

RECORDATION FORM COVER SHEET
TRADEMARKS ONLY

To the director of the U. S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)/Execution Date(s):

Ion Geophysical Corporation

- Individual(s)
- General Partnership
- Corporation-State
- Other: _____
- Association
- Limited Partnership

Citizenship (see guidelines) Delaware

Execution Date(s) August 22, 2014

Additional names of conveying parties attached? Yes No

2. Name and address of receiving party(ies)

Additional names, addresses, or citizenship attached? Yes

No

Name: PNC Bank, National Association, as Agent

Internal Address: _____

Street Address: 2100 Ross Avenue, Suite 1850

City: Dallas

State: Texas

Country: USA

Zip: 75201

Association Citizenship U.S.A.

General Partnership Citizenship _____

Limited Partnership Citizenship _____

Corporation Citizenship

Other Citizenship

If assignee is not domiciled in the United States, a domestic representative designation is attached. Yes No
(Designations must be a separate document from assignment)

3. Nature of conveyance:

- Assignment
- Security Agreement
- Other: _____
- Merger
- Change of Name

4. Application number(s) or registration number(s) and identification or description of the Trademark.

A. Trademark Application No.(s) SEE SCHEDULE A ANNEXED HERETO

B. Trademark Registration No.(s) SEE SCHEDULE A ANNEXED HERETO

Additional sheet(s) attached? Yes No

C. Identification or Description of Trademark(s) (and Filing Date if Application or Registration Number is unknown)
SEE SCHEDULE A ANNEXED HERETO

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

Name: Susan O'Brien

Internal Address: CT Lien Solutions

Street Address: 187 Wolf Road - Suite 101

City: Albany

State: New York

Zip: 12205

Phone Number: 800-342-3676

Fax Number: 800-962-7049

Email Address: cls_udsalbanv@watterskiwyer.com

6. Total number of applications and registrations involved: 29

7. Total fee (37 CFR 2.6(b)(6) & 3.41) \$740.00

- Authorized to be charged by credit card
- Authorized to be charged to deposit account
- Enclosed

8. Payment information:

a. Credit Card Last 4 Numbers 0974

Expiration Date 3/17

b. Deposit Account Number _____

Authorized User Name: _____

9. Signature: _____

Signature

8/22/2014
Date

Michael G. Regina
Name of Person Signing

Total number of pages including cover sheet, attachments, and document. 12

Documents to be recorded (including cover sheet) should be faxed to (703) 306-6895, or mailed to: Mail Stop Assignment Recordation Services, Director of the USPTO, P. O. Box 1450, Alexandria, VA 22313-1450

OP \$715.00 85522411

ADDITIONAL NAMES OF CONVEYING PARTIES

I/O Marine Systems, Inc.	Corporation	Louisiana
GX Technology Corporation	Corporation	Texas
Ion Exploration Products (U.S.A.), Inc.	Corporation	Delaware

**SCHEDULE A
TO
TRADEMARKS ONLY RECORDATION**

TRADEMARKS AND TRADEMARK APPLICATIONS

TRADEMARKS

Mark	Country	Owner	Federal Registration No.	Registration Date
IO and design	USA	INPUT/OUTPUT, INC	931,732	4/4/1972
GEOCON-REED	USA	INPUT/OUTPUT, INC	1,347,388	7/9/1985
Digicourse dolphin logo	USA	INPUT/OUTPUT, INC	1,900,455	6/20/1995
I/O logo	USA	INPUT/OUTPUT, INC	1,759,593	12/1/1992
I/O SYSTEM TWO	USA	INPUT/OUTPUT, INC	1,817,371	12/1/1992
PRESEIS	USA	ION GEOPHYSICAL CORPORATION	2,102,677	10/7/1997
FATHOMO	USA	ION GEOPHYSICAL CORPORATION	2,677,071	1/21/2003
VECTORSEIS	USA	ION GEOPHYSICAL CORPORATION	2,472,270	7/24/2001
SPRINT	USA	ION GEOPHYSICAL CORPORATION	3,211,015	2/20/2007
DIGICOURSE	USA	ION GEOPHYSICAL CORPORATION	1,811,957	12/21/1993
ORCA	USA	INPUT/OUTPUT, INC	3,424,277	6/6/2008
ION (word)	USA	ION GEOPHYSICAL CORPORATION	3,828,674	8/3/2010
ION GEOPHYSICAL	USA	ION GEOPHYSICAL CORPORATION	4,204,475	9/11/2012
ION Logo	USA	ION GEOPHYSICAL CORPORATION	3,763,728	3/23/2010
CHARGED TO INNOVATE. DRIVEN TO SOLVE.	USA	ION GEOPHYSICAL CORPORATION	4,302,215	3/12/2013
DIGIFIN	USA	ION GEOPHYSICAL CORPORATION	3,794,007	5/25/2010
DIGIBIRD	USA	ION GEOPHYSICAL CORPORATION	3,794,014	5/25/2010
CHARGED WITH INNOVATION	USA	ION GEOPHYSICAL CORPORATION	3,769,248	3/30/2010

3424463.1

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**TRADEMARK
REEL: 005350 FRAME: 0730**

Mark	Country	Owner	Federal Registration No.	Registration Date
GEOVENTURES	USA	ION GEOPHYSICAL CORPORATION	4,248,567	11/27/2012
PRIMUS	USA	GX TECHNOLOGY CORPORATION	3,434,755	5/27/2008
GX TECHNOLOGY	USA	GX TECHNOLOGY CORPORATION	3,732,046	12/29/2009
OPTIMUS	USA	GX TECHNOLOGY CORPORATION	3,434,756	5/27/2008
SIRIUS	USA	GX TECHNOLOGY CORPORATION	3,434,757	5/27/2008
ULTIMUS	USA	GX TECHNOLOGY CORPORATION	3,471,843	6/22/2008
GULFSPAN	USA	GX TECHNOLOGY CORPORATION	3,553,314	12/30/2008
AFRICASPAN	USA	GX TECHNOLOGY CORPORATION	3,732,368	12/29/2009
INDIASPAN	USA	GX TECHNOLOGY CORPORATION	3,732,384	12/29/2009
WIBAND	USA	ION GEOPHYSICAL CORPORATION	4,598,102	8/19/2014

TRADEMARK APPLICATIONS

Mark	Country	Owner	Application Number	Application Date
CALYPSO	USA	ION GEOPHYSICAL CORPORATION	85,522,411	6/12/2012

TRADEMARK SECURITY AGREEMENT

This **TRADEMARK SECURITY AGREEMENT** (this "**Trademark Security Agreement**"), dated as of August 22, 2014 is made by ION GEOPHYSICAL CORPORATION, formerly known as Input/Output, Inc. ("**Geophysical**"), I/O MARINE SYSTEMS, INC. ("**Marine**"), GX TECHNOLOGY CORPORATION ("**GXT**") and ION EXPLORATION PRODUCTS (U.S.A.), INC. ("**Exploration**" and together with Geophysical, Marine and GXT, collectively, the "**Grantors**", and each individually, a "**Grantor**"), in favor of PNC BANK, NATIONAL ASSOCIATION ("**Grantee**"), as agent for the financial institutions which are now or which hereafter become a party (collectively, the "**Lenders**" and each individually, a "**Lender**") to that certain Revolving Credit and Security Agreement (as in effect on the date hereof and as amended, modified and supplemented from time to time, the "**Credit Agreement**"), dated of even date hereof, by and among Grantors, Grantee and Lenders.

WHEREAS, pursuant to the Credit Agreement, the Lenders have extended and may extend certain loans and other financial accommodations to the Grantors;

WHEREAS, under the terms of the Credit Agreement, the Grantors have granted to Grantee a security interest in, among other property, the intellectual property of the Grantors; and

WHEREAS, the Grantors have agreed to execute and deliver this Trademark Security Agreement for recording with national, federal and state government authorities, including, but not limited to, the United States Patent and Trademark Office ("**USPTO**").

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantors agree with the Grantee as follows:

1. **Defined Terms**. All initially capitalized terms used but not otherwise defined herein have the meanings given to them in the Credit Agreement.

2. **Grant of Security**. Each of the Grantors hereby pledge and grant to the Grantee a security interest in and to all of the right, title and interest of such Grantor in, to and under the following, wherever located, and whether now existing or hereafter arising or acquired from time to time (the "**Trademark Collateral**");

(a) the Trademarks and Trademark applications set forth on Schedule 1 hereto and all renewals and extensions thereof and amendments thereto and the goodwill associated therewith and with Grantors' business symbolized by the foregoing or connected therewith (the "**Trademarks**");

(b) all rights of any kind whatsoever of such Grantor accruing under any of the foregoing provided by applicable law of any jurisdiction, by international treaties and conventions and otherwise throughout the world;

(c) any and all royalties, fees, income, payments and other proceeds now or hereafter due or payable with respect to any and all of the foregoing; and

(d) any and all claims and causes of action, with respect to any of the foregoing, whether occurring before, on or after the date hereof, including all rights to and claims for damages, restitution and injunctive and other legal and equitable relief for past, present and future infringement, misappropriation, violation, dilution, misuse, breach or default, with the right but no obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages.

Notwithstanding anything contained in this Trademark Security Agreement to the contrary, the term "**Trademark Collateral**" shall not include any United States intent-to-use trademark applications for which

an amendment to allege use or statement of use has not been filed under 15 U.S.C. § 1051(c) or 15 U.S.C. § 1051(d), respectively, or if filed, has not been deemed in conformance with 15 U.S.C. § 1051(a) or examined and accepted, respectively, by the USPTO; provided, that, upon such filing and acceptance, such intent-to-use trademark application shall be considered Trademark Collateral.

3. Recordation. Each of the Grantors hereby authorizes the Commissioner for Trademarks and any other government officials to record and register this Trademark Security Agreement upon request by the Grantee.

4. Other Documents. This Trademark Security Agreement has been entered into pursuant to and in conjunction with the Credit Agreement, which is hereby incorporated by reference. The provisions of the Credit Agreement shall supersede and control over any conflicting or inconsistent provision herein. The rights and remedies of the Grantee with respect to the Trademark Collateral are as provided by the Credit Agreement and Other Documents and nothing in this Trademark Security Agreement shall be deemed to limit such rights and remedies.

5. Special Power of Attorney. Grantors will, concurrently with the execution and delivery of this Trademark Security Agreement, execute and deliver to Grantee an original of a Special Power of Attorney for the implementation of the assignment, sale or other disposition of the Trademark Collateral pursuant to Grantee's exercise of the rights and remedies granted to Grantee hereunder and under the other Other Documents.

6. Execution in Counterparts. This Trademark Security Agreement may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page to this Trademark Security Agreement by facsimile or in electronic format (i.e., "pdf" or "tif") shall be effective as delivery of a manually executed counterpart of this Trademark Security Agreement.

7. Successors and Assigns. This Trademark Security Agreement will be binding on and shall inure to the benefit of the parties hereto and their respective successors and assigns.

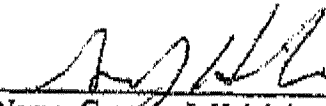
8. Governing Law. This Trademark Security Agreement and any claim, controversy, dispute or cause of action (whether in contract or tort or otherwise) based upon, arising out of or relating to this Trademark Security Agreement and the transactions contemplated hereby and thereby shall be governed by, and construed in accordance with, the laws of the United States and the State of New York, without giving effect to any choice or conflict of law provision or rule (whether of the State of New York or any other jurisdiction).

9. Disputes. All claims, disputes and controversies between the Grantors and Grantee, whether in tort, contract or otherwise, arising out of or relating in any way to this Trademark Security Agreement, shall be governed by the dispute resolution provisions set forth in the Credit Agreement.

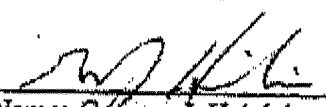
[Signature page follows]

IN WITNESS WHEREOF, each Grantor has caused this Trademark Security Agreement to be duly executed and delivered by its duly authorized officer as of the date first above written.


ION GEOPHYSICAL CORPORATION

By: 
Name: Gregory J. Heinlein
Title: Senior Vice President and
Chief Financial Officer


I/O MARINE SYSTEMS, INC.

By: 
Name: Gregory J. Heinlein
Title: Vice President

GX TECHNOLOGY CORPORATION

By: 
Name: Gregory J. Heinlein
Title: Senior Vice President

**ION EXPLORATION PRODUCTS
(U.S.A.), INC.**

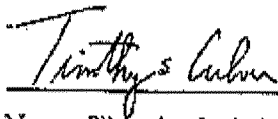
By: 
Name: Gregory J. Heinlein
Title: Vice President

[Trademark Security Agreement]

AGREED TO AND ACCEPTED:

PNC BANK, NATIONAL ASSOCIATION
as Agent for the Lenders

By:



Name: Timothy S. Culver

Title: Vice President

Address: 2100 Ross Avenue, Suite 1850
Dallas, Texas 75201

[Trademark Security Agreement]

TRADEMARK
REEL: 005350 FRAME: 0735

SCHEDULE 1
TRADEMARKS AND TRADEMARK APPLICATIONS

(See attached.)

{Schedule 1 - Trademark Security Agreement}

TRADEMARK
REEL: 005350 FRAME: 0736

TRADEMARKS AND TRADEMARK APPLICATIONS

TRADEMARKS

Mark	Country	Owner	Federal Registration No.	Registration Date
IO and design	USA	INPUT/OUTPUT, INC	931,732	4/4/1972
IO and design	EURO COMM	INPUT/OUTPUT, INC	849,604	8/7/2002
GEOCON-REED	USA	INPUT/OUTPUT, INC	1,347,388	7/9/1985
Digicourse dolphin logo	USA	INPUT/OUTPUT, INC	1,900,455	6/20/1995
I/O logo	USA	INPUT/OUTPUT, INC	1,759,593	12/1/1992
I/O logo	EURO COMM	INPUT/OUTPUT, INC	346,569	8/26/1996
I/O SYSTEM TWO	USA	INPUT/OUTPUT, INC	1,817,371	12/1/1992
PRESEIS	USA	ION GEOPHYSICAL CORPORATION	2,102,677	10/7/1997
PATHTOMO	USA	ION GEOPHYSICAL CORPORATION	2,677,071	1/21/2003
VECTORSEIS	USA	ION GEOPHYSICAL CORPORATION	2,472,270	7/24/2001
VECTORSEIS	EURO COMM	ION GEOPHYSICAL CORPORATION	1,537,414	3/2/00
VECTORSEIS	CAN	ION GEOPHYSICAL CORPORATION	569,770	10/28/2002
SPRINT	USA	ION GEOPHYSICAL CORPORATION	3,211,015	2/20/2007
DIGICOURSE	USA	ION GEOPHYSICAL CORPORATION	1,811,957	12/21/1993
ORCA	USA	INPUT/OUTPUT, INC	3,424,277	6/6/2008
ION (word)	USA	ION GEOPHYSICAL CORPORATION	3,828,674	8/3/2010
ION (word)	EURO COMM	ION GEOPHYSICAL CORPORATION	6,274,567	7/8/2009
ION (word)	CAN	ION GEOPHYSICAL CORPORATION	1,363,387	12/22/2011
ION (word)	CHINA	ION GEOPHYSICAL CORPORATION	6,316,707	4/28/2010
ION (word)	NORW	ION GEOPHYSICAL CORPORATION	248,845	11/27/2008
ION (word)	RUSS	ION GEOPHYSICAL CORPORATION	371812	2/10/2009
ION GEOPHYSICAL	USA	ION GEOPHYSICAL CORPORATION	4,204,475	9/11/2012

Mark	Country	Owner	Federal Registration No.	Registration Date
ION GEOPHYSICAL	EURO COMM	ION GEOPHYSICAL CORPORATION	6,274,872	8/18/2008
ION GEOPHYSICAL	CAN	ION GEOPHYSICAL CORPORATION	1,363,388	11/14/2011
ION GEOPHYSICAL	CHINA	ION GEOPHYSICAL CORPORATION	6316708	4/28/2010
ION GEOPHYSICAL	NORW	ION GEOPHYSICAL CORPORATION	248,847	11/27/2008
ION GEOPHYSICAL	RUSS	ION GEOPHYSICAL CORPORATION	367452	12/15/2008
ION GEOPHYSICAL	UAE	ION GEOPHYSICAL CORPORATION	108113	10/19/2070
ION GEOPHYSICAL	UAE	ION GEOPHYSICAL CORPORATION	108092	10/19/2010
ION Logo	USA	ION GEOPHYSICAL CORPORATION	3,763,728	3/23/2010
CHARGED TO INNOVATE. DRIVEN TO SOLVE.	USA	ION GEOPHYSICAL CORPORATION	4,302,215	3/12/2013
DIGIFIN	USA	ION GEOPHYSICAL CORPORATION	3,794,007	5/25/2010
DIGIBIRD	USA	ION GEOPHYSICAL CORPORATION	3,794,014	5/25/2010
CHARGED WITH INNOVATION	USA	ION GEOPHYSICAL CORPORATION	3,769,248	3/30/2010
GEOVENTURES	USA	ION GEOPHYSICAL CORPORATION	4,248,567	11/27/2012
PRIMUS	USA	GX TECHNOLOGY CORPORATION	3,434,755	5/27/2008
GX TECHNOLOGY	USA	GX TECHNOLOGY CORPORATION	3,732,046	12/29/2009
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SIRIUS	USA	GX TECHNOLOGY CORPORATION	3,434,757	5/27/2008
ULTIMUS	USA	GX TECHNOLOGY CORPORATION	3,471,843	6/22/2008
GULFSPAN	USA	GX TECHNOLOGY CORPORATION	3,553,314	12/30/2008
AFRICASPAN	USA	GX TECHNOLOGY CORPORATION	3,732,368	12/29/2009
INDIASPAN	USA	GX TECHNOLOGY CORPORATION	3,732,384	12/29/2009
WIBAND	USA	ION GEOPHYSICAL CORPORATION	4,598,102	8/19/2014

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TRADEMARK APPLICATIONS

Mark	Country	Owner	Application Number	Application Date
CALYPSO	USA	ION GEOPHYSICAL CORPORATION	85,522,411	6/12/2012
ION (word)	UAE	ION GEOPHYSICAL CORPORATION	108157	1/20/2008
ION (word)	CHINA	ION GEOPHYSICAL CORPORATION	6,316,831	10/11/2007
ION GEOPHYSICAL	CHINA	ION GEOPHYSICAL CORPORATION	6316837	10/11/2007
ION GEOPHYSICAL	INDIA	ION GEOPHYSICAL CORPORATION	1602473	9/17/2007

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