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Form PTO-1595

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U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office

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

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

PHOTON CONTROL TECHNOLOGIES, INC.

8-15-02

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

## 3. Nature of conveyance:

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

Execution Date: JULY 12, 2002

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

Name: CAPROCK RESOURCES GROUP, LLC

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

Street Address: 624 SOUTH BOSTON

SUITE 300

City: TULSA State: OK Zip: 74119

Additional 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: N/A

A. Patent Application No(s) \_\_\_\_\_

SEE LIST ATTACHED

B. Patent No(s) \_\_\_\_\_

SEE LIST ATTACHED

Additional numbers attached? ☒ Yes ☐ No

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

Name: ROBERT G. SBARDELLATTI, ESQ.

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

SHEPPARD, MULLIN, RICHTER  
Street Address: & HAMPTON, LLP

501 WEST BROADWAY, 19th FLOOR

City: SAN DIEGO State: CA Zip: 92101

## 6. Total number of applications and patents involved: 7

7. Total fee (37 CFR 3.41).....\$ 280.00

☒ Enclosed☐ Authorized to be charged to deposit account

## 8. Deposit account number: \_\_\_\_\_

DO NOT USE THIS SPACE

## 9. Signature.

ROBERT G. SBARDELLATTI, ESQ.

Name of Person Signing

Signature

Date

July 31, 2002

Total number of pages including cover sheet, attachments, and documents: 10

08/16/2002 6TON11 00000040 60186104

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280.00 OP

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents & Trademarks, Box Assignments  
Washington, D.C. 20231PATENT  
REEL: 013177 FRAME: 0834

Conveying party: Photon Control Technologies

**Continuation to**  
**Recordation Form Cover Sheet Patents Only**

Item 4. Application numbers or patent numbers (continued):

A. Patent application numbers:

60/186,104

60/187,363

60/360,433

60/356,274

B. Patent numbers:

4,763,272

5,121,453

5,652,819

## SECURITY AGREEMENT

THIS SECURITY AGREEMENT (the "Agreement"), is made and entered into as of the 17 day of July, 2002, between Photon Control Technologies, Inc., a Michigan corporation ("Company"), debtor hereunder and Caprock Resources Group, LLC, an Oklahoma limited liability company ("Holder"), a secured party hereunder, and is the Security Agreement referred to in that certain Promissory Note dated concurrently herewith (the "Note"), by and between Holder and Company. The terms used in this Agreement shall have the meanings ascribed to such terms pursuant to the Note, unless otherwise defined herein.

### 1. Grant of Security Interest Collateral.

1.1 Company does hereby grant to Holder a security interest in and to each of the following:

1.1.1 The assets of Company specifically listed in Exhibit "A" hereto (the "Assets");

All property of Company heretofore mentioned which is assigned or hereafter is assigned to Holder as security or in which Holder now has or hereafter acquires a security interest may be hereinafter sometimes referred to as the "Collateral."

### 2. Obligations Secured

2.1 The Collateral secures the payment and performance of all present and future liabilities and obligations, absolute or contingent, from Company to Holder or its successors arising under the Note.

2.2 All obligations, indebtedness and liabilities heretofore mentioned may be hereinafter sometimes collectively referred to as the "Obligation."

### 3. Covenants

3.1 Company hereby covenants and agrees as follows:

3.1.1 Company shall, at its own expense, defend any action or proceeding which may affect the security interest of Holder in, or the title of Company to, any of the Collateral and take all necessary steps to preserve its rights and the rights of Holder in and to the Collateral.

3.1.2 Company shall pay before delinquency all taxes and assessments levied against the Collateral and all sums secured by liens permitted by this Agreement, if any.

3.1.3 Company shall promptly notify Holder of any attachment or other legal process levied against any of the Collateral and any information

received by Company relative to the Collateral which may in any way affect the value of the Collateral or the rights or remedies of Holder in respect thereto.

3.1.4 Company shall promptly notify Holder of each location at which the Collateral is or will be kept, other than for temporary processing, storage or similar purposes and of any removal thereof to a new location.

3.1.5 Company shall promptly upon demand of Holder or its successor execute and deliver to Holder or its successor any notices, financing and continuation statements and other documents and papers as Holder or its successor may require in order to affirm, effectuate or further assure the security interest of Holder in the Collateral, specifically including, but not limited to, a UCC-1 Financing Statement.

3.1.6 Until the Obligation is satisfied in full and the security interest of Holder in the Collateral is released, and except in connection with Company's obtaining any Senior Indebtedness, Company shall not sell, transfer, convey or encumber any of the Collateral without the prior written consent of Holder.

3.1.7 Company shall pay when due all sums secured hereby and will perform each and every covenant and condition of this Agreement.

3.18 Company shall keep insurance coverage on the Collateral, shall make Holder a loss payee on the insurance, and shall provide Holder evidence of same.

#### 4. Restrictions

Until the Obligation is satisfied in full and the security interest of Holder in the Collateral is released, Company shall not create any security interest in, mortgage, or otherwise encumber any Collateral or permit the same to be subject to any lien, attachment, execution, encumbrance or other legal or equitable process of any kind or character, except in favor of Holder.

#### 5. Default; Remedies

5.1 As used in this Agreement "default" means any of the following:

5.1.1 The failure of Company to perform or observe any covenant, provision or agreement set forth in this Agreement (including without limitation, in the event Company shall take, or participate in, any action prohibited by, or contrary to, the restrictions set forth in Section 4 herein) or in the Note.

5.1.2 Any Event of Default under the Note.

5.2 In the event of any default as hereinabove defined and the failure of the Company or a preferred shareholder of the Company to cure within fifteen (15) days after written notice is received by each of them, Holder or its successor may, at

its sole option and without further demand or notice to Company, do any one or more of the following:

5.2.1 Declare all or any portion of the sums secured hereby immediately due and payable.

5.2.2 Immediately take possession of the Collateral wherever it may be found, or require Company to assemble the Collateral and make it available to Holder or its successor at a place designated by Holder or its successor which is reasonably convenient to the parties.

5.2.3 Prior to any disposition, Holder or its successor may, at its option, cause any of the Collateral to be repaired or reconditioned in such manner and to such extent as Holder or its successor may deem advisable.

5.2.4 Proceed with the foreclosure of Holder's or its successor's security interest and sale of the Collateral in any manner permitted by law or provided for herein. Any public foreclosure sale shall be held in Escondido, California.

5.2.5 Exercise any remedies available to a secured party under the California Uniform Commercial Code or exercise any rights provided herein.

5.3 Holder shall have the right to enforce one or more remedies hereunder successively or concurrently, and any such action shall not prevent Holder from pursuing any further remedy which it may have hereunder or by law.

5.4 Holder shall be entitled to apply the proceeds of any sale or other disposition of the Collateral in the following order: (i) to the payment of all of its reasonable costs incurred in storing, preparing for sale, or selling all or any part of the Collateral and to the payment of attorney's fees, and (ii) next, toward payment of the Obligation as provided in this Agreement. Company shall remain liable for any deficiency remaining after disposition of the Collateral if Holder would be entitled to a deficiency absent an agreement to the contrary. The statute of limitations on all claims of Holder against Company shall be tolled during any and all periods when Holder is prevented from exercising any remedy under the provisions of Section 6.2.

## 6. Release of Security

6.1 After the Obligation shall have been paid in full or discharged and within ten (10) days of Company's written demand, Holder or its successor will cause to be delivered to Company, or order, (i) a written termination statement in which Holder or its successors shall declare that they no longer claim any security interest hereunder and which shall otherwise conform to the requirement of Division 9, California Uniform Commercial Code-Secured Transactions, and (ii) any other documents or instruments executed by Company in accordance with the provisions of this Agreement which Company shall request to be returned.

7. Notices

7.1 Any and all notices or other communications which either party shall be required or may elect to provide the other party pursuant to this Agreement shall be in writing unless otherwise so provided. Any written notice or communication shall be personally delivered or telecopied or mailed certified mail, return receipt requested to the other party at the applicable address set forth below or at such other address as either party shall designate in accordance with the provisions of this Paragraph.

If to Company to: Photon Control Technologies, Inc.  
A Michigan Corporation

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

With a copy to: Robert G. Sbardellati, Esq.  
Sheppard, Mullin, Richter & Hampton, LLP  
501 West Broadway, 19<sup>th</sup> Floor  
San Diego, CA 92101

And copies to: XR Ventures

\_\_\_\_\_  
\_\_\_\_\_

and SBV

\_\_\_\_\_  
\_\_\_\_\_

If to Holder, to: Caprock Resources Group, LLC  
An Oklahoma limited liability company

\_\_\_\_\_  
\_\_\_\_\_

7.2 Delivery or service of any written notice or communication shall be deemed received and completed (i) if personally delivered, upon such delivery, (ii) if telecopied, upon acknowledgment thereof or (iii) if mailed, upon receipt by the other party, but in any event within 72 hours after transmission.

8. General Provisions

8.1 Time is of the essence of this Agreement.

8.2 In the event any attorney is required to be employed by Holder, with regard to any legal action, arbitration or other proceeding brought for the enforcement or interpretation of this Agreement, or because of an alleged dispute, breach, default or misrepresentation with respect to any provisions of this Agreement,

then Company shall bear the costs and expenses, including attorney fees, whether at trial or upon appeal. For purposes of this Paragraph, attorney fees shall include, without limitation, fees incurred in the following: post-judgment motions; contempt proceedings; garnishment, levy, and debtor and third party examinations; discovery; and bankruptcy litigation. Such fees will be collateralized and collectible as a part of the Note and Security Agreement.

8.3 This Agreement, together with the Notes and the instruments referred to herein, contains the entire agreement between the parties relating to the Collateral and all prior and contemporaneous agreements, understandings, representations and statements, oral or written, are merged herein.

8.4 No modification, amendment, discharge or change of this Agreement shall be valid unless same be in writing and signed by all the parties hereto.

8.5 No course of dealings between the parties, nor any failure, neglect or delay by Holder or its successor in exercising any of its rights, powers or remedies hereunder shall operate as a waiver, forfeiture or abandonment of any such right, power or remedy except only to the extent expressly provided in writing signed by Holder or its successor.

8.6 If any provision of this Agreement or the application thereof is hereafter held invalid or unenforceable, the remainder of this Agreement shall not be affected thereby and to this end only the provisions of this Agreement are declared severable.

8.7 The use herein of (i) the neuter gender includes the masculine and the feminine and (ii) the singular number includes the plural, whenever the context so requires.

8.8 Captions in this Agreement are inserted for convenience of reference only and do not define, decide or limit the scope or the intent of this Agreement or any of the terms hereof.

8.9 All terms of this Agreement shall be binding upon and inure to the benefit and/or burden of and be enforceable by the parties hereto and their respective legal representatives, successors and assigns.

8.10 This Agreement shall be construed and enforced in accordance with the laws of the State of California.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

Company:

PHOTON CONTROL TECHNOLOGIES, INC.,  
a Michigan corporation

By: Jacques Pelti

Authorized Representative

Holder:

CAPROCK RESOURCES GROUP, LLC  
An Oklahoma limited liability company

By: Ken Zond, Operating Mgr



## **PCT INTELLECTUAL PROPERTY SUMMARY**

June 11, 2002

License agreements have been secured for three patents from the licensor, which cover the manufacture of the PCT WDM couplers. The second of these three patents is particularly broad. Because the patent covers the fundamentals of obtaining polarization independence in a fused coupler, it is believed to be virtually impossible to make such a coupler without infringing that patent.

The three patents are:

- 1) 4,763,272, August 9, 1988; Automated and Computer Controlled Precision Method of Fused Elongated Optical Fiber Coupler Fabrication.
- 2) 5,121,453, June 9, 1992; Polarization Independent Narrow Channel Wavelength Division Multiplexing Fiber Coupler and Method for Producing Same.
- 3) 5,652,819, July 29, 1997; Method for Tuning Fiber Optic Couplers and Multiplexers.

Part of the licensing agreement includes a Cooperative R&D Agreement (CRADA) between the Company and the licensor. This is a no cost contract under which the inventors of the couplers are made available to the Company to assist in the installation and operation of the new production facility. These key people are also available as consultants.

The license PCT negotiated will grant to the Company the right to develop future commercial applications of the WDM coupler and will not restrict the Company from patenting any design or manufacturing innovations it develops, whether or not related to WDM technology.

PCT's proprietary development of additional unique devices goes well beyond the basic licensor patents and involves intellectual property that is being patented by the Company itself. To date four applications have been filed. Two of these patents focus on unique extensions of the basic WDM coupler technology to a variety of dense components such as DWDM'S and OADM's. Two others focus on unique compact multiple component packages.

These applications are:

- 1) U.S. Provisional Patent Application No. 60/186,104, Filed March 3, 2000 corresponding to U.S. Patent Application No. 09/796,181; Hybrid Wavelength Division Multiplexer and Add/Drop Device Using Fiber Optic Polarization Independent Couplers and Bragg-Evanescent-Couplers.

- 2) U.S. Application No. 60/186,104 was filed internationally as PCT/US01/06352 with an international filing date of February 28, 2001 and a priority date of March 3, 2000.
- 3) U.S. Provisional Patent Application No. 60/187,363, Filed March 6, 2000 corresponding to U.S. Patent Application No. 09/799,461; Polarization Independent Coupler (PINC) With Bragg-Evanescence-Coupler (BEC) Grating.
- 4) U.S. Application No. 60/187,363 was filed internationally as PCT/US01/40257 with an international filing date of March 6, 2001 and a priority date of March 3, 2000.
- 5) U.S. Provisional Patent Application No. 60/360,433, Filed Feb 28, 2002, Fiber Optic Assembly.
- 6) U.S. Provisional Patent Application No. 60/356,274, Filed Feb 12, 2002., Compact Fiber Optic Assembly

PCT's patent council is Mr. Don Stout of:

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