto;

(b) all reissues, divisions, continuations, continuations-in-part, extensions, renewals and reexaminations of any of the items described in clause (a);

(c) all patent licenses, including each patent license referred to in Attachment 1 attached hereto; and

(d) all proceeds of, and rights associated with, the foregoing (including license royalties and proceeds of infringement suits), the right to sue third parties for past, present or future infringements of any patent or patent application, including any patent or patent application referred to in Attachment 1 attached hereto, and for breach or enforcement of any patent license, including any patent license referred to in Attachment 1 attached hereto, and all rights corresponding thereto throughout the world.

SECTION 3. Security Agreement. This Agreement has been executed and delivered by the Grantor for the purpose of registering the security interest of the Administrative Agent in the Patent Collateral with the United States Patent and Trademark Office and corresponding offices in other countries of the world. The security interest granted hereby has been granted as a supplement to, and not in limitation of, the security interest granted to the Administrative Agent for its benefit and the benefit of each Secured Party under the Security Agreement. The Security Agreement (and all rights and remedies of the Administrative Agent and each Secured Party thereunder) shall remain in full force and effect in accordance with its terms.

SECTION 4. Release of Security Interest. Upon the Termination Date, the Administrative Agent shall, at the Grantor's expense, execute and deliver to the Grantor all instruments and other documents as may be necessary or proper to release the lien on and security interest in the Patent Collateral which has been granted hereunder.

SECTION 5. Acknowledgment. The Grantor does hereby further acknowledge and affirm that the rights and remedies of the Administrative Agent with respect to the security

interest in the Patent Collateral granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which (including the remedies provided for therein) are incorporated by reference herein as if fully set forth herein.

SECTION 6. Loan Document, etc. This Agreement is a Loan Document executed pursuant to the Credit Agreement and shall (unless otherwise expressly indicated herein) be construed, administered and applied in accordance with the terms and provisions of the Credit Agreement.

SECTION 7. Counterparts. This Agreement may be executed by the parties hereto in several counterparts, each of which shall be deemed to be an original and all of which shall constitute together but one and the same agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed and delivered by their respective officers thereunto duly authorized as of the day and year first above written.


PULSE SCIENCES, INC.

By

  
Name: *Eric DeMarco*  
Title: *Assistant Financial Officer*

THE BANK OF NOVA SCOTIA, as  
Administrative Agent

By

  
Name: Christopher Osborn  
Title: Relationship Manager

# Patent Activity

Name	Inventor(s)	Company	Description	App. Ser. No. App. Date	Patent No.		Foreign	Notes
					Iss.	Date		
Compact, Lightweight, High-Current Electron Accelerator (Spiral Line Accelerator)	Sidney D. Putnam	The Titan Corporation (PSI)	Apparatus for accelerating high-current pulses of electrons in a compact space to impart considerable energy to electrons.	166,661	4,870,368	9/26/89		
Electron Beam Countermine Method and System	Sidney D. Putnam	The Titan Corporation (PSI)	A system for neutralizing a mine which includes an induction synchrotron accelerator for providing a high-kinetic-energy pulsed electron beam and a system for directing the high-kinetic-energy beam to the mine to neutralize the mine.	08/623,133				File 21-94
In-Situ X-Ray Treatment of Organically Contaminated Material	Randy D. Curry	The Titan Corporation (PSI)	A method of treating organically contaminated material through in-situ irradiation from an x-ray converter.	07/949,777	5,311,566	5/10/94		File 21-24
Magnetic-Pulse Sealing of Oil-Well-Head Pipe	Randy D. Curry	The Titan Corporation (PSI)	A method of sealing an oil-well-head pipe having a metal casing.	07/730,668	5,188,177	2/23/93		Abandoned Patent expired 2/23/97 File 21-4