

## TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

ETAS ID: TM781559

<b>SUBMISSION TYPE:</b>	RESUBMISSION		
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT OF THE ENTIRE INTEREST AND THE GOODWILL		
<b>RESUBMIT DOCUMENT ID:</b>	900726179		
<b>CONVEYING PARTY DATA</b>			
<b>Name</b>	<b>Formerly</b>	<b>Execution Date</b>	<b>Entity Type</b>
ION Geophysical, Corp.		08/31/2022	Corporation: DELAWARE
<b>RECEIVING PARTY DATA</b>			
<b>Name:</b>	TGS-NOPEC Geophysical Company		
<b>Street Address:</b>	10451 Clay Road		
<b>City:</b>	Houston		
<b>State/Country:</b>	TEXAS		
<b>Postal Code:</b>	77041		
<b>Entity Type:</b>	Corporation: DELAWARE		
<b>PROPERTY NUMBERS Total: 1</b>			
<b>Property Type</b>	<b>Number</b>	<b>Word Mark</b>	
<b>Serial Number:</b>	90453294	GEMINI	
<b>CORRESPONDENCE DATA</b>			
<b>Fax Number:</b>	6152524707		
<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>			
<b>Phone:</b>	6152524639		
<b>Email:</b>	jne@bradley.com		
<b>Correspondent Name:</b>	Jacob W Neu		
<b>Address Line 1:</b>	1600 Division Street		
<b>Address Line 2:</b>	Suite 700		
<b>Address Line 4:</b>	Nashville, TENNESSEE 37203		
<b>ATTORNEY DOCKET NUMBER:</b>	219005-401008		
<b>NAME OF SUBMITTER:</b>	Jacob W Neu		
<b>SIGNATURE:</b>	/jacobwneu/		
<b>DATE SIGNED:</b>	01/19/2023		
<b>Total Attachments: 15</b>			
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## INTELLECTUAL PROPERTY ASSIGNMENT AND ASSUMPTION AGREEMENT

**THIS INTELLECTUAL PROPERTY ASSIGNMENT AND ASSUMPTION AGREEMENT** (“Assignment”), effective as of August 31, 2022 (“Effective Date”), is by and between Sellers (collectively, the “Assignors”), and TGS-NOPEC Geophysical Company, a Delaware corporation (“Assignee”) (each of Assignor and Assignee, a “Party” and, together, the “Parties”).

**WHEREAS**, pursuant to that certain Stock and Asset Purchase Agreement, dated as of August 16, 2022, by and among ION Geophysical Corporation, a Delaware corporation (“ION”), GX Technology Corporation, a Texas corporation (“GX Technology”), GX Geoscience Corporation S. de R.L. de C.V., a Sociedad de Responsabilidad Limitada de Capital Variable organized under the laws of Mexico (“GX Mexico”), GX Technology Imaging Services Limited, an Egyptian limited company (“GX Egypt”), GX Technology EAME Limited, a United Kingdom limited company (“Chertsey”), and ION International Holdings, L.P., a Bermuda limited partnership (“ION International”, and together with ION, GX Mexico, GX Technology, GX Egypt, Chertsey and ION International, each a “Seller” and collectively, the “Sellers”) and TGS ASA, a Norwegian public limited company, (“TGS”) (as amended, supplemented or otherwise modified, the “Purchase Agreement”). Assignors have agreed to sell, and Buyer has agreed to purchase from Assignors, all of Assignors’ right, title and interest in, to, and under the Transferred Assets, in each case, on the terms and subject to the conditions set forth in the Purchase Agreement. Capitalized terms used but not otherwise defined herein shall have the meaning ascribed to them in the Purchase Agreement;

**WHEREAS**, TGS owns 100% of the ownership interests in TGS AS, a Norwegian private limited company, TGS AS owns 100% of the ownership interests in Spectrum Geo Ltd., a United Kingdom limited company (“Spectrum UK”), Spectrum UK owns 100% of the ownership interests in Spectrum Geo Inc., a Texas corporation (“Spectrum US”), and Spectrum US owns 100% of the ownership interests in Assignee;

**WHEREAS**, as required in the Purchase Agreement, Assignors hereby desire to sell, convey, assign, transfer, and deliver to Assignee all Business Intellectual Property and Business Technology, including the Intellectual Property and Business Technology set forth on Exhibit A hereto (the “Assigned IP”); and

**WHEREAS**, Assignee desires to purchase, acquire and accept delivery of the Assigned IP from Assignors, which Assigned IP shall be acquired by Buyer in connection with Buyer’s acquisition of the Transferred Assets and Transferred Equity Interests pursuant to the terms of the Purchase Agreement.

**NOW, THEREFORE**, for good and valuable consideration, the sufficiency and receipt of which is hereby acknowledged, and intending to be legally bound hereby, the Parties agree as follows:

1. Assignment of Intellectual Property. Assignors hereby convey, sell, assign and transfer to Assignee each Assignor’s entire worldwide right, title and interest in and to the

Assigned IP, together with any and all goodwill connected with and symbolized by the Assigned IP, the same to be held and enjoyed by Assignee for its own use and enjoyment and the use and enjoyment of its successors, assigns and other legal representatives as fully and entirely as the same would have been held and enjoyed by Assignors if this assignment and sale had not been made, as assignee of its respective entire right, title and interest therein, including, without limitation, all rights in and to all fees, income, royalties, damages and payments now or hereafter due or payable with respect thereto, all causes of action (whether in law or in equity) with respect thereto, and the right to sue, counterclaim, and recover for past, present and future infringement, misappropriation, dilution or other violation of the rights assigned or to be assigned under this Assignment.

2. Binding Agreement. This Assignment shall be binding upon and inure to the benefit of the Parties and their respective permitted successors and assigns. It is understood that any finding of invalidity of one assignment as effected hereby shall not affect the assignment of other Assigned IP.

3. Severability. If any term or provision of this Agreement is held invalid, illegal or unenforceable in any respect under any applicable Law, as a matter of public policy or on any other grounds, the validity, legality and enforceability of all other terms and provisions of this Agreement will not in any way be affected or impaired. If the final judgment of a court of competent jurisdiction or other Government Authority declares that any term or provision hereof is invalid, illegal or unenforceable, the Parties agree that the court making such determination will have the power to reduce the scope, duration, area or applicability of the term or provision, to delete specific words or phrases, or to replace any invalid, illegal or unenforceable term or provision with a term or provision that is valid, legal and enforceable and that comes closest to expressing the intention of the invalid, illegal or unenforceable term or provision.

4. Amendments. This Agreement may be amended, restated, supplemented or otherwise modified, only by written agreement duly executed by each Party.

5. Further Assurances. Each of the Parties shall execute and deliver such documents, and take such other action, as shall be reasonably requested by the other Party to carry out the transactions contemplated by this Assignment, and shall take such reasonable actions as may be necessary or appropriate to record, memorialize or make effective the assignments of the Assigned IP contemplated hereby as may be reasonably requested by the other Party, and to vest and perfect in Assignee such right, title, and interest in and to the Assigned IP as sold, assigned and transferred to Assignee hereunder. Effective as of the Effective Date, and to the extent permissible under applicable law, Assignors hereby designate Assignee and its respective officers as each Assignor's true and lawful attorney-in-fact, with full power of substitution, to execute and endorse for the benefit of Assignee all documents necessary for effecting the recordal and transfer of Assigned IP. Assignors hereby acknowledge and agree that the power of attorney set forth in the preceding sentence in favor of Assignee is coupled with an interest, and further agree to execute and deliver to Assignee from time to time any documents or other instruments reasonably requested by Assignee to evidence such power of attorney.

6. Recordations. Assignors hereby authorize and request the officials of the United States Copyright Office and the United States Patent and Trademark Office, and the corresponding

entities or agencies in any applicable foreign jurisdiction, to record Assignee as assignee and owner of the entire right, title and interest in, to and under the Assigned IP.

7. Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which when taken together shall constitute one and the same instrument. Facsimiles, e-mail transmission of .pdf signatures or other electronic copies of signatures shall be deemed to be originals.

8. Governing Law. This Agreement will be exclusively governed by and construed and enforced in accordance with the internal Laws of the State of Texas, without giving effect to any Law or rule that would cause the Laws of any jurisdiction other than the State of Texas to be applied.

9. No Third-Party Beneficiaries. Nothing in this Agreement shall create or be deemed to create any third-party beneficiary rights in any Person not a party hereto, including any Affiliates of any Party.

10. Entire Agreement. This Agreement, the Purchase Agreement and the other Transaction Agreements (and all exhibits and schedules hereto and thereto) collectively constitute and contain the entire agreement and understanding of the Parties with respect to the subject matter hereof and thereof and supersede all prior negotiations, correspondence, understandings, agreements and Contracts, whether written or oral, among the Parties respecting the subject matter hereof and thereof.

*[Signature page follows]*

IN WITNESS WHEREOF, the Parties, through their authorized representatives, have caused this Assignment to be duly executed and delivered as of the Effective Date.

ASSIGNORS:

ION GEOPHYSICAL CORPORATION

By: [Signature]  
Name: Mike Morrison  
Its: EVP & CFO

GX TECHNOLOGY CORPORATION

By: [Signature]  
Name: Mike Morrison  
Its: Director

GX GEOSCIENCE CORPORATION  
S. DE R.L. DE C.V.

By: [Signature]  
Name: Mike Morrison  
Its: Manager

GX TECHNOLOGY IMAGING SERVICES LIMITED

By: Chris Anderson  
Name: Chris Anderson  
Its: Manager

GX TECHNOLOGY EAME LIMITED

By: Chris Anderson  
Name: Chris Anderson  
Its: Director

ION INTERNATIONAL HOLDINGS, L.P.

By: ION Exploration Products (U.S.A.) Inc.,  
Name: Mike Morrison  
Its: Director  
*its General Partner*

ASSIGNEE:

TGS-NOPEC GEOPHYSICAL COMPANY

By: \_\_\_\_\_  
Name:  
Its:

WITNESS:

By: \_\_\_\_\_  
Name:

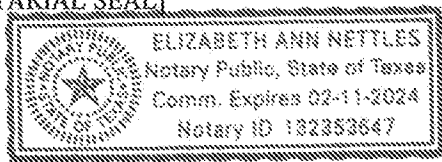
STATE OF TEXAS )  
COUNTY HARRIS )

Subscribed and sworn to before me this 31<sup>st</sup> day of August in the year 2022.

[Signature]  
Notary Public

My commission expires: 2/11/2024

[NOTARIAL SEAL]



[Signature Page to IP Assignment Agreement]

IN WITNESS WHEREOF, the Parties, through their authorized representatives, have caused this Assignment to be duly executed and delivered as of the Effective Date.

**ASSIGNORS:**

ION GEOPHYSICAL CORPORATION

GX TECHNOLOGY CORPORATION

By: \_\_\_\_\_  
Name: Mike Morrison  
Its: EVP & CFO

By: \_\_\_\_\_  
Name: Mike Morrison  
Its: Director

GX GEOSCIENCE CORPORATION  
S. DE R.L. DE C.V.

GX TECHNOLOGY IMAGING SERVICES LIMITED

By: \_\_\_\_\_  
Name: Mike Morrison  
Its: Manager

By: \_\_\_\_\_  
Name: Chris Anderson  
Its: Manager

GX TECHNOLOGY EAME LIMITED

ION INTERNATIONAL HOLDINGS, L.P.

By: \_\_\_\_\_  
Name: Chris Anderson  
Its: Director

By: \_\_\_\_\_  
Name: Mike Morrison  
Its: Director

**ASSIGNEE:**

**WITNESS:**

TGS-NOPEC GEOPHYSICAL COMPANY

By: \_\_\_\_\_  
Name: *Shanika Bequa*

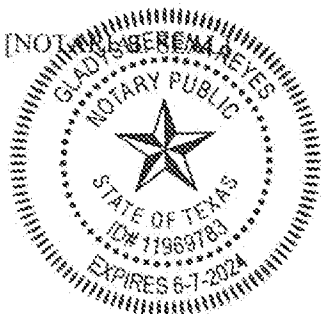
By: *Day*  
Name: DAVID HAJDOVSKY  
Its: EVP WESTERN HEMISPHERE

STATE OF TEXAS  
COUNTY HARRIS

Subscribed and sworn to before me this 31<sup>st</sup> day of August in the year 2022

*[Signature]*  
\_\_\_\_\_  
Notary Public

My commission expires: June 7, 2024



[Signature Page to IP Assignment Agreement]

**EXHIBIT A**  
**Assigned IP**

Country	Application Number	Application Date	National Filing Date	Patent Number	Grant Date	Publication Number	Publication Date	Title
AU - (Australia)	2016344004	10/31/2016	5/24/2018					MULTI-AXIS, SINGLE MASS ACCELEROMETER
BR - (Brazil)	BR112018008393-3	10/31/2016	4/27/2018			2494	10/23/2018	MULTI-AXIS, SINGLE MASS ACCELEROMETER
BR - (Brazil)	BR112021003892-2	9/13/2019	3/1/2021					MULTI-AXIS, SINGLE MASS ACCELEROMETER
CA - (Canada)	3,003,466	10/31/2016	4/26/2018					MULTI-AXIS, SINGLE MASS ACCELEROMETER
CN - (China P.R.)	201680077142.5	10/31/2016	6/29/2018	ZL201680077142.5	4/13/2021	108431637	8/21/2018	MULTI-AXIS, SINGLE MASS ACCELEROMETER
CN - (China P.R.)	201980074991.9	9/13/2019	5/13/2021			112955752	6/11/2021	MULTI-AXIS, SINGLE MASS ACCELEROMETER
EP - (EPC)	16794487.5	10/31/2016	4/30/2018			3368923	9/5/2018	MULTI-AXIS, SINGLE MASS ACCELEROMETER
EP - (EPC)	19779263.3	9/13/2019	3/10/2021			3850373	7/21/2021	MULTI-AXIS, SINGLE MASS ACCELEROMETER
MX - (Mexico)	MX/a/2018/005422	10/31/2016	4/27/2018	383079	6/1/2021			MULTI-AXIS, SINGLE MASS ACCELEROMETER
RU - (Russian Federation)	2018119488	10/31/2016	5/28/2018	2733974	10/8/2020	2733974	12/2/2019	MULTI-AXIS, SINGLE MASS ACCELEROMETER
US - (United States)	15/339,276	10/31/2016	10/31/2016	10,545,254	1/28/2020	2017-0123088	5/4/2017	MULTI-AXIS, SINGLE MASS ACCELEROMETER
US - (United States)	16/569,764	9/13/2019	9/13/2019	11,204,365	#####	2020-0088757	3/19/2020	MULTI-AXIS, SINGLE MASS ACCELEROMETER
US - (United States)	16/721,567	12/19/2019	12/19/2019			2020-0166666	5/28/2020	MULTI-AXIS, SINGLE MASS ACCELEROMETER
CA - (Canada)	2,911,840	3/17/2014	9/14/2015	2,911,840	6/19/2018			ARCTIC SEISMIC SURVEYING OPERATIONS
RU - (Russian Federation)	2015144061	3/17/2014	10/14/2015	2624835	7/7/2017			ARCTIC SEISMIC SURVEYING OPERATIONS
US - (United States)	12/719,783	3/8/2010	3/8/2010	8,593,905	#####	2010-0226204	9/9/2010	MARINE SEISMIC SURVEYING IN ICY WATERS
US - (United States)	14/054,116	10/15/2013	10/15/2013	9,604,701	3/28/2017	2014-0102347	4/17/2014	MARINE SEISMIC SURVEYING IN ICY OR OBSTRUCTED WATERS
US - (United States)	14/216,935	3/17/2014	3/17/2014	9,933,536	4/3/2018	2014-0269174	9/18/2014	ARCTIC SEISMIC SURVEYING OPERATIONS
CA - (Canada)	2,836,850	5/7/2012	11/20/2013					CALIBRATION OF DECLINOMETER FOR SEISMIC SURVEYS
CN - (China P.R.)	201280033850.0	5/7/2012	11/23/2013	201280033850.0	8/29/2017	103649783	3/19/2014	DECLINATION COMPENSATION FOR SEISMIC SURVEYS
DK -	12168832.9			2527880		2527880		DECLINATION



(Denmark)		5/22/2012	5/22/2012		6/20/2018		11/28/2012	COMPENSATION FOR SEISMIC SURVEYS
EP - (EPC)	12168832.9	5/22/2012	5/22/2012	2527880	6/20/2018	2527880	11/28/2012	DECLINATION COMPENSATION FOR SEISMIC SURVEYS
FR - (France)	12168832.9	5/22/2012	5/22/2012	2527880	6/20/2018	2527880	11/28/2012	DECLINATION COMPENSATION FOR SEISMIC SURVEYS
GB - (Great Britain)	12168832.9	5/22/2012	5/22/2012	2527880	6/20/2018	2527880	11/28/2012	DECLINATION COMPENSATION FOR SEISMIC SURVEYS
GB - (Great Britain)	1403126.4	5/7/2012	2/21/2014	2510268	9/9/2015		7/30/2014	DECLINATION COMPENSATION FOR SEISMIC SURVEYS
NO - (Norway)	12168832.9	5/22/2012	5/22/2012	2527880	6/20/2018	2527880	11/28/2012	DECLINATION COMPENSATION FOR SEISMIC SURVEYS
US - (United States)	13/113.216	5/23/2011	5/23/2011	9.354,343	5/31/2016	2013-0182531		DECLINATION COMPENSATION FOR SEISMIC SURVEYS
US - (United States)	13/793,544	3/11/2013	3/11/2013	9,535,182	1/3/2017		7/18/2013	MARINE SEISMIC SURVEYING WITH TOWED COMPONENTS BELOW WATER SURFACE
AU - (Australia)	2017224136	2/27/2017	8/15/2018					DYNAMIC GAIN ADJUSTMENTS IN SEISMIC SURVEYS
BR - (Brazil)	BR112018067407-9	2/27/2017	10/16/2018			112018067407	12/26/2018	DYNAMIC GAIN ADJUSTMENTS IN SEISMIC SURVEYS
CA - (Canada)	3,015,668	2/27/2017	8/23/2018			3,015,668	8/31/2017	DYNAMIC GAIN ADJUSTMENTS IN SEISMIC SURVEYS
DK - (Denmark)	PA201870594	2/27/2017	9/13/2018			201870594	11/29/2018	DYNAMIC GAIN ADJUSTMENTS IN SEISMIC SURVEYS
EP - (EPC)	17709328.3	2/27/2017	9/26/2018			3420382	1/2/2019	DYNAMIC GAIN ADJUSTMENTS IN SEISMIC SURVEYS
MX - (Mexico)	MX/a/2018/010098	2/27/2017	8/21/2018	UNKNOWN	1/12/2022	2018010098	9/27/2018	DYNAMIC GAIN ADJUSTMENTS IN SEISMIC SURVEYS
US - (United States)	15/441,657	2/24/2017	2/24/2017	10,228,479	3/12/2019	2017-0248720	8/31/2017	DYNAMIC GAIN ADJUSTMENTS IN SEISMIC SURVEYS
CA - (Canada)	2,865,212	2/6/2013	8/5/2014	2,865,212	5/7/2019			INTEGRATED PASSIVE AND ACTIVE SEISMIC SURVEYING USING MULTIPLE ARRAYS
MX - (Mexico)	MX/a/2014/009479	2/6/2013	8/5/2014	336177	1/7/2016			INTEGRATED PASSIVE AND ACTIVE SEISMIC SURVEYING USING MULTIPLE ARRAYS
US - (United States)	13/759,986			10,061,046		2013-0215717		INTEGRATED PASSIVE AND

(States)		2/5/2013	2/5/2013		8/28/2018		8/22/2013	ACTIVE SEISMIC SURVEYING USING MULTIPLE ARRAYS
US - (United States)	13/759,990	2/5/2013	2/5/2013	9,448,313	9/20/2016			INTEGRATED PASSIVE AND ACTIVE SEISMIC SURVEYING USING MULTIPLE ARRAYS
US - (United States)	13/795,598	3/12/2013	3/12/2013	10,073,184	9/11/2018	2013-0265851	10/10/2013	SENSOR SYSTEM FOR BURIED SEISMIC ARRAY
CA - (Canada)	2,754,543	3/9/2010	9/6/2011	2,754,543	6/7/2016			MARINE SEISMIC SURVEYING IN ICY OR OBSTRUCTED WATERS
CN - (China P.R.)	201080017371.0	3/9/2010	3/9/2010	201080017371.0	4/6/2016	102405419	4/4/2012	MARINE SEISMIC SURVEYING IN ICY OR OBSTRUCTED WATERS
US - (United States)	14/054,098	10/15/2013	10/15/2013	10,286,981	5/14/2019	2014-0104985	4/17/2014	MARINE SEISMIC SURVEYING IN ICY OR OBSTRUCTED WATERS
GB - (Great Britain)	1701157.8	7/24/2015	1/24/2017	2542541	12/3/2019	2542541	3/22/2017	MARINE SEISMIC SURVEYING WITH TOWED COMPONENTS BELOW WATER'S SURFACE
US - (United States)	14/339,726	7/24/2014	7/24/2014	9,766,360	9/19/2017	2016-0025882	1/28/2016	MARINE SEISMIC SURVEYING WITH TOWED COMPONENTS BELOW WATER'S SURFACE
US - (United States)	16/566,632	9/10/2019	9/10/2019			2020-0073003	3/5/2020	MARINE SEISMIC SURVEYING WITH TOWED COMPONENTS BELOW WATER'S SURFACE
BR - (Brazil)	BR112016013331-5	12/9/2014	6/9/2016			2431	8/8/2017	SEISMIC DATA ACQUISITION WITH VARYING RELATIVE DISTANCE BETWEEN MULTIPLE
CA - (Canada)	2,933,467	12/9/2014	6/9/2016					SEISMIC DATA ACQUISITION WITH VARYING RELATIVE DISTANCE BETWEEN MULTIPLE
CN - (China P.R.)	2014800755327.3	12/9/2014	8/11/2016	ZL2014800755327.3	10/1/2019	105960600	9/21/2016	SEISMIC DATA ACQUISITION WITH VARYING DISTANCE BETWEEN SEISMIC VESSELS
GB - (Great Britain)	1611737.6	12/9/2014	7/5/2016	2535965	8/19/2020	2535965	8/31/2016	SEISMIC DATA ACQUISITION WITH VARYING RELATIVE DISTANCE BETWEEN MULTIPLE
MX - (Mexico)	MX/a/2016/007583	12/9/2014	6/9/2016	365309	5/29/2019			SEISMIC DATA ACQUISITION WITH VARYING DISTANCE BETWEEN SEISMIC VESSELS
NO - (Norway)	20161118	12/9/2014	7/5/2016					SEISMIC DATA ACQUISITION WITH VARYING RELATIVE DISTANCE

US - (United States)	14/564,363	12/9/2014	12/9/2014	9,720,120	8/1/2017	2015-0160360	6/1/2015	BETWEEN MULTIPLE SEISMIC DATA ACQUISITION WITH VARYING DISTANCE BETWEEN SEISMIC VESSELS
US - (United States)	15/650,406	7/14/2017	7/14/2017	10,712,463	7/14/2020	2017-0315250	11/2/2017	SEISMIC DATA ACQUISITION WITH VARYING DISTANCE BETWEEN SEISMIC VESSELS
AU - (Australia)	2017281128	4/7/2017	9/17/2018					UNMANNED MARINE VESSEL FOR SEISMIC SOURCES
BR - (Brazil)	BR112018069754-0	4/7/2017	9/27/2018				2/5/2019	UNMANNED MARINE VESSEL FOR SEISMIC SOURCES
CA - (Canada)	3,017,938	4/7/2017	9/14/2018					UNMANNED MARINE VESSEL FOR SEISMIC SOURCES
EP - (EPC)	17784422.2	4/7/2017	9/24/2018	3440483	#####	3440483	2/13/2019	UNMANNED MARINE VESSEL FOR SEISMIC SOURCES
FR - (France)	17784422.2	4/7/2017	9/24/2018	3440483	#####	3440483	2/13/2019	UNMANNED MARINE VESSEL FOR SEISMIC SOURCES
GB - (Great Britain)	17784422.2	4/7/2017	9/24/2018	3440483	#####	3440483	2/13/2019	UNMANNED MARINE VESSEL FOR SEISMIC SOURCES
MX - (Mexico)	MX/a/2018/012026	4/7/2017	10/1/2018	387196	#####			UNMANNED MARINE VESSEL FOR SEISMIC SOURCES
NO - (Norway)	17784422.2	4/7/2017	9/24/2018	3440483	#####	3440483	2/13/2019	UNMANNED MARINE VESSEL FOR SEISMIC SOURCES
US - (United States)	15/482,175	4/7/2017	4/7/2017	10,254,423	4/9/2019	2017-0293042	10/12/2017	UNMANNED MARINE VESSEL FOR SEISMIC SOURCES
US - (United States)	16/245,999	1/11/2019	1/11/2019			2019-0146113	5/16/2019	MARINE VESSEL FOR SEISMIC SOURCES
US - (United States)	14/594,846	1/12/2015	1/12/2015	10,345,463	7/9/2019	2015-0241582	8/27/2015	METHODS AND SYSTEMS FOR MICROSEISMIC EVENT LOCATION, TOMOGRAPHY, AND
AU - (Australia)	2015371210	12/23/2015	6/23/2017	2015371210	#####	2015371210	7/13/2017	REAL-TIME INFILL IN MARINE SEISMIC SURVEYS USING AN INDEPENDENT SEISMIC
BR - (Brazil)	BR112017013577.9	12/23/2015	6/22/2017					REAL-TIME INFILL IN MARINE SEISMIC SURVEYS USING AN INDEPENDENT SEISMIC
CA - (Canada)	2,972,245	12/23/2015	6/23/2017			2,972,245	6/30/2016	REAL-TIME INFILL IN MARINE SEISMIC SURVEYS USING AN INDEPENDENT SEISMIC

CN - (China P.R.)	201580075289.6	12/23/2015	8/2/2017		107430204	12/1/2017	REAL-TIME INFILL IN MARINE SEISMIC SURVEYS USING AN INDEPENDENT SEISMIC
EP - (EPC)	15832712.2	12/23/2015	6/23/2017	3237935	3237935	11/1/2017	REAL-TIME INFILL IN MARINE SEISMIC SURVEYS USING AN INDEPENDENT SEISMIC
FR - (France)	15832712.2	12/23/2015	6/23/2017	3237935	3237935	11/1/2017	REAL-TIME INFILL IN MARINE SEISMIC SURVEYS USING AN INDEPENDENT SEISMIC
GB - (Great Britain)	15832712.2	12/23/2015	6/23/2017	3237935	3237935	11/1/2017	REAL-TIME INFILL IN MARINE SEISMIC SURVEYS USING AN INDEPENDENT SEISMIC
MX - (Mexico)	MX/a/2017/008514	12/23/2015	6/23/2017	364787	2972245	9/19/2017	REAL-TIME INFILL IN MARINE SEISMIC SURVEYS USING AN INDEPENDENT SEISMIC
NO - (Norway)	15832712.2	12/23/2015	6/23/2017	3237935	3237935	11/1/2017	REAL-TIME INFILL IN MARINE SEISMIC SURVEYS USING AN INDEPENDENT SEISMIC
NZ - (New Zealand)	733189	12/23/2015	6/23/2017				REAL-TIME INFILL IN MARINE SEISMIC SURVEYS USING AN INDEPENDENT SEISMIC
RU - (Russian Federation)	2017126185	12/23/2015	7/21/2017	2712793			REAL-TIME INFILL IN MARINE SEISMIC SURVEYS USING AN INDEPENDENT SEISMIC
US - (United States)	14/977,791	12/22/2015	12/22/2015	10,031,248	2016-0178776	6/23/2016	REAL-TIME INFILL IN MARINE SEISMIC SURVEYS USING AN INDEPENDENT SEISMIC
AU - (Australia)	2015259148	5/14/2015	11/14/2016	2015259148	1/28/2021	12/1/2016	METHODS AND SYSTEMS FOR CONDUCTING RECONNAISSANCE MARINE SEISMIC
BR - (Brazil)	BR112016026496.7	5/14/2015	11/22/2016				METHODS AND SYSTEMS FOR CONDUCTING RECONNAISSANCE MARINE SEISMIC
CA - (Canada)	2,948,862	5/14/2015	11/10/2016				METHODS AND SYSTEMS FOR CONDUCTING RECONNAISSANCE MARINE SEISMIC
CN - (China P.R.)	201580033280.9	5/14/2015	12/21/2016	201580033280.9	107003424	8/1/2017	METHODS AND SYSTEMS FOR CONDUCTING RECONNAISSANCE MARINE SEISMIC
EP - (EPC)	15724498.9	5/14/2015	11/21/2016	3143435	3143435	3/22/2017	METHODS AND SYSTEMS FOR CONDUCTING

FR - (France)	15724498.9	5/14/2015	11/21/2016	3143435	4/22/2020	3143435	3/22/2017	RECONNAISSANCE MARINE SEISMIC
GB - (Great Britain)	15724498.9	5/14/2015	11/21/2016	3143435	4/22/2020	3143435	3/22/2017	METHODS AND SYSTEMS FOR CONDUCTING RECONNAISSANCE MARINE SEISMIC
MX - (Mexico)	MX/a/2016/014897	5/14/2015	11/14/2016	364789	5/7/2019			METHODS AND SYSTEMS FOR CONDUCTING RECONNAISSANCE MARINE SEISMIC
NO - (Norway)	15724498.9	5/14/2015	11/21/2016	3143435	4/22/2020	3143435	3/22/2017	METHODS AND SYSTEMS FOR CONDUCTING RECONNAISSANCE MARINE SEISMIC
US - (United States)	14/711.154	5/13/2015	5/13/2015	9,581,712	2/28/2017	2015-0331127		METHODS AND SYSTEMS FOR CONDUCTING RECONNAISSANCE MARINE SEISMIC
AU - (Australia)	2016327569	9/22/2016	4/20/2018	2016327569	11/4/2021	2016327569	5/10/2018	TRAVELING OCEAN BOTTOM SEISMIC SURVEY
BR - (Brazil)	BR112018005726.6	9/22/2016	3/22/2018			112018005726	10/9/2018	TRAVELING OCEAN BOTTOM SEISMIC SURVEY
CA - (Canada)	2,999,760	9/22/2016	3/22/2018			2,999,760	3/30/2017	TRAVELING OCEAN BOTTOM SEISMIC SURVEY
EP - (EPC)	16774798.9	9/22/2016	3/22/2018			3338114	6/27/2018	TRAVELING OCEAN BOTTOM SEISMIC SURVEY
GB - (Great Britain)	16181513	9/22/2016	10/27/2016					TRAVELING OCEAN BOTTOM SEISMIC SURVEY
MX - (Mexico)	MX/a/2018/003547	9/22/2016	3/22/2018	383092	6/1/2021	2018003547	3/14/2019	TRAVELING OCEAN BOTTOM SEISMIC SURVEY
US - (United States)	15/271,715	9/21/2016	9/21/2016	10,502,852	#####	2017-0082762	3/23/2017	TRAVELING OCEAN BOTTOM SEISMIC SURVEY
AU - (Australia)	2017240650	3/31/2017	10/4/2018				10/25/2018	RECONNAISSANCE MARINE SEISMIC SURVEYS HAVING REDUCED DENSITY OF
BR - (Brazil)	BR112018070048-7	3/31/2017	9/28/2018					RECONNAISSANCE MARINE SEISMIC SURVEYS HAVING REDUCED DENSITY OF
CA - (Canada)	3,019,579	3/31/2017	9/28/2018					RECONNAISSANCE MARINE SEISMIC SURVEYS HAVING REDUCED

EP - (EPC)	17716433.2	3/31/2017	10/2/2018			3436853	2/6/2019	DENSITY OF RECONNAISSANCE MARINE SEISMIC SURVEYS HAVING REDUCED DENSITY OF
MX - (Mexico)	MX/a/2018/011916	3/31/2017	9/28/2018	386868	10/7/2021			RECONNAISSANCE MARINE SEISMIC SURVEYS HAVING REDUCED DENSITY OF
US - (United States)	15/475,465	3/31/2017	3/31/2017	10,627,534	4/21/2020	2017-0285197	10/5/2017	RECONNAISSANCE MARINE SEISMIC SURVEYS HAVING REDUCED DENSITY OF
BR - (Brazil)	BR112019018783-9	5/1/2019	9/10/2019					SEISMIC SOURCE OPERATION AT LOW FREQUENCIES
EP - (EPC)	19723996.5	5/1/2019	11/2/2020			3788409	3/10/2021	SEISMIC SOURCE OPERATION AT LOW FREQUENCIES
MX - (Mexico)	MX/a/2020/001921	5/1/2019	2/19/2020					SEISMIC SOURCE OPERATION AT LOW FREQUENCIES
BR - (Brazil)	BR112021025508-7	6/17/2020	12/16/2021					SEISMIC SOURCE APPARATUS
EP - (EPC)	20737663.3	6/17/2020	1/4/2022			3983826	4/20/2022	SEISMIC SOURCE APPARATUS
MX - (Mexico)	MX/a/2021/015689	6/17/2020	12/15/2021					SEISMIC SOURCE APPARATUS
US - (United States)	16/904,188	6/17/2020	6/17/2020			2020-0393583	12/17/2020	SEISMIC SOURCE APPARATUS
BR - (Brazil)	BR112021024559-6	6/3/2020	12/3/2021					SPARSE SEISMIC DATA ACQUISITION SYSTEM, APPARATUS AND METHOD
EP - (EPC)	20747236.6	6/3/2020	12/15/2021			3977180	4/6/2022	SPARSE SEISMIC DATA ACQUISITION SYSTEM, APPARATUS AND METHOD
MX - (Mexico)	MX/a/2021/014982	6/3/2020	12/3/2021					SPARSE SEISMIC DATA ACQUISITION
US - (United States)	16/891,817	6/3/2020	6/3/2020			2020-0379138	12/3/2020	SPARSE SEISMIC DATA ACQUISITION
WO - (Patent Cooperation Treaty)	PCT/US2021/044454	8/4/2021	8/4/2021					DOUBLE BAFLE CHAMBER
US - (United States)	17/384,325	7/23/2021	7/23/2021			2022-0043173	2/10/2022	DIRECT FILL CHAMBER
WO - (Patent Cooperation Treaty)	PCT/US2021/051336	9/21/2021	9/21/2021					NEUTRALLY BUOYANT PARTICLE VELOCITY SENSOR
US - (United States)	17/487,206	9/28/2021	9/28/2021					NEUTRALLY BUOYANT PARTICLE VELOCITY

US - (United States)	10/071,105	2/8/2002	2/8/2002	7,042.80	5/9/2006	2003-0151974	8/14/2003	SENSOR MARINE SEISMIC SOURCE TOWING APPARATUS AND METHOD
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Country	Status	Application Number	Application Date	National Filing Date	Publication Number	Publication Date	Title
BR - (Brazil)	FILED - (F)	BR112021025508-7	6/17/2020	12/16/2021			SEISMIC SOURCE APPARATUS
EP - (EPC)	FILED - (F)	20737663.3	6/17/2020	1/4/2022	3983826	4/20/2022	SEISMIC SOURCE APPARATUS
MX - (Mexico)	FILED - (F)	MX/a/2021/015689	6/17/2020	12/15/2021			SEISMIC SOURCE APPARATUS
US - (United States)	FILED - (F)	16/904,188	6/17/2020	6/17/2020	2020-0393583	12/17/2020	SEISMIC SOURCE APPARATUS
WO - (Patent Cooperation)	FILED - (F)	PCT/US2021/044454	8/4/2021	8/4/2021			DOUBLE BAFFLE CHAMBER
US - (United States)	FILED - (F)	17/384,325	7/23/2021	7/23/2021	2022-0043173	2/10/2022	DIRECT FILL CHAMBER

Mark	Country	Application No.	Class	Serial No.	Status
GEMINI	USA	90/453,294	009,042	90453294	Granted

Country	Application Number	Application Date	National Filing Date	Patent Number	Grant Date	Publication Number	Publication Date	Title
EP - (EPC)	18718058.3	3/27/2018	10/25/2019			3602136	2/5/2020	AMPLITUDE COMPENSATION OF REVERSE TIME MIGRATION (RTM) GATHERS FOR
FR - (France)	18718058.3	3/27/2018	10/25/2019			3602136	2/5/2020	AMPLITUDE COMPENSATION OF REVERSE TIME MIGRATION (RTM) GATHERS FOR
GB - (Great Britain)	18718058.3	3/27/2018	10/25/2019			3602136	2/5/2020	AMPLITUDE COMPENSATION OF REVERSE TIME MIGRATION (RTM) GATHERS FOR
NO - (Norway)	18718058.3	3/27/2018	10/25/2019			3602136	2/5/2020	AMPLITUDE COMPENSATION OF REVERSE TIME MIGRATION (RTM) GATHERS FOR
US - (United States)	15/937,407	3/27/2018	3/27/2018	10,884,148	1/5/2021	201840275502	9/27/2018	AMPLITUDE COMPENSATION OF REVERSE TIME MIGRATION (RTM) GATHERS FOR
CN - (China P.R.)	201380075856.9	2/22/2013	10/11/2015	ZL201380075856.9	8/30/2019	105209934	12/30/2015	METHOD AND APPARATUS FOR MULTI-COMPONENT DATUMING
EP - (EPC)	13708038.8	2/22/2013	9/15/2015			2959323	12/30/2015	METHOD AND APPARATUS FOR MULTI-COMPONENT DATUMING
AU - (Australia)	2013214831	2/1/2013	8/4/2014	2013214831	10/27/2016			METHOD AND APPARATUS FOR PROCESSING SEISMIC DATA
EP - (EPC)	13705660.2	2/1/2013	8/29/2014					METHOD AND APPARATUS FOR PROCESSING SEISMIC DATA
MX - (Mexico)	MX/a/2014/009366	2/1/2013	8/1/2014	346820	3/31/2017			METHOD AND APPARATUS FOR PROCESSING SEISMIC DATA
RU - (Russian Federation)	2014135771	2/1/2013	9/2/2014	2616650	4/18/2017			METHOD AND APPARATUS FOR PROCESSING SEISMIC DATA
EP - (EPC)	12742980.1	6/22/2012	1/4/2014	2724181	8/19/2020	2724181	4/30/2014	METHOD AND APPARATUS FOR SEISMIC NOISE REDUCTION
FR - (France)	12742980.1	6/22/2012	1/4/2014	2724181	8/19/2020	2724181	4/30/2014	METHOD AND APPARATUS FOR SEISMIC NOISE REDUCTION
GB - (Great Britain)	12742980.1	6/22/2012	1/4/2014	2724181	8/19/2020	2724181	4/30/2014	METHOD AND APPARATUS FOR SEISMIC NOISE REDUCTION
US - (United States)	14/128,884	6/22/2012	12/23/2013	10,310,119	6/4/2019	201440112099	4/24/2014	METHOD AND APPARATUS FOR SEISMIC NOISE REDUCTION
CN - (China P.R.)	03821743.0	9/12/2003	9/12/2003			1682234	10/12/2005	SUBSURFACE ILLUMINATION, A HYBRID WAVE
GB - (Great Britain)	0504974.7	9/12/2003	3/10/2005	2409076	10/26/2005			EQUATION-RAY-TRACING METHOD
US - (United States)	10/243,175	9/13/2002	9/13/2002	6,763,305	7/13/2004	200440054477	3/18/2004	SUBSURFACE ILLUMINATION, A HYBRID WAVE
EP - (EPC)	16820112.7	12/12/2016	6/13/2018	3387465	8/4/2021	3387465	10/17/2018	EQUATION-RAY-TRACING METHOD
FR - (France)	16820112.7	12/12/2016	6/13/2018	3387465	8/4/2021	3387465	10/17/2018	SYSTEM AND METHOD FOR RECONSTRUCTED WAVEFIELD INVERSION
GB - (Great Britain)	16820112.7	12/12/2016	6/13/2018	3387465	8/4/2021	3387465	10/17/2018	SYSTEM AND METHOD FOR RECONSTRUCTED WAVEFIELD INVERSION
NO - (Norway)	16820112.7	12/12/2016	6/13/2018	3387465	8/4/2021	3387465	10/17/2018	SYSTEM AND METHOD FOR RECONSTRUCTED WAVEFIELD INVERSION
US - (United States)	15/375,471	12/12/2016	12/12/2016	10,578,755	3/3/2020	201740168177	6/15/2017	SYSTEM AND METHOD FOR TIME DOMAIN RECONSTRUCTED WAVEFIELD FWI (TDWF)
BR - (Brazil)	BR112019012803-4	12/19/2017	6/19/2019			BR112019012803-4	12/3/2019	SYSTEM AND METHOD FOR RECONSTRUCTED WAVEFIELD IMAGING
CA - (Canada)	3,047,144							SYSTEM AND METHOD FOR RECONSTRUCTED



EP - (EPC)	17829493.0	12/19/2017	6/13/2019	3559707		3559707		WAVEFIELD IMAGING
								SYSTEM AND METHOD FOR RECONSTRUCTED
FR - (France)	17829493.0	12/19/2017	7/10/2019	3559707	2/17/2021	3559707	10/30/2019	WAVEFIELD IMAGING
								SYSTEM AND METHOD FOR RECONSTRUCTED
GB - (Great Britain)	17829493.0	12/19/2017	7/10/2019	3559707	2/17/2021	3559707	10/30/2019	WAVEFIELD IMAGING
								SYSTEM AND METHOD FOR RECONSTRUCTED
US - (United States)	15/847,846	12/19/2017	12/19/2017	10,816,685	10/27/2020	2018-0172858	6/21/2018	SYSTEM AND METHOD FOR RECONSTRUCTED
								WAVEFIELD IMAGING
US - (United States)	14/887,948	10/20/2015	10/20/2015	9,903,968	2/27/2018	2016-0109595		NOISE REMOVAL IN NON-UNIFORMMLY SPACED
								SEISMIC RECEIVER ARRAYS
US - (United States)	12/826,837	6/30/2010	6/30/2010	8,737,166	5/27/2014	2011-0122726	5/26/2011	WAVE EQUATION IMAGING

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RECORDED: 10/17/2022