ION GEOPHYSICAL CORP Form DEF 14A April 11, 2019

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934 (Amendment No.

Filed by the Registrant ý

Filed by a Party other than the Registrant o

Check the appropriate box:

- o Preliminary Proxy Statement
- o Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- ý Definitive Proxy Statement
- o Definitive Additional Materials
- o Soliciting Material under §240.14a-12

ION Geophysical Corporation

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- ý No fee required.
- o Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
 - (1) Title of each class of securities to which transaction applies:
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o	Fee p	aid previously with preliminary materials.
О		k box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee aid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.
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ION GEOPHYSICAL CORPORATION

2105 CityWest Boulevard, Suite 100 Houston, Texas 77042-2855 (281) 933-3339

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS To Be Held May 15, 2019

To ION's Shareholders:

The 2019 Annual Meeting of Shareholders of ION Geophysical Corporation will be held in the offices of the Company located at 2105 CityWest Boulevard, Houston, Texas, on Wednesday, May 15, 2019, at 10:30 a.m., local time, for the following purposes:

- 1. Elect the three directors named in the attached Proxy Statement to our Board, each to serve for a three-year term;
- 2. Advisory (non-binding) vote to approve the compensation of our named executive officers;
- 3. Ratify the appointment of Grant Thornton LLP as our independent registered public accounting firm (independent auditors) for 2019; and
- 4. Consider any other business that may properly come before the annual meeting, or any postponement or adjournment of the meeting.

ION's Board of Directors has set March 29, 2019, as the record date for the meeting. This means that owners of ION Common Stock at the close of business on that date are entitled to receive this notice of meeting and vote at the meeting and any adjournments or postponements of the meeting.

Your vote is very important, and your prompt cooperation in voting your proxy is greatly appreciated. Whether or not you plan to attend the meeting, please sign, date and return your enclosed proxy card as soon as possible so that your shares can be voted at the meeting.

By Authorization of the Board of Directors

Matthew Powers

Executive Vice President, General Counsel and Corporate Secretary

April 11, 2019 Houston, Texas

ION GEOPHYSICAL CORPORATION

2105 CityWest Boulevard, Suite 100 Houston, Texas 77042-2855 (281) 933-3339

PROXY STATEMENT FOR ANNUAL MEETING OF SHAREHOLDERS To Be Held May 15, 2019

Our Board of Directors (the "Board") is furnishing you this proxy statement (this "Proxy Statement") to solicit proxies on its behalf to be voted at the 2019 Annual Meeting of Shareholders ("Annual Meeting") of ION Geophysical Corporation ("ION"). The Annual Meeting will be held at 2105 CityWest Boulevard, Houston, Texas, on May 15, 2019, at 10:30 a.m., local time. Directions to the annual meeting are also provided in this Proxy Statement under "About the Meeting Where will the Annual Meeting be held?"

The matters intended to be acted upon are:

- 1. Elect the three directors named in the attached Proxy Statement to our Board, each to serve for a three-year term;
- 2. Advisory (non-binding) vote to approve the compensation of our named executive officers;
- 3. Ratify the appointment of Grant Thornton LLP as our independent registered public accounting firm (independent auditors) for 2019; and
- 4. Consider any other business that may properly come before the annual meeting, or any postponement or adjournment of the meeting.

The Board of Directors recommends voting in favor of the nominees listed in the Proxy Statement, the approval of the compensation of our named executive officers and the ratification of the appointment of Grant Thornton LLP.

The mailing address of our principal executive offices is 2105 CityWest Boulevard, Suite 100, Houston, Texas 77042-2855. We are mailing the proxy materials to our shareholders beginning on or about April 11, 2019. All properly completed and returned proxies for the annual meeting will be voted at the Annual Meeting in accordance with the directions given in the proxy, unless the proxy is revoked before the Annual Meeting. The proxies also may be voted at any adjournments or postponements of the Annual Meeting.

Only owners of record of our outstanding shares of our Common Stock, par value \$0.01 ("Common Stock") on March 29, 2019 are entitled to vote at the Annual Meeting, or at adjournments or postponements of the Annual Meeting. Each owner of Common Stock on the record date is entitled to one vote for each share of Common Stock held. On March 29, 2019, there were 14,959,914 shares of Common Stock issued and outstanding.

When used in this Proxy Statement, "ION Geophysical," "ION," "Company," "we," "our," "ours" and "us" refer to ION Geophysical Corporation and its consolidated subsidiaries, except where the context otherwise requires or as otherwise indicated.

Important Notice Regarding the Availability of Proxy Materials
For the Annual Shareholders' Meeting to be held on May 15, 2019
The Proxy Statement and our 2018 annual report to shareholders
are available at www.iongeo.com under "Investor Relations Investor Materials
Annual Report & Proxy Statement."

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2019 PROXY STATEMENT HIGHLIGHTS

This summary highlights information contained elsewhere in our Proxy Statement. This summary does not contain all of the information that you should consider. You should read the entire Proxy Statement carefully before voting.

Board Nominees

		Director				Commi Member:		
Name	Age	Since	Occupation	Independent	Audit	Comp	Gov	Fin
David H. Barr	69	2010	Former President and Chief					
			Executive Officer, Logan					
			International, Inc.	*	*	*	*	
Franklin Myers	66	2001	Senior Advisor, Quantum Energy					
			Partners	*		*	*	*
S. James Nelson, Jr.	77	2004	Former Vice Chairman, Cal Dive					
			International, Inc. (now Helix					
			Energy Solutions Group, Inc.)	*	*			*

Executive Compensation Highlights

ION is committed to paying for performance. We provide the majority of compensation to our executives through programs in which the amounts ultimately received vary to reflect our performance. Our executive compensation programs evolve and are adjusted over time to support our business goals and to promote both near-term and long-term profitable company growth.

The majority of cash compensation is paid through base salary and under our annual incentive cash plan (that is, annual cash bonuses). Payment under our annual incentive cash plan is based on company performance relative to the Company's goals and on individual performance. Under our annual incentive cash plan, cash compensation reflects near-term (annual) business performance of the Company. Our employees can also receive cash payments through awards of stock appreciation rights ("SARs").

Awards of SARs and equity awards (consisting of stock options, restricted stock and restricted stock units) are used to align compensation with the long-term interests of our shareholders by focusing our executive officers on total shareholder return. Equity and SARs awards generally contain a time-based vesting restriction that is, they become fully vested in either three or four years after the grant date, contingent on continued employment so that compensation realized under the awards is dependent on the long-term performance of our Common Stock. Our most recent SARs and restricted stock awards contain, in addition to a time-based vesting restriction, a performance-based vesting restriction based on the price of our common stock (meaning, in addition to the time requirements, our stock price must attain and maintain certain price levels within three years for the awards to vest).

In setting executive officer compensation, the Compensation Committee evaluates individual performance reviews of the executive officers and compensation of executives at other companies as reported by various research and advisory companies (such as Gartner, Inc.). This past year (2018), the Company also engaged a compensation consulting firm, Aon Hewitt, to help determine appropriate compensation for our executive officers and other key employees.

Total compensation for each executive officer varies with ION's performance in achieving strategic and financial objectives and with individual performance. Each executive officer's compensation is designed to reward his or her contribution to ION's results. Our executive officers' 2019 compensation

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also reflects adjustments arising from our normal annual process of assessing pay competitiveness. Year-over-year changes in salaries and equity award levels also reflect promotions, individual performance and competitive market adjustments. The following table shows the total direct compensation granted by the Compensation Committee to our named executive officers in 2018, 2017 and 2016 (except for Mr. Powers, who did not become a named executive officer until 2017):

				Stock	Option	Non-Equity Incentive Plan	Total Direct
Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Awards (\$)	Awards (\$)	Compensation (\$)	Compensation (\$)
R. Brian Hanson President, Chief Executive Officer and Director	2018 2017 2016	600,000 558,689 540,000	(φ)	1,888,032	262,400 203,817	582,000 1,200,000 720,000	3,332,432 1,758,689 1,805,717
Steven A. Bate Executive Vice President and Chief Financial Officer	2018 2017 2016	375,000 350,484 337,500		1,092,322 170,950	130,427 101,909	273,100 450,000 337,500	1,870,849 800,484 947,859
Matthew R. Powers Executive Vice President, General Counsel and Corporate Secretary	2018 2017	275,000 220,664		365,943 168,600	56,027 291,540	160,200 165,000	857,170 845,804
Christopher T. Usher Executive Vice President and Chief Operating Officer, Operations Optimization	2018 2017 2016	378,560 353,808 340,704		1,023,188 59,686	130,427 50,954	220,600 347,000 272,500	1,752,775 700,808 723,844
Kenneth G. Williamson Executive Vice President and Chief Operating Officer, E&P Technology & Services	2018 2017 2016	387,213 361,905 348,492		1,086,632 70,875	130,427 71,336	211,500 508,000 260,000	1,815,772 869,905 750,703
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ABOUT THE MEETING

What is a proxy, a proxy solicitation and a proxy statement?

A proxy is your legal designation of another person to vote the stock you own on your behalf. That other person is also referred to as a "proxy." A proxy solicitation is a request that a corporate shareholder authorize another person to cast the shareholder's vote at a corporate meeting. Our Board has designated R. Brian Hanson and James M. Lapeyre, Jr. as proxies for the Annual Meeting of Shareholders. By completing and submitting the enclosed proxy card, you are giving Mr. Hanson and Mr. Lapeyre the authority to vote your shares in the manner you indicate on your proxy card. A proxy statement is an informational document that the regulations of the Securities and Exchange Commission ("SEC") require us to give you when we ask you, in a proxy solicitation, to sign a proxy card designating individuals as proxies to vote on your behalf.

Who is soliciting my proxy?

Our Board is soliciting proxies on its behalf to be voted at the Annual Meeting. All costs of soliciting the proxies will be paid by ION. Copies of solicitation materials will be furnished to banks, brokers, nominees and other fiduciaries and custodians to forward to beneficial owners of Common Stock held by such persons. ION will reimburse such persons for their reasonable out-of-pocket expenses in forwarding solicitation materials. In addition to solicitations by mail, some of ION's directors, officers and other employees, without extra compensation, might supplement this solicitation by telephone, personal interview or other communication. ION has also retained Georgeson LLP to assist with the solicitation of proxies from banks, brokers, nominees and other holders, for a fee not to exceed \$11,500 plus reimbursement for out-of-pocket expenses.

What are the voting rights of holders of Common Stock?

Each outstanding share of Common Stock is entitled to one vote on each matter considered at the Annual Meeting.

What is the difference between a "shareholder of record" and a shareholder who holds stock in "street name"?

If your shares are registered directly in your name, you are a shareholder of record. If your shares are registered in the name of your broker, bank or similar organization, then you are the beneficial owner of shares held in street name.

Where will the Annual Meeting be held?

ION's 2019 Annual Meeting of Shareholders will be held on the 1st Floor of 2105 CityWest Boulevard in Houston, Texas.

Directions: The site for the Annual Meeting is located on CityWest Boulevard off of West Sam Houston Parkway South ("Beltway 8"), near the intersection of Beltway 8 and Briar Forest Drive. Traveling south on the Beltway 8 feeder road after Briar Forest Drive, turn right on Del Monte Drive. Enter Garage Entrance 3 on your immediate left. Advise the guard that you are attending the ION Annual Meeting. You may be required to show your driver's license or other photo identification. The guard will then direct you where to park in the visitors section of the parking garage. The guard can also direct you to 2105 CityWest Boulevard, which is directly south of the garage. Once in the building, check in at the security desk where you will then be directed to the first floor receptionist.

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What is the effect of not voting?

It depends on how ownership of your shares is registered. If you are a shareholder of record, your unvoted shares will not be represented at the Annual Meeting and will not count toward the quorum requirement. Assuming a quorum is obtained, your unvoted shares will not be treated as a vote for or against a proposal. Depending on the circumstances, if you own your shares in street name, your broker or bank may represent your shares at the Annual Meeting for purposes of obtaining a quorum. As described in the answer to the question immediately following, in the absence of your voting instruction, your broker may or may not vote your shares.

If I don't vote, will my broker vote for me?

If you own your shares in street name and you do not vote, your broker may vote your shares in its discretion on proposals determined to be "routine matters" under the rules of the New York Stock Exchange ("NYSE"). With respect to "non-routine matters," however, your broker may not vote your shares for you. Where a broker cannot vote your shares on non-routine matters because he has not received any instructions from you regarding how to vote, the number of unvoted shares on those matters is reported as "broker non-votes." These "broker non-vote" shares are counted toward the quorum requirement, but, generally speaking, they do not affect the determination of whether a matter is approved. See " How are abstentions and broker non-votes counted?" below. The election of directors and the advisory vote on executive compensation are not considered to be routine matters under current NYSE rules, so your broker will not have discretionary authority to vote your shares held in street name on those matters. The proposal to ratify the appointment of Grant Thornton LLP ("Grant Thornton") as our independent registered public accounting firm is considered to be a routine matter on which brokers will be permitted to vote your shares without instructions from you.

What is the record date and what does it mean?

The record date for the Annual Meeting of Shareholders is March 29, 2019. The record date is established by the Board as required by Delaware law (the state in which we are incorporated). Holders of Common Stock at the close of business on the record date are entitled to receive notice of the Annual Meeting and vote at the Annual Meeting and any adjournments or postponements of the Annual Meeting.

How can I revoke a proxy?

A shareholder can revoke a proxy prior to the vote at the Annual Meeting by (a) giving written notice to the Corporate Secretary of ION, (b) delivering a later-dated proxy or (c) voting in person at the Annual Meeting. Written notice to the Corporate Secretary should be sent to Corporate Secretary, ION Geophysical Corporation, 2105 CityWest Boulevard, Suite 100, Houston, Texas 77042-2855. If you hold shares through a bank or broker, you must contact that bank or broker in order to revoke any prior voting instructions.

What constitutes a quorum?

The presence, in person or by proxy, of the holders of a majority of the outstanding shares of Common Stock constitutes a quorum. We need a quorum of shareholders to hold a validly convened Annual Meeting. If you have submitted your proxy, your shares will be counted toward the quorum. If a quorum is not present, the chairman may adjourn the Annual Meeting, without prior notice other than by announcement at the Annual Meeting, until the required quorum is present. As of the record date, 14,959,914 shares of Common Stock were outstanding. Thus, the presence of the holders of Common Stock representing at least 7,479,958 shares will be required to establish a quorum.

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What are my voting choices when voting for director nominees, and what vote is needed to elect directors?

In voting on the election of the director nominees to serve until the 2022 Annual Meeting of Shareholders, shareholders may vote in one of the following ways:

- in favor of all nominees.
- (b) withhold votes as to all nominees or
- (c) withhold votes as to a specific nominee.

Directors will be elected by a plurality of the votes of the shares of Common Stock present or represented by proxy at the Annual Meeting. This means that director nominees receiving the highest number of "for" votes will be elected as directors. Votes "for" and "withheld" are counted in determining whether a plurality has been cast in favor of a director. Under ION's Corporate Governance Guidelines, any director nominee who receives a greater number of votes "withheld" from his election than votes "for" such election shall promptly tender to the Board his resignation following certification of the results of the shareholder vote. For a more complete explanation of this requirement and process, please see "Item 1 Election of Directors Board of Directors and Corporate Governance Majority Voting Procedure for Directors" below.

If you vote, you may not abstain from voting for purposes of the election of directors. Shareholders are not permitted to cumulate their votes in the election of directors.

The Board recommends a vote "FOR" all of the nominees.

What are my voting choices when casting an advisory vote to approve the compensation of our named executive officers?

In casting an advisory vote to approve the compensation of our named executive officers, shareholders may vote in one of the following ways:

- in favor of the advisory vote to approve our executive compensation,
- (b) against the advisory vote to approve our executive compensation or
- (c) abstain from voting.

The advisory vote to approve the compensation of our named executive officers will be approved if the number of votes cast in favor of the proposal exceeds the number of votes cast against it.

The Board recommends a vote "FOR" this proposal.

What are my voting choices when voting on the ratification of the appointment of Grant Thornton as our independent registered public accounting firm or independent auditors and what vote is needed to ratify their appointment?

In voting to ratify the appointment of Grant Thornton as independent auditors for 2019, shareholders may vote in one of the following ways:

- (a) in favor of ratification,
- (b)

against ratification or

(c) abstain from voting on ratification.

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The proposal to ratify the appointment of Grant Thornton will require the affirmative vote of a majority of the votes cast on the proposal by holders of Common Stock in person or represented by proxy at the Annual Meeting.

The Board recommends a vote "FOR" this proposal.

Will any other business be transacted at the Annual Meeting? If so, how will my proxy be voted?

We do not know of any business to be transacted at the Annual Meeting other than those matters described in this Proxy Statement. We believe that the periods specified in our Amended and Restated Bylaws (our "Bylaws") for submitting proposals to be considered at the Annual Meeting have passed and no proposals were submitted. However, should any other matters properly come before the Annual Meeting, and should any adjournments or postponements of the Annual Meeting be proposed, shares with respect to which voting authority has been granted to the proxies will be voted by the proxies in accordance with the proxies' respective judgment.

What if I do not specify a choice for a matter when submitting my proxy?

Shareholders should specify their choice for each matter on their proxy. If no instructions are given, in a proxy that is properly submitted, that proxy will be voted "FOR" the election of all director nominees, "FOR" the non-binding advisory vote to approve our Company's executive compensation and "FOR" the proposal to ratify the appointment of Grant Thornton as independent auditors for 2019.

How are abstentions and broker non-votes counted?

Abstentions are counted for purposes of determining whether a quorum is present at the Annual Meeting. A properly submitted proxy marked "withhold" with respect to the election of one or more directors will not be voted with respect to the director or directors indicated, although it will be counted for purposes of determining whether there is a quorum.

With respect to (i) the proposal regarding the advisory vote on executive compensation and (ii) the proposal to ratify the appointment of the independent auditors, an abstention from voting on either such proposal will be counted as present in determining whether a quorum is present but will not be counted in determining the total votes cast on such proposal. Thus, abstentions will have no effect on the outcome of the vote on these proposals.

Broker non-votes will have no effect on the outcome of the vote on any of the proposals.

What is the deadline for submitting proposals to be considered for inclusion in the 2020 proxy statement and for submitting a nomination for director of ION for consideration at the Annual Meeting of Shareholders in 2020?

Shareholder proposals requested to be included in our 2020 proxy statement must be received by ION no later than December 13, 2019. A proper director nomination may be considered at ION's 2020 Annual Meeting of Shareholders only if the proposal for nomination is received by ION not later than December 13, 2019. Proposals and nominations should be directed to Corporate Secretary, ION Geophysical Corporation, 2105 CityWest Boulevard, Suite 100, Houston, Texas 77042-2855.

Will I have electronic access to the proxy materials and Annual Report?

The notice of Annual Meeting, Proxy Statement and 2018 Annual Report to Shareholders are posted on ION's Internet website at www.iongeo.com under "Investor Relations Investor Materials Annual Report & Proxy Statement".

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How can I obtain a copy of ION's Annual Report on Form 10-K?

A copy of our 2018 Annual Report on Form 10-K (without schedules or exhibits) forms a part of our 2018 Annual Report to Shareholders, which is enclosed with this Proxy Statement. You may obtain an additional copy of our 2018 Form 10-K at no charge by sending a written request to Corporate Secretary, ION Geophysical Corporation, 2105 CityWest Boulevard, Suite 100, Houston, Texas 77042-2855. Our Form 10-K is also available (i) through the Investor Relations section of our website at www.iongeo.com and (ii) with exhibits on the SEC's website at https://www.sec.gov.

Please note that the contents of these and any other websites referenced in this Proxy Statement are not incorporated by reference herein. Further, our references to the URLs for these and other websites listed in this Proxy Statement are intended to be inactive textual references only.

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ITEM 1 ELECTION OF DIRECTORS

Our Board currently consists of seven members. (Michael Jennings, whom the Board plans to replace, resigned from the Board in February of 2019.) The Board is divided into three classes. Members of each class are elected for three-year terms and until their respective successors are duly elected and qualified, unless the director dies, resigns, retires, is disqualified or is removed. Our shareholders elect the directors in a designated class annually. Directors in Class II, which is the class of directors to be elected at the Annual Meeting, will serve on the Board until our annual meeting in 2022 (except in the case of any earlier death, resignation, retirement, disqualification or removal).

The current Class II directors are David H. Barr, Franklin Myers and S. James Nelson, Jr. and their current terms will expire when their successors are elected and qualified at the Annual Meeting. At its meeting on February 4, 2019, the Board approved the recommendation of the Governance Committee that Messrs. Barr, Myers and Nelson be nominated to stand for reelection at the Annual Meeting to hold office until our 2022 Annual Meeting and until their successors are elected and qualified.

We have no reason to believe that any of the nominees will be unable or unwilling to serve if elected. However, if any nominee should become unable or unwilling to serve for any reason, proxies may be voted for another person nominated as a substitute by our Board, or our Board may reduce the number of directors.

The Board of Directors recommends a vote "FOR" the election of each of David H. Barr, Franklin Myers and S. James Nelson, Jr.

The biographies of each nominee (each of whom is also a current director) contains information regarding the nominee's service as a director, business experience, education, director positions and the experiences, qualifications, attributes or skills that caused the Governance Committee and our Board to determine that the person should serve as a director for the Company:

Class II Director Nominees for Re-Election for Term Expiring In 2022

DAVID H. BARR Director since 2010

From May 2011 until December 2012, Mr. Barr, age 69, served as the President and Chief Executive Officer of Logan International Inc., a Calgary-based Toronto Stock Exchange (TSX)-listed manufacturer and provider of oilfield tools and services. In 2009, Mr. Barr retired from Baker Hughes Incorporated, an oilfield services and equipment provider, after serving for 36 years in various manufacturing, marketing, engineering and product management functions. At the time of his retirement, Mr. Barr was Group President Eastern Hemisphere, responsible for all Baker Hughes products and services for Europe, Russia/Caspian, Middle East, Africa and Asia Pacific. From 2007 to 2009, he served as Group President Completion & Production, and from 2005 to 2007, as Group President Drilling and Evaluation. Mr. Barr served as President of Baker Atlas, a division of Baker Hughes Inc., from 2000 to 2005, and served as Vice President, Supply Chain Management for the Cameron division of Cameron International Corporation from 1999 to 2000. Prior to 1999, he held positions of increasing responsibility within Baker Hughes Inc. and its affiliates, including Vice President Business Process Development and various leadership positions with Hughes Tool Company and Hughes Christensen. Mr. Barr initially joined Hughes Tool Company in 1972 after graduating from Texas Tech University with a Bachelor of Science degree in mechanical engineering. He formerly served on the Board of Directors, Compensation Committee, and as Chairman of the Safety and Social Responsibility Committee of Enerplus Corporation (a NYSE- and TSX-listed independent oil and gas exploration and production ("E&P") company), on the Board of Directors and Compensation Committee of Logan International Inc., and on the Board of Directors and Audit, Remuneration and Governance Committees of Hunting PLC, a London Stock Exchange-listed provider of energy services. Mr. Barr is the chairman of our Compensation Committee and a member of the Audit and Governance Committees of our Board.

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Mr. Barr's more than 36 years of experience in the oilfield equipment and services industry provides a uniquely valuable industry perspective for our Board. While at Baker Hughes, Mr. Barr obtained experience within a wide range of company functions, from engineering to group President. His breadth of experience enables him to better understand and inform the Board regarding a range of issues and decisions involved in the operation of our business, including development of business strategy.

FRANKLIN MYERS Director since 2001

Mr. Myers, age 66, has served as a Senior Advisor of Quantum Energy Partners, a private equity firm for the global energy industry, since February 2013. From 2009 to 2012, he was an Operating Advisor with Paine & Partners, LLC, a private equity firm focused on leveraged buyout transactions. Prior to joining Paine & Partners, Mr. Myers was employed by Cameron International Corporation, an international manufacturer of oil and gas flow control equipment, as Senior Vice President, General Counsel and Corporate Secretary (from 1995 to 1999), President of the Cooper Energy Services Division (from 1998 until 2001), Senior Vice President (from 2001 to 2003), Senior Vice President and Chief Financial Officer (from 2003 to 2008) and Senior Advisor (from 2008 to 2009). Prior to joining Cameron, he was Senior Vice President and General Counsel of Baker Hughes Incorporated, an oilfield services and equipment provider, and an attorney and partner with the law firm of Fulbright & Jaworski L.L.P. in Houston, Texas. Mr. Myers also currently serves on the Boards of Directors of Comfort Systems USA, Inc. (a NYSE-listed provider of heating, ventilation and air conditioning services), HollyFrontier Corporation (a NYSE-listed independent oil refining and marketing company), and NCS Multistage (a manufacturer of down-hole tubular equipment). From September 2010 until March 15, 2018, Mr. Myers served on the Board of Directors of Forum Energy Technology, Inc. (a NYSE-listed oilfield equipment manufacturing company). Mr. Myers is a member of the Compensation, Governance and Finance Committees of our Board. He holds a Bachelor of Science degree in industrial engineering from Mississippi State University and a Juris Doctorate degree with Honors from the University of Mississippi.

Mr. Myers' extensive experience as both a financial and legal executive makes him uniquely qualified as a valuable member of our Board. While at Cameron, Baker Hughes and Fulbright & Jaworski, Mr. Myers was responsible for numerous successful finance and acquisition transactions, and his expertise gained through those experiences have proved to be a significant resource for our Board. In addition, Mr. Myers' service on Boards of Directors of other NYSE-listed companies enables Mr. Myers to observe and advise on favorable governance practices pursued by other public companies.

S. JAMES NELSON, JR. Director since 2004

Mr. Nelson, age 77, joined our Board in 2004. In 2004, Mr. Nelson retired from Cal Dive International, Inc. (now named Helix Energy Solutions Group, Inc.), a marine contractor and operator of offshore oil and gas properties and production facilities, where he was a founding shareholder, Chief Financial Officer (prior to 2000), Vice Chairman (from 2000 to 2004) and a Director (from 1990 to 2004). From 1985 to 1988, Mr. Nelson was the Senior Vice President and Chief Financial Officer of Diversified Energies, Inc., a NYSE-traded company with \$1 billion in annual revenues and the former parent company of Cal Dive. From 1980 to 1985, Mr. Nelson served as Chief Financial Officer of Apache Corporation, an oil and gas E&P company. From 1966 to 1980, Mr. Nelson was employed with Arthur Andersen & Co. where, from 1976 to 1980, he was a partner serving on the firm's worldwide oil and gas industry team. Mr. Nelson also currently serves on the Board of Directors and Audit Committees of Oil States International, Inc. (a NYSE-listed diversified oilfield services company) and W&T Offshore, Inc. (a NYSE-listed oil and natural gas E&P company), where he was appointed to the Governance Committee in late 2016. From 2010 until October 2012, Mr. Nelson also served on the Board of Directors and Audit and Compensation Committees of the general partner of Genesis

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Energy LP, an operator of oil and natural gas pipelines and provider of services to refineries and industrial gas users. From 2005 until the Company's sale in 2008, he served as a member of the Board of Directors, a member of the Compensation Committee and Chair of the Audit Committee of Quintana Maritime, Ltd., a provider of dry bulk cargo shipping services based in Athens, Greece. Mr. Nelson, who is also a Certified Public Accountant, is Chairman of the Audit and Finance Committees of our Board. He holds a Bachelor of Science degree in accounting from Holy Cross College and a Master of Business Administration degree from Harvard University.

Mr. Nelson is an experienced financial leader with the skills necessary to lead our Audit Committee. His service as Chief Financial Officer of Cal Dive International, Inc., Diversified Energies, Inc. and Apache Corporation, as well as his years with Arthur Andersen & Co., make him a valuable asset to ION, both on our Board and as the Chairman of our Audit Committee, particularly with regard to financial and accounting matters. In addition, Mr. Nelson's service on audit committees of other companies enables Mr. Nelson to remain current on audit committee best practices and current financial reporting developments within the energy industry.

Class III Director Term Expiring In 2020

JOHN N. SEITZ Director since 2003

Mr. Seitz, age 67, has been Chairman and Chief Executive Officer of GulfSlope Energy, Inc., an OTC-listed independent E&P company exploring for oil and gas using advanced seismic imaging, since 2013. From 1977 to 2003, Mr. Seitz held positions of increasing responsibility at Anadarko Petroleum Company, serving most recently as a Director and as President and Chief Executive Officer. Mr. Seitz is a Trustee of the American Geological Institute Foundation. Mr. Seitz currently serves on the Investment Committee for Sheridan Production Company, LLC, a privately held oil & gas company with interests in Texas, Oklahoma and Wyoming. He formerly serviced on the Board of Directors for Endeavor International, Inc., Constellation Energy Partners LLC, and Gulf United Energy, Inc. Mr. Seitz is chairman of the Governance Committee and a member of the Compensation Committee of our Board. Mr. Seitz holds a Bachelor of Science degree in geology from the University of Pittsburgh, a Master of Science degree in geology from Rensselaer Polytechnic Institute and is a Certified Professional Geoscientist in Texas. He also completed the Advanced Management Program at the Wharton School of Business.

Mr. Seitz' extensive experience as a leader of global E&P companies has proven to be an important resource for our Board when considering industry and customer issues. In addition, Mr. Seitz' geology background and expertise assists the Board in better understanding industry trends and issues.

Class I Director Term Expiring In 2021

R. BRIAN HANSON Director since 2012

Mr. Hanson, age 54, has been our President and Chief Executive Officer since January 1, 2012. He joined ION in May 2006 as our Executive Vice President and Chief Financial Officer and was appointed our President and Chief Operating Officer in August 2011. Prior to joining ION, Mr. Hanson served as the Executive Vice President and Chief Financial Officer of Alliance Imaging, Inc., a NYSE-listed provider of diagnostic imaging services to hospitals and other healthcare providers, from July 2004 until November 2005. From 1998 to 2003, Mr. Hanson held a variety of positions at Fisher Scientific International, Inc., a NYSE-listed manufacturer and supplier of scientific and healthcare products and services, including Vice President Finance of the Healthcare group from 1998 to 2002 and Chief Operating Officer from 2002 to 2003. From 1986 until 1998, Mr. Hanson served in various positions with Culligan Water Conditioning, an international manufacturer of water treatment products and producer and retailer of bottled water products, most recently as Vice President

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of Finance and Chief Financial Officer. Mr. Hanson received a Bachelor's degree in engineering from the University of New Brunswick and a Master of Business Administration degree from Concordia University in Montreal.

Mr. Hanson's day-to-day leadership and involvement with our Company provides him with personal knowledge regarding our operations. In addition, Mr. Hanson's financial experience and skills and technical background enable the Board to better understand and be informed with regard to our Company's operations, prospects and financial condition.

HUASHENG ZHENG Director since 2018

Mr. Zheng, age 52, has been employed by China National Petroleum Corporation ("CNPC"), China's largest oil company, and its affiliates in various positions of increasing responsibility since 1994. Since 2018, he has been Executive Vice President of BGP Inc., China National Petroleum Corporation ("BGP"). BGP is a subsidiary of CNPC and is the world's largest land seismic contractor. From 1994 to 1997, Mr. Zheng was Legal Representative & Financial Supervisor, Ecuador Branch. From 1997 to 1998, he was Representative of the Sudan Office of BGP International. From 1998 to 1999, Mr. Zheng was Manager of Strategy & Planning Department, BGP International. From 1999 to 2003, Mr. Zheng was Vice President of BGP International and Assistant President of BGP. From 2010 to 2018, Mr. Zheng was Vice President of BGP. He holds a Masters of Business Administration degree from the University of Calgary, Haskayne School of Business.

Mr. Zheng has over 20 years of experience in geophysical program management, particularly in international business. Mr. Zheng's position with BGP and his extensive knowledge of the global seismic industry enables our Board to receive current input and advice reflecting the perspectives of our seismic contractor customers. In addition, our land equipment joint venture with BGP and the ever-increasing importance of China in the global economy and the worldwide oil and gas industry has elevated our commercial involvement with China and Chinese companies. Mr. Zheng's insights with regard to issues relating to China provide our Board with a valuable resource.

Mr. Zheng was appointed to our Board of Directors under the terms of the Company's Investor Rights Agreement with BGP. Under the agreement, BGP is entitled to designate one individual to serve as a member of our Board unless BGP's ownership of our Common Stock falls below 10%. In April of 2018, Mr. Zheng replaced Hao Huimin, BGP's prior appointee to our Board.

JAMES M. LAPEYRE, JR. Director since 1998

Mr. Lapeyre, age 66, served as Chairman of our Board from 1999 until January 1, 2012, and again from January 1, 2013 until present. During 2012, Mr. Robert P. Peebler held the role of Executive Chairman and Mr. Lapeyre served as Lead Independent Director. Mr. Lapeyre has been President and Manager of Laitram L.L.C., a privately-owned, New Orleans-based manufacturer of food processing equipment and modular conveyor belts, and its predecessors since 1989. Mr. Lapeyre joined our Board when we bought the DigiCOURSE marine positioning products business from Laitram in 1998. Mr. Lapeyre is a member of the Audit, Compensation, Governance and Finance Committees of our Board. He holds a Bachelor of Art degree in history from the University of Texas and Master of Business Administration and Juris Doctorate degrees from Tulane University.

Mr. Lapeyre's status as a significant shareholder of our Company enables our Board to have direct access to the perspective of our shareholders and ensures that the Board will take into consideration the interests of our shareholders in all Board decisions. In addition, Mr. Lapeyre has extensive knowledge regarding the marine products and technology that we acquired from Laitram in 1998.

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BOARD OF DIRECTORS AND CORPORATE GOVERNANCE

Governance Initiatives. ION is committed to excellence in corporate governance and maintains clear practices and policies that promote good corporate governance. We review our governance practices and update them, as appropriate, based upon Delaware law, rules and listing standards of the NYSE, SEC regulations and practices recommended by our outside advisors.

Examples of our corporate governance initiatives include the following:

Six of our seven Board members are independent of ION and its management. R. Brian Hanson, our President and Chief Executive Officer, is not independent because he is an employee of ION.

All members of the principal standing committees of our Board the Audit Committee, the Governance Committee and the Compensation Committee are independent.

The independent members of our Board and each of the principal committees of our Board meet regularly without the presence of management. The members of the Audit Committee meet regularly with representatives of our independent registered public accounting firm without the presence of management. The members of the Audit Committee also meet regularly with our Director of Internal Audit without the presence of other members of management.

Our Audit Committee has at least one member who qualifies as a "financial expert" in accordance with Section 407 of the Sarbanes-Oxley Act of 2002.

The Board has adopted written Corporate Governance Guidelines to assist its members in fulfilling their responsibilities.

Under our Corporate Governance Guidelines, Board members are required to offer their resignation from the Board if they retire or materially change the position they held when they began serving as a director on the Board.

We comply with and operate in a manner consistent with regulations prohibiting loans to our directors and executive officers.

Members of our Disclosure Committee, consisting of management employees and senior finance and accounting employees, must review and confirm they have reviewed all quarterly and annual reports before filing with the SEC.

We have a dedicated hotline and website available to all employees to report ethics and compliance concerns, anonymously if preferred, including concerns related to accounting, accounting controls, financial reporting and auditing matters. The hotline and website are administered and monitored by an independent hotline monitoring company. The Board has adopted a policy and procedures for the receipt, retention and treatment of complaints and employee concerns received through the hotline or website. The policy is available on our website at

http://ir.iongeo.com/phoenix.zhtml?c=101545&p=irol-govhighlights.

On an annual basis, each director and each executive officer is obligated to complete a questionnaire that requires disclosure of any transactions with ION in which the director or executive officer, or any member of his or her immediate family, has a direct or indirect material interest.

We have included as Exhibits 31.1 and 31.2 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, filed with the SEC, certificates of our Chief Executive Officer and Chief Financial Officer, respectively, certifying as to the quality of our public disclosure. In addition, in 2018, we submitted to the NYSE a certificate of our Chief Executive Officer

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certifying that he is not aware of any violation by ION of the NYSE corporate governance listing standards.

Our internal audit controls function maintains critical oversight over the key areas of our business and financial processes and controls, and provides reports directly to the Audit Committee.

We have a compensation recoupment (clawback) policy that applies to our current and former executive officers. The policy is available on our website at http://ir.iongeo.com/phoenix.zhtml?c=101545&p=irol-govhighlights.

We have stock ownership guidelines for our non-employee directors and senior management.

Our employment contracts with our Chief Executive Officer, Chief Financial Officer and other employees do not contain a "single-trigger" change of control severance provision or entitle the employee to tax gross-up benefits.

Majority Voting Procedure for Directors. Our Corporate Governance Guidelines require a mandatory majority voting, director resignation procedure. Any director nominee in an uncontested election who receives a greater number of votes "withheld" from his election than votes "for" such election is required to promptly tender to the Board his resignation following certification of the shareholder vote. Upon receipt of the resignation, the Governance Committee will consider the resignation offer and recommend to the Board whether to accept it. The Board will act on the Governance Committee's recommendation within 120 days following certification of the shareholder vote. The Governance Committee and the Board may consider any factors they deem relevant in deciding whether to accept a director's resignation. Thereafter, the Board will promptly disclose its decision whether to accept the director's resignation offer (and the reasons for rejecting the resignation offer, if applicable) in a Current Report on Form 8-K furnished to the SEC.

Code of Ethics. We have adopted a Code of Ethics that applies to all members of our Board and all of our employees, including our principal executive officer, principal financial officer, principal accounting officer and all other senior members of our finance and accounting departments. An updated version of our Code of Ethics was approved by the Board on November 4, 2014. We require all employees to adhere to our Code of Ethics in addressing legal and ethical issues encountered in conducting their work. The Code of Ethics requires that our employees avoid conflicts of interest, comply with all laws and other legal requirements, conduct business in an honest and ethical manner, promote full and accurate financial reporting and otherwise act with integrity and in ION's best interest. Every year our senior management employees and senior finance and accounting employees affirm their compliance with our Code of Ethics and other principal compliance policies. New employees acknowledge receipt and compliance with Company policies through an online onboarding portal, after the employment offer has been accepted.

We have made our Code of Ethics, Corporate Governance Guidelines, charters for the principal standing committees of our Board and other information that may be of interest to investors available on the Investor Relations section of our website at http://ir.iongeo.com/phoenix.zhtml?c=101545&p=irol-govhighlights. Copies of this information may also be obtained by writing to us at ION Geophysical Corporation, Attention: Corporate Secretary, 2105 CityWest Boulevard, Suite 100, Houston, Texas 77042-2855. Amendments to, or waivers from, our Code of Ethics will also be available on our website and reported as may be required under SEC rules; however, any technical, administrative or other non-substantive amendments to our Code of Ethics may not be posted.

Please note that the preceding Internet address and all other Internet addresses referenced in this Proxy Statement are for information purposes only and are not intended to be a hyperlink. Accordingly,

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no information found or provided at such Internet addresses or at our website in general is intended or deemed to be incorporated by reference herein

Lead Independent Director. James M. Lapeyre, Jr. serves as our Chairman of the Board. Under NYSE corporate governance listing standards, Mr. Lapeyre has also been designated as our Lead Independent Director and presiding non-management director to lead non-management directors meetings of the Board. Our non-management directors meet at regularly scheduled executive sessions without management, over which Mr. Lapeyre presides. The powers and authority of the Lead Independent Director also include the following:

Advise and consult with the Chief Executive Officer, senior management and the Chairperson of each Committee of the Board, as to the appropriate information, agendas and schedules of Board and Committee meetings;

Advise and consult with the Chief Executive Officer and senior management as to the quality, quantity and timeliness of the information submitted by the Company's management to the independent directors;

Recommend to the Chief Executive Officer and the Board the retention of advisers and consultants to report directly to the Board:

Call meetings of the Board or executive sessions of the independent directors;

Develop the agendas for and preside over executive sessions of the Board's independent directors;

Serve as principal liaison between the independent directors, and the Chief Executive Officer and senior management, on sensitive issues, including the review and evaluation of the Chief Executive Officer; and

Coordinate with the independent directors in respect of each of the foregoing.

Certain of the duties and powers described above are to be conducted in conjunction with our Chairman of the Board if the Lead Independent Director is not also the Chairman of the Board.

Communications to Board and Lead Independent Director. Shareholders and other interested parties may communicate with the Board and our Lead Independent Director or non-management independent directors as a group by writing to "Chairman of the Board" or "Lead Independent Director," c/o Corporate Secretary, ION Geophysical Corporation, 2105 CityWest Boulevard, Suite 100, Houston, Texas 77042-2855. Inquiries sent by mail will be reviewed by our Corporate Secretary and, if they pertain to the functions of the Board or committees of the Board or if the Corporate Secretary otherwise determines that they should be brought to the intended recipient's attention, they will be forwarded to the intended recipient. Concerns relating to accounting, internal controls, auditing or compliance matters will be brought to the attention of our Audit Committee and handled in accordance with procedures established by the Audit Committee.

Our Corporate Secretary's review of these communications will be performed with a view that the integrity of this process be preserved. For example, items that are unrelated to the duties and responsibilities of the Board, such as personal employee complaints, product inquiries, new product suggestions, resumes and other forms of job inquiries, surveys, service or product complaints, requests for donations, business solicitations or advertisements, may not be forwarded to the directors. In addition, material that is considered to be hostile, threatening, illegal or similarly unsuitable may not be forwarded. Except for these types of items, the Corporate Secretary will promptly forward written communications to the intended recipient. Within the above guidelines, the independent directors have granted the Corporate Secretary discretion to decide what correspondence should be shared with ION management and independent directors.

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2018 Meetings of the Board and Shareholders. During 2018, the Board held six meetings and the four standing committees of the Board held a total of 15 meetings. The rate of attendance by our directors at such meetings was 91%. We do not require our Board members to attend our Annual Meeting of Shareholders; however, seven out of eight of our directors were present at our Annual Meeting held in May 2018 and six were present at the special shareholder meeting held in November 2018.

Independence. In determining independence, each year the Board determines whether directors have any "material relationship" with ION. When assessing the "materiality" of a director's relationship with ION, the Board considers all relevant facts and circumstances, not merely from the director's standpoint, but from that of the persons or organizations with which the director has an affiliation, and the frequency or regularity of the services, whether the services are being carried out at arm's length in the ordinary course of business and whether the services are being provided substantially on the same terms to ION as those prevailing at the time from unrelated parties for comparable transactions. Material relationships can include commercial, banking, industrial, consulting, legal, accounting, charitable and familial relationships. Factors that the Board may consider when determining independence for purposes of this determination include (1) not being a current employee of ION or having been employed by ION within the last three years; (2) not having an immediate family member who is, or who has been within the last three years, an executive officer of ION; (3) not personally receiving or having an immediate family member who has received, during any 12-month period within the last three years, more than \$120,000 per year in direct compensation from ION other than director and committee fees; (4) not being employed or having an immediate family member employed within the last three years as an executive officer of another company of which any current executive officer of ION serves or has served, at the same time, on that company's compensation committee; (5) not being an employee of or a current partner of, or having an immediate family member who is a current partner of, a firm that is ION's internal or external auditor; (6) not having an immediate family member who is a current employee of such an audit firm who personally works on ION's audit; (7) not being or having an immediate family member who was within the last three years a partner or employee of such an audit firm and who personally worked on ION's audit within that time; (8) not being a current employee, or having an immediate family member who is a current executive officer, of a company that has made payments to, or received payments from, ION for property or services in an amount that, in any of the last three fiscal years, exceeds the greater of \$1 million or 2% of the other company's consolidated gross revenues; or (9) not being an executive officer of a charitable organization to which, within the preceding three years, ION has made charitable contributions in any single fiscal year that has exceeded the greater of \$1 million or 2% of such organization's consolidated gross revenues.

Our Board has affirmatively determined that, with the exception of R. Brian Hanson, who is our President and Chief Executive Officer and an employee of ION, no director has a material relationship with ION within the meaning of the NYSE's listing standards, and that each of our directors (other than Mr. Hanson) is independent from management and from our independent registered public accounting firm, as required by NYSE listing standard rules regarding director independence.

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Our Chairman and Lead Independent Director, Mr. Lapeyre, is an executive officer and significant shareholder of Laitram, L.L.C., a company with which ION has ongoing contractual relationships, and Mr. Lapeyre and Laitram together owned approximately 8.8% of our outstanding Common Stock as of February 28, 2019. Our Board has determined that these contractual relationships have not interfered with Mr. Lapeyre's demonstrated independence from our management, and that the services performed by Laitram for ION are being provided at arm's length in the ordinary course of business and substantially on the same terms to ION as those prevailing at the time from unrelated parties for comparable transactions. In addition, the services provided by Laitram to ION resulted in payments by ION to Laitram in an amount less than 1% of Laitram's 2018 consolidated gross revenues. As a result of these factors, our Board has determined that Mr. Lapeyre, along with each of our other non-management directors, is independent within the meaning of the NYSE's director independence standards. For an explanation of the contractual relationship between Laitram and ION, please see " *Certain Transactions and Relationships*" below.

Our director, Mr. Zheng, is employed as Executive Vice President of BGP. For an explanation of the relationships between BGP and ION, please see " *Certain Transactions and Relationships*" below.

Risk Oversight. Our Board oversees an enterprise-wide approach to risk management, designed to support the achievement of organizational objectives, including strategic objectives, to improve long-term organizational performance and enhance shareholder value. A fundamental part of risk management is not only understanding the risks a company faces and what steps management is taking to manage those risks, but also understanding what level of risk is appropriate for the Company. The involvement of the full Board in setting ION's business strategy is a key part of its assessment of the Company's appetite for risk and also a determination of what constitutes an appropriate level of risk for the Company. The Board also regularly reviews information regarding the Company's credit, liquidity and operations, as well as the risks associated with each. While the Board has the ultimate oversight responsibility for the risk management process, various committees of the Board also have responsibility for risk management. In particular, the Audit Committee focuses on financial risk, including internal controls, and receives an annual risk assessment report from ION's internal auditors. The Audit Committee is also responsible for overseeing cybersecurity-related risks. In addition, in setting compensation, the Compensation Committee strives to create incentives that encourage a level of risk-taking behavior consistent with ION's business strategies. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, the entire Board is regularly informed through committee reports about such risks.

Board Leadership. Our current Board leadership structure consists of a Chairman of the Board (who is not our current CEO), a Lead Independent Director (who is also our Chairman of the Board) and strong independent committee chairs. The Board believes this structure provides independent Board leadership and engagement and strong independent oversight of management while providing the benefit of having our Chairman and Lead Independent Director lead regular Board meetings as we discuss key business and strategic issues. Mr. Lapeyre, a non-employee independent director, serves as our Chairman of the Board and Lead Independent Director. Mr. Hanson has served as our CEO since January 1, 2012. We separate the roles of CEO and Chairman of the Board in recognition of the differences between the two roles. The CEO is responsible for setting the strategic direction for the Company and the day-to-day leadership and performance of the Company, while the Chairman provides guidance to the CEO and sets the agenda for Board meetings and presides over the meetings of the full Board. Separating these positions allows our CEO to focus on our day-to-day business, while allowing the Chairman to lead the Board in its fundamental role of providing advice to, and independent oversight of, management. The Board recognizes the time, effort and energy that the CEO is required to devote to his position, as well as the commitment required to serve as our Chairman. The Board believes that having separate positions is the appropriate leadership structure for our Company at this time and demonstrates our commitment to good corporate governance.

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Political Contributions and Lobbying. Our Code of Ethics prohibits company contributions to political candidates or parties. In addition, we do not advertise in or purchase political publications, allow company assets to be used by political parties or candidates, use corporate funds to purchase seats at political fund raising events, or allow company trademarks to be used in political or campaign literature. ION is a member of certain trade associations that may use a portion of their membership dues for lobbying and/or political expenditures.

Committees of the Board

The Board has established four standing committees to facilitate and assist the Board in the execution of its responsibilities. The four standing committees are the Audit Committee, the Compensation Committee, the Governance Committee and the Finance Committee. Each standing committee operates under a written charter, which sets forth the functions and responsibilities of the committee. A copy of the charter for each of the Audit Committee, the Compensation Committee and the Governance Committee can be obtained by writing to us at ION Geophysical Corporation, Attention: Corporate Secretary, 2105 CityWest Boulevard, Suite 100, Houston, Texas 77042-2855 and can also be viewed on our website at http://ir.iongeo.com/phoenix.zhtml?c=101545&p=irol-govhighlights. The Audit Committee, Compensation Committee, Governance Committee and Finance Committee are composed entirely of non-employee directors. In addition, the Board establishes temporary special committees from time to time on an as-needed basis. During 2018, the Audit Committee met five times, the Compensation Committee met five times, the Governance Committee met four times and the Finance Committee met one time.

The current members of the four standing committees of the Board are identified below.

	Compensation	Audit	Governance	Finance
Director	Committee	Committee	Committee	Committee
James M. Lapeyre, Jr.	*	*	*	*
David H. Barr	Chair	*	*	
R. Brian Hanson				
Franklin Myers	*		*	*
S. James Nelson, Jr.		Chair		Chair
John N. Seitz	*		Chair	
HuaSheng Zheng				

*

Member

Audit Committee

The Audit Committee is a separately-designated standing audit committee as defined in Section 3(a)(58)(A) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The Audit Committee oversees matters relating to financial reporting, internal controls, risk management and compliance. These responsibilities include appointing, overseeing, evaluating and approving the fees of our independent auditors, reviewing financial information that is provided to our shareholders and others, reviewing with management our system of internal controls and financial reporting processes, and monitoring our compliance program and system.

The Board has determined that each member of the Audit Committee is financially literate and satisfies the definition of "independent" as established under the NYSE corporate governance listing standards and Rule 10A-3 under the Exchange Act. In addition, the Board has determined that Mr. Nelson, the Chairman of the Audit Committee, is qualified as an audit committee financial expert within the meaning of SEC regulations, and that he has accounting and related financial management expertise within the meaning of the listing standards of the NYSE and Rule 10A-3.

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Compensation Committee

General. The Compensation Committee has responsibility for the compensation of our executive officers, including our Chief Executive Officer, and the administration of our executive compensation and benefit plans. The Compensation Committee also has authority to retain or replace outside counsel, compensation and benefits consultants or other experts to provide it with independent advice, including the authority to approve the fees payable and any other terms of retention. All actions regarding named executive officer compensation require Compensation Committee approval. The Compensation Committee completes a comprehensive review of all elements of compensation at least annually. If it is determined that any changes to any executive officer's total compensation are necessary or appropriate, the Compensation Committee obtains such input from management as it determines to be necessary or appropriate. All compensation decisions with respect to executives other than our Chief Executive Officer are determined in discussion with, and frequently based in part upon the recommendation of, our Chief Executive Officer. The Compensation Committee makes all determinations with respect to the compensation of our Chief Executive Officer, including, but not limited to, establishing performance objectives and criteria related to the payment of his compensation, and determining the extent to which such objectives have been established, obtaining such input from the Compensation Committee's independent compensation advisors as it deems necessary or appropriate.

As part of its responsibility to administer our executive compensation plans and programs, the Compensation Committee, usually near the beginning of the calendar year, establishes the parameters of the annual incentive plan awards, including the performance goals relative to our performance that will be applicable to such awards and the similar awards for our other senior executives. It also reviews our performance against the objectives established for awards payable in respect of the prior calendar year, and confirms the extent, if any, to which such objectives have been obtained, and the amounts payable to each of our executive officers in respect of such achievement.

The Compensation Committee also determines the appropriate level and type of awards, if any, to be granted to each of our executive officers pursuant to our equity compensation plans, and approves the total annual grants to other key employees, to be granted in accordance with a delegation of authority to a corporate human resources officer or other Company officer.

The Compensation Committee reviews, and has the authority to recommend to the Board for adoption, any new executive compensation or benefit plans that are determined to be appropriate for adoption by ION, including those that are not otherwise subject to the approval of our shareholders. It reviews any contracts with current or former elected officers of the corporation. In connection with the review of any such contract, the Compensation Committee may seek from its independent advisors such advice, counsel and information as it determines to be appropriate in the conduct of such review. The Compensation Committee will direct such outside advisors as to the information it requires in connection with any such review, including data regarding competitive practices among the companies with which ION generally compares itself for compensation purposes.

Compensation Committee Interlocks and Insider Participation. The Board has determined that each member of the Compensation Committee satisfies the definition of "independent" as established under the NYSE corporate governance listing standards. No member of the Compensation Committee is, or was during 2018, an officer or employee of ION. Mr. Lapeyre is President and Manager and a significant equity owner of Laitram, L.L.C, which has had a business relationship with ION since 1999. During 2018, the Company paid Laitram and its affiliates \$0.4 million, which consisted of manufacturing services and reimbursement of costs and less than \$0.1 million for reimbursement for costs related to providing administrative and other back-office support services in connection with the Company's Louisiana marine operations. In addition, in 2018, the Company subleased approximately 4,100 square feet of office space to Laitram. See "Certain Transactions and Relationships" below.

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During 2018:

No executive officer of ION served as a member of the compensation committee of another entity, one of whose executive officers served as a director or on the Compensation Committee of ION; and

No executive officer of ION served as a director of another entity, one of whose executive officers served on the Compensation Committee of ION.

Governance Committee

The Governance Committee functions as the Board's nominating and corporate governance committee and advises the Board with regard to matters relating to governance practices and policies, management succession, and composition and operation of the Board and its committees, including reviewing potential candidates for membership on the Board and recommending to the Board nominees for election as directors of ION. In addition, the Governance Committee reviews annually with the full Board and our Chief Executive Officer the succession plans for senior executive officers and makes recommendations to the Board regarding the selection of individuals to occupy these positions. The Board has determined that each member of the Governance Committee satisfies the definition of "independent" as established under the NYSE corporate governance listing standards.

In identifying and selecting new director candidates, the Governance Committee considers the Board's current and anticipated strengths and needs and a candidate's experience, knowledge, skills, expertise, integrity, diversity, ability to make independent analytical inquiries, understanding of our Company's business environment, willingness to devote adequate time and effort to Board responsibilities, and other relevant factors. The Governance Committee has not established specific minimum age, education, years of business experience, or specific types of skills for potential director candidates, but, in general, expects that qualified candidates will have ample experience and a proven record of business success and leadership. The Governance Committee also seeks an appropriate balance of experience and expertise in accounting and finance, technology, management, international business, compensation, corporate governance, strategy, industry knowledge and general business matters. In addition, the Governance Committee seeks diversity on our Board, including diversity of experience, professions, skills, geographic representation, and backgrounds. The committee may rely on various sources to identify potential director nominees, including input from directors, management and others the Governance Committee feels are reliable, and professional search firms. In 2018, our Board engaged Heidrick & Struggles to assist in a search for potential new director candidates, with a particular emphasis on increasing the gender diversity of our Board.

Our Bylaws permit shareholders to nominate individuals for director for consideration at an annual shareholders' meeting. A proper director nomination may be considered at our 2020 Annual Meeting only if the proposal for nomination is received by ION no later than December 13, 2019. All nominations should be directed to Corporate Secretary, ION Geophysical Corporation, 2105 CityWest Boulevard, Suite 100, Houston, Texas 77042-2855.

The Governance Committee will consider properly submitted recommendations for director nominations made by a shareholder or other sources (including self-nominees) on the same basis as other candidates. For consideration by the Governance Committee, a recommendation of a candidate must be submitted timely and in writing to the Governance Committee in care of our Corporate Secretary at our principal executive offices. The submission must include sufficient details regarding the qualifications of the potential candidate. In general, nominees for election should possess (1) the highest level of integrity and ethical character, (2) strong personal and professional reputation, (3) sound judgment, (4) financial literacy, (5) independence, (6) significant experience and proven superior performance in professional endeavors, (7) an appreciation for Board and team performance,

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(8) the commitment to devote the time necessary, (9) skills in areas that will benefit the Board and (10) the ability to make a long-term commitment to serve on the Board.

Finance Committee

From time to time, the Finance Committee reviews, with ION management, and has the power and authority to approve on behalf of the Board, ION's strategies, plans, policies and actions related to corporate finance, including, but not limited to, (a) capital structure plans and strategies and specific equity or debt financings, (b) capital expenditure plans and strategies and specific capital projects, (c) strategic and financial investment plans and strategies and specific investments, (d) cash management plans and strategies and activities relating to cash flow, cash accounts, working capital, cash investments and treasury activities, including the establishment and maintenance of bank, investment and brokerage accounts, (e) financial aspects of insurance and risk management, (f) tax planning and compliance, (g) dividend policy, (h) plans and strategies for managing foreign currency exchange exposure and other exposures to economic risks, including plans and strategies with respect to the use of derivatives, and (i) reviewing and making recommendations to the Board with respect to any proposal by ION to divest any asset, investment, real or personal property, or business interest if such divestiture is required to be approved by the Board. The Finance Committee does not have oversight responsibility with respect to ION's financial reporting, which is the responsibility of the Audit Committee. The Board has determined that each member of the Finance Committee (including its Chairman) satisfies the definition of "independent" as established under the NYSE corporate governance listing standards.

Stock Ownership Requirements

The Board has adopted stock ownership requirements for ION's directors. The Board adopted these requirements in order to align the economic interests of the directors with those of our shareholders and further focus our emphasis on enhancing shareholder value. Under these requirements, each non-employee director is expected to own at least 7,500 shares of Common Stock, which, at the \$5.18 closing price per share of our Common Stock on the NYSE on December 31, 2018 equates to approximately 84% of the \$46,000 annual retainer fee we pay to our non-employee directors. Directors have three years to acquire and increase the director's ownership of ION Common Stock to satisfy the requirements. The stock ownership requirements are subject to modification by the Board in its discretion. The Board has also adopted stock ownership requirements for senior management of ION. See "Executive Compensation Compensation Discussion and Analysis Elements of Compensation Stock Ownership Requirements; Hedging Policy" below.

The Governance Committee and the Board regularly review and evaluate ION's directors' compensation program on the basis of current and emerging compensation practices for directors, emerging legal, regulatory and corporate compliance developments and comparisons with director compensation programs of other similarly-situated public companies.

Certain Transactions and Relationships

The Board has adopted a policy to be followed prior to any transaction, arrangement or relationship, or series of similar transactions, arrangements or relationships, including any indebtedness or guarantee of indebtedness, between ION and a "Related Party" where the aggregate amount involved is expected to exceed \$120,000 in any calendar year. Under the policy, "Related Party" includes (a) any person who is or was an executive officer, director or nominee for election as a director (since the beginning of the last fiscal year); (b) any person or group who is a greater-than-5% beneficial owner of ION voting securities; or (c) any immediate family member of any of the foregoing, which means any child, stepchild, parent, stepparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, sister-in-law, and anyone residing in the home of an

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executive officer, director or nominee for election as a director (other than a tenant or employee). Under the policy, the Audit Committee of the Board is responsible for reviewing the material facts of any Related Party transaction and approving or ratifying the transaction. In making its determination to approve or ratify, the Audit Committee is required to consider such factors as (i) the extent of the Related Party's interest in the transaction, (ii) if applicable, the availability of other sources of comparable products or services, (iii) whether the terms of the Related Party transaction are no less favorable than terms generally available in unaffiliated transactions under like circumstances, (iv) the benefit to ION and (v) the aggregate value of the Related Party transaction.

Mr. Lapeyre is the President and Manager and a significant equity owner of Laitram, L.L.C. ("Laitram") and has served as President and Manager of Laitram and its predecessors since 1989. Laitram is a privately-owned, New Orleans-based manufacturer of food processing equipment and modular conveyor belts. Mr. Lapeyre and Laitram together owned approximately 8.8% of our outstanding Common Stock as of February 28, 2019.

We acquired DigiCourse, Inc., our marine positioning products business, from Laitram in 1998. In connection with that acquisition, we entered into a Continued Services Agreement with Laitram under which Laitram agreed to provide us certain bookkeeping, software, manufacturing, and maintenance services. Manufacturing services consist primarily of machining of parts for our marine positioning systems. The term of this agreement expired in September 2001 but we continue to operate under its terms. In addition, from time to time, when we have requested, the legal staff of Laitram has advised us on certain intellectual property matters with regard to our marine positioning systems. During 2018, the Company paid Laitram and its affiliates \$0.4 million which consisted of manufacturing services and reimbursement of costs. During 2017 and 2016, the Company paid less than \$0.1 million in each year for reimbursement for costs related to providing administrative and other back-office support services in connection with the Company's Louisiana marine operations. In addition, throughout 2018, the Company subleased approximately 4,100 square feet of office space to Laitram. In the opinion of the Company's management, the terms of these services were fair and reasonable and as favorable to the Company as those that could have been obtained from unrelated third parties at the time of their performance.

Mr. Zheng is Executive Vice President of BGP, which has been a customer of our products and services for many years. For 2018 and 2017, the Company recorded revenues from BGP of \$4.9 million and \$4.4 million, respectively. Receivables due from BGP were \$1.6 million and \$0.6 million at December 31, 2018 and 2017, respectively.

In March 2010, prior to Mr. Zheng being appointed to the Board, we entered into certain transactions with BGP that resulted in the commercial relationships between our Company and BGP as described below:

We issued and sold approximately 1,585,969 shares of our Common Stock to BGP for an effective purchase price of \$42.00 per share pursuant to (i) a Stock Purchase Agreement we entered into with BGP and (ii) the conversion of the principal balance of indebtedness outstanding under a Convertible Promissory Note dated as of October 23, 2009. As of February 28, 2019, BGP held beneficial ownership of approximately 10.6% of our outstanding shares of Common Stock. The shares of our Common Stock acquired by BGP are subject to the terms and conditions of an Investor Rights Agreement that we entered into with BGP in connection with its purchase of our shares. Under the Investor Rights Agreement, for so long as BGP owns as least 10% of our outstanding shares of Common Stock, BGP will have the right to nominate one director to serve on our Board. The appointment of Mr. Zheng to our Board was made pursuant to this agreement. The Investor Rights Agreement also provides that whenever we may issue shares of our Common Stock or other securities convertible into, exercisable or exchangeable for our Common Stock, BGP will have certain pre-emptive rights to subscribe for

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a number of such shares or other securities as may be necessary to retain its proportionate ownership of our Common Stock that would exist before such issuance. These pre-emptive rights are subject to usual and customary exceptions, such as issuances of securities as equity compensation to our directors, employees and consultants and under employee stock purchase plans.

We formed a joint venture with BGP, owned 49% by us and 51% by BGP, to design, develop, manufacture and sell land-based seismic data acquisition equipment for the petroleum industry. The name of the joint venture company is INOVA Geophysical Equipment Limited. Under the terms of the joint venture transaction, INOVA Geophysical was initially formed as a wholly-owned direct subsidiary of ION, and BGP acquired its interest in the joint venture by paying us aggregate consideration of (i) \$108.5 million in cash and (ii) contributing certain assets owned by BGP relating to the business of the joint venture.

Change in

Director Compensation

ION employees who are also directors do not receive any fee or remuneration for services as members of our Board. We currently have six non-employee directors who qualify for compensation as directors. In addition to being reimbursed for all reasonable out-of-pocket expenses that the director incurs attending Board meetings and functions, our outside directors receive an annual retainer fee of \$46,000. In addition, our Chairman of the Board receives an annual retainer fee of \$25,000, our Chairman of the Audit Committee receives an annual retainer fee of \$20,000, our Chairman of the Compensation Committee receives an annual retainer fee of \$15,000, our Chairman of the Governance Committee receives an annual retainer fee of \$10,000 and our Chairman of the Finance Committee receives an annual retainer fee of \$10,000. Our non-employee directors also receive, in cash, \$2,000 for each Board meeting attended and \$2,000 for each committee meeting attended (unless the committee meeting is held in conjunction with a Board meeting, in which case the fee for committee meeting attendance is \$1,000) and \$1,000 for each Board or committee meeting attended via teleconference.

Each non-employee director also receives an initial grant of 533 vested shares of our Common Stock on the first quarterly grant date after joining the Board and follow-on grants each year of a number of shares of our Common Stock equal in market value to \$110,000, up to an annual grant of 2,500 shares per director.

The following table summarizes the compensation earned by our non-employee directors in 2018:

				Pension		
				Value and		
		ľ	Non-Equity 1	Nonqualifie	i	
	Fees		Incentive	Deferred		
	Earned	Stock	Plan (Compensatio	n All Other	
	or Paid in	Awards Co	ompensation	1 Earnings	Compensation	Total
Name(1)	Cash (\$)	(\$)(2)	(\$)	(\$)	(\$)(3)	(\$)
David H. Barr	67,000	71,125			53,594	191,719
Michael C.						
Jennings(4)	66,000	71,125			53,594	190,719
James M. Lapeyre, Jr.	97,000	71,125			53,594	221,719
Franklin Myers	79,000	71,125			53,594	203,719
S. James Nelson, Jr.	88,000	71,125			53,594	212,719
John N. Seitz	77,000	71,125			53,594	201,719
HuaSheng Zheng	34,200	58,153			24,813	117,166

(1)

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- All of the amounts shown represent the value of Common Stock granted under our Second Amended and Restated 2013 Long-Term Incentive Plan (the "2013 LTIP"). On March 1, 2018, each of our non-employee directors was granted an award of 2,500 shares of ION Common Stock. The values contained in the table are based on the grant-date fair value of awards of stock during the fiscal year.
- On March 1, 2018, the value of the 2,500 shares received by each of our non-employee directors (except for Mr. Zheng) was only \$71,125 (using the closing price on the NYSE of \$28.45 per share on the March 1, 2018 grant date) leaving a gap of \$38,875 in the value of the equity awarded versus the \$110,000 compensation target. On June 1, 2018, Mr. Zheng received a prorated grant of 1,875 shares (prorated to reflect that he did not serve for the full year) valued at \$45,281 (using the closing price on the NYSE of \$24.15 per share on the June 1, 2018 grant date) leaving a gap of \$37,219 in the value of equity awarded versus the \$110,000 compensation target. As a result, the Governance Committee approved additional cash compensation to be provided to the Board (except for Mr. Zheng) in the amount of \$38,875 and \$37,219 for Mr. Zheng. The additional compensation is paid in quarterly increments. In addition on June 1, 2018 (the first quarterly grant date after his election to the Board), Mr. Zheng received an award of 533 vested shares valued at \$12,872 (using the closing price on the NYSE of \$24.15 per share on the June 1, 2018 grant date).
- (4) Mr. Jennings resigned from the Board on February 8, 2019.

As of December 31, 2018, our non-employee directors held the following unvested and unexercised ION equity awards:

Unvested Stock Awards(#)	Unexercised Option Awards(#)
2,500	
2,500	
2,500	
2,500	
2,500	
2,500	
1,875	
	Awards(#) 2,500 2,500 2,500 2,500 2,500 2,500 2,500

(1) Mr. Jennings resigned from the Board on February 8, 2019.

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OWNERSHIP OF EQUITY SECURITIES OF ION

Except as otherwise set forth below, the following table sets forth information as of February 28, 2019, with respect to the number of shares of Common Stock owned by (i) each person known by us to be a beneficial owner of more than 5% of our Common Stock, (ii) each of our directors, (iii) each of our executive officers named in the 2018 Summary Compensation Table included in this Proxy Statement and (iv) all of our directors and executive officers as a group. Except where information was otherwise known by us, we have relied solely upon filings of Schedules 13D and 13G to determine the number of shares of our Common Stock owned by each person known to us to be the beneficial owner of more than 5% of our Common Stock as of such date.

Name of Owner	Common Stock(1)	Rights to Acquire(2)	Restricted Stock(3)	Percent of Common Stock(4)
BGP Inc., China National Petroleum Corporation(5)	1,585,969	1		10.6%
James M. Lapeyre, Jr.(6)	1,310,190		2,500	8.8%
Gates Capital Management, L.P.(7)	1,212,408			8.1%
Renaissance Technologies Holding Company(8)	1,026,523			6.9%
Laitram, L.L.C.(9)	979,816			6.5%
Empery Asset Management, LP(10)	832,314			5.6%
R. Brian Hanson	20,299	72,921	203,332	2.0%
Steven A. Bate	102,369	61,397	101,095	1.8%
Kenneth G. Williamson	71,674	60,048	95,263	1.5%
Christopher T. Usher	49,085	32,913	94,029	1.1%
David H. Barr	22,933		2,500	*
Franklin Myers	20,000		2,500	*
S. James Nelson, Jr.	14,266		2,500	*
Matthew R. Powers	6,804	13,916	47,109	*
John N. Seitz	16,259		2,500	*
HuaSheng Zheng	373		1,875	*
All directors and executive officers as a group (12 Persons)	1,637,875	249,051	565,480	16.1%

Less than 1%

- (1)

 Represents shares for which the named person (a) has sole voting and investment power or (b) has shared voting and investment power. Excluded are shares that (i) are unvested restricted stock holdings or (ii) may be acquired through stock option exercises.
- (2) Represents shares of Common Stock that may be acquired upon the exercise of stock options held by our officers and directors that are currently exercisable or will be exercisable on or before April 29, 2019.
- (3)

 Represents unvested shares subject to a vesting schedule, forfeiture risk and other restrictions. Although these shares are subject to risk of forfeiture, the holder has the right to vote the unvested shares unless and until they are forfeited.
- (4)
 Assumes shares subject to outstanding stock options that such person has rights to acquire upon exercise, presently and on or before April 29, 2019, are outstanding.
- (5)
 The address for BGP Inc., China National Petroleum Corporation is No. 189 Fanyang Middle Road, ZhuoZhou City, HeBei Province 072750 P.R. China.
- (6)
 The shares of Common Stock held by Mr. Lapeyre include 129,402 shares that Mr. Lapeyre holds as a custodian or trustee for the benefit of his children, 979,816 shares owned by Laitram, L.L.C.

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(which are set forth in the table under Laitram, L.L.C.), and 699 shares that Mr. Lapeyre holds as a co-trustee with his wife for the benefit of his children, in all of which Mr. Lapeyre disclaims any beneficial interest. Please read note 9 below. Mr. Lapeyre has sole voting power over only 202,773 of these shares of Common Stock.

- (7)
 The address for Gates Capital Management, L.P. is 1177 Avenue of the Americas, 46th Floor, New York, New York 10036. Gates Capital Management reports that it has shared voting power with Gates Capital Management GP, LLC, Gates Capital Management, Inc. and Jeffrey L. Gates.
- (8) The address for Renaissance Technologies Holdings Corporation is 800 Third Avenue, New York, New York 10022. Renaissance Technologies reported that it has sole voting power with respect to 853,349 shares, sole dispositive powers with respect to 853,423 shares and shared dispositive power with respect to 173,100 shares.
- (9)
 The address for Laitram, L.L.C. is 220 Laitram Lane, Harahan, Louisiana 70123. Mr. Lapeyre is the President and Manager of Laitram. Please read note 6 above. Mr. Lapeyre disclaims beneficial ownership of any shares held by Laitram.
- (10)
 The address for Empery Asset Management, LP is 1 Rockefeller Plaza, Suite 1205, New York, New York 10020.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires directors and certain officers of ION, and persons who own more than 10% of ION's Common Stock, to file with the SEC and the NYSE initial statements of beneficial ownership on Form 3 and changes in such ownership on Forms 4 and 5. Based on our review of the copies of such reports, we believe that during 2018 our directors, executive officers and shareholders holding greater than 10% of our outstanding shares complied with all applicable filing requirements under Section 16(a) of the Exchange Act, and that all of their filings were timely made.

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EXECUTIVE OFFICERS

Our executive officers are as follows:

Name	Age	Position with ION
R. Brian Hanson	54	President, Chief Executive Officer and Director
Steven A. Bate	56	Executive Vice President and Chief Financial Officer
Matthew R. Powers	43	Executive Vice President, General Counsel and Corporate Secretary
Scott P. Schwausch	44	Vice President and Corporate Controller
Christopher T. Usher	58	Executive Vice President and Chief Operating Officer, Operations Optimization
Kenneth G. Williamson	54	Executive Vice President and Chief Operating Officer, E&P Technology & Services

For a description of the business background of Mr. Hanson, please see "Class I Term Expiring in 2021" above.

Mr. Bate is currently our Executive Vice President and Chief Financial Officer. Mr. Bate rejoined ION in May 2013 as Senior Vice President, Systems Division, became the Executive Vice President and Chief Operating Officer, Systems Division in February 2014 and became the Executive Vice President and Chief Financial Officer in November 2014. Mr. Bate originally joined ION in 2005 as Chief Financial Officer of our GX Technology business unit. In 2007, he was appointed Senior Vice President, Sensor business unit and in 2009, his area of responsibility broadened to our Land Imaging Systems Division. Following our formation in March 2010 of INOVA Geophysical, a land seismic equipment joint venture with BGP, Mr. Bate was appointed as INOVA Geophysical's first President and Chief Executive Officer, and served in that role until October 2012. Prior to joining ION in 2005, Mr. Bate founded a consulting business and served as President of a residential construction company. Mr. Bate holds a Bachelor of Business Administration degree from the University of Houston.

Mr. Powers joined ION in 2013 as Senior Legal Counsel and held that position until February 2016 when he was promoted to Deputy General Counsel. In September 2017, he was promoted to General Counsel and Corporate Secretary, and was further promoted to Executive Vice President in October 2017. Prior to joining ION, Mr. Powers held a variety of positions in the Houston offices of Mayer Brown LLP (beginning in 2005 and ending in 2012) and Sidley Austin LLP (beginning in 2012 and ending in 2013). Mr. Powers holds a Juris Doctor from the University of Chicago Law School and a Bachelor's degree in Economics, summa cum laude, from the University of Colorado-Denver. He is licensed to practice in Texas.

Mr. Schwausch joined ION in 2006 as Assistant Controller and held that position until June 2010 when he became Director of Financial Reporting. In May 2012, he became Controller, Solutions Business Unit, and in May 2013 became Vice President and Corporate Controller. Mr. Schwausch held a variety of positions at Deloitte & Touche, LLP, a public accounting firm, from 2000 until he joined ION. Mr. Schwausch is a Certified Public Accountant and a Certified Management Accountant. He received a Bachelor of Science degree in accounting from Brigham Young University.

Mr. Usher is our Executive Vice President and Chief Operating Officer, Operations Optimization. Mr. Usher joined ION in November 2012 as the Executive Vice President and Chief Operating Officer, GeoScience Division. Prior to joining our Company, Mr. Usher served as the Senior Vice President, Data Processing, Analysis and Interpretation and Chief Technology Officer (including significant merger and acquisitions responsibility) of Global Geophysical Services, Inc., a NYSE-listed seismic products and services company, since January 2010. Prior to joining Global, Mr. Usher served from October 2005 to January 2010 as Senior Director at Landmark Software and Services (including significant merger and acquisition responsibility), a division of Halliburton Company, an oilfield services company.

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From 2004 to 2005, he was Senior Corporate Vice President, Integrated Services, at Paradigm Geotechnology, an E&P software company. From 2000 to 2003, Mr. Usher served as President of the global data processing division of Petroleum Geo-Services (PGS), a marine geophysical contracting company. He began his career at Western Geophysical where he served in a number of roles over his 17-year tenure before becoming the Worldwide VP Technology. Mr. Usher holds a Bachelor of Science degree in geology and geophysics from Yale University.

Mr. Williamson is our Executive Vice President and Chief Operating Officer, E&P Technology & Services. Mr. Williamson originally joined ION as Vice President of our GeoVentures business unit in September 2006, became a Senior Vice President in January 2007, and became Executive Vice President and Chief Operating Officer, GeoVentures Division, in November 2012 and Executive Vice President and Chief Operating Officer of E&P Technology & Services in February of 2015. Between 1987 and 2006, Mr. Williamson was employed by Western Geophysical, which in 2000 became part of WesternGeco, a seismic solutions and technology subsidiary of Schlumberger, Ltd., a global oilfield and information services company. While at WesternGeco, Mr. Williamson served as Vice President, Marketing from 2001 to 2003, Vice President, Russia and Caspian Region, from 2003 to 2005 and Vice President, Marketing, Sales & Commercialization of WesternGeco's electromagnetic services and technology division from 2005 to 2006. Mr. Williamson holds a Bachelor of Science degree in geophysics from Cardiff University in Wales.

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EXECUTIVE COMPENSATION

Introductory note: The following discussion of executive compensation contains descriptions of various employee benefit plans and employment-related agreements. These descriptions are qualified in their entirety by reference to the full text or detailed descriptions of the plans and agreements, which are filed or incorporated by reference as exhibits to our annual report on Form 10-K for the year ended December 31, 2018. In this discussion, the terms "ION," "we," "our" and "us" refer to ION Geophysical Corporation and its consolidated subsidiaries, except where the context otherwise requires or as otherwise indicated.

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COMPENSATION DISCUSSION AND ANALYSIS

This Compensation Discussion and Analysis provides an overview of the Compensation Committee of the Company's Board of Directors, a discussion of the background and objectives of our compensation programs for our senior executives, and a discussion of all material elements of the compensation of each of the executive officers identified in the following table, whom we refer to as our named executive officers ("NEOs"):

Name	Title
R. Brian Hanson	President, Chief Executive Officer and Director
Steven A. Bate	Executive Vice President and Chief Financial Officer
Matthew R. Powers	Executive Vice President, General Counsel and Corporate Secretary
Christopher T. Usher	Executive Vice President and Chief Operating Officer, Operations Optimization
Kenneth G. Williamson	Executive Vice President and Chief Operating Officer, E&P Technology & Services

Executive Summary

General. Our executive compensation program provides our NEOs with total annual compensation that includes three principal elements: base salary, performance-based annual non-equity incentive plan compensation (annual cash bonuses), and long-term equity-based incentive awards. (For the purposes of this Compensation Discussion and Analysis, our stock appreciation rights awards ("SARs") are categorized as long-term equity-based incentive awards because, while they are cash-settled, their value is determined by the spread between the price of the Company's common stock on the date they are granted and the price of the Company's common stock on date they are exercised). A significant portion of each NEOs' total annual compensation is performance based and is at risk and dependent upon our Company's achievement of specific, measurable performance goals. Our performance-based pay closely aligns our NEOs' interests with those of our shareholders and promotes the creation of shareholder value, without encouraging excessive risk-taking. In addition, our equity programs, combined with our executive share ownership requirements are designed to reward long-term stock performance and encourage investment in the Company.

Annual Bonus Incentive Plan. Payments under our annual cash bonus incentive plan for 2018 (which were made in February 2019) reflected the Company's performance and the level of achievement of our 2018 plan performance goals. NEOs' bonus targets range from 60% to 100% of their annual base salaries. The total dollars that could have been achieved under the bonus plan pool (by all participating employees of the Company, including the NEOs) were increased from \$14 million in 2017 to a maximum of \$14.5 million in 2018.

The Compensation Committee determined that the bonus available for awards paid to our NEOs under the 2018 plan should be based on a combination of long-term strategic initiatives and cash generation goals. In early 2019, the Compensation Committee reviewed the Company's progress towards the achievement of the strategic initiatives and cash generation goals, and approved a bonus for each NEO based on each individual's achievement of key objectives and company performance. In approving the individual awards to our NEOs in February 2019, the Compensation Committee noted that, although the Company fell short of its cash generation goals, our NEOs' efforts had helped the Company execute on several of its long-term strategic initiatives. It was also noted that the Company's strategic vision helped to stimulate investor interest that culminated in a successful equity raise, and that the NEOs' efforts to execute that vision had contributed to that success.

Base Salaries. No NEO received an increase in base pay in 2018.

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Long-Term Stock-Based Incentive Compensation. The Compensation Committee approved significant grants of equity-based compensation in 2018, including to our NEOs, in the form of restricted stock and SARs. However, these awards were structured differently than the Company's awards in the past. As described below, in addition to containing traditional time-based vesting restrictions (the shares vest equally on the first, second and third anniversary of the grant, subject to continued employment), they also contain very aggressive performance-based vesting restrictions tied to the performance of our Company's stock price. The Compensation Committee believes that these performance-based vesting triggers allow a more efficient use of available equity from our long-term incentive plan, and more closely align our NEOs' interests with those of our shareholders by instilling ownership thinking.

Corporate Governance

Compensation Committee

The Compensation Committee of our Board reviews and approves, or recommends to the Board for approval, all salary and other remuneration for our NEOs and oversees matters relating to our employee compensation and benefit programs. No member of the Compensation Committee is an employee of ION. The Board has determined that each member of the Compensation Committee satisfies the definition of "independent" as established in the NYSE corporate governance listing standards. In determining the independence of each member of the Compensation Committee, the Board considered all factors specifically relevant to determining whether the director has a relationship to our Company that is material to the director's ability to be independent from management in the execution of his duties as a Compensation Committee member, including, but not limited to:

the source of compensation of the director, including any consulting, advisory or other compensatory fee paid by us to the director; and

whether the director is affiliated with our Company, a subsidiary or affiliate.

When considering the director's affiliation with us for purposes of independence, the Board considered whether the affiliate relationship places the director under the direct or indirect control of our Company or its senior management, or creates a direct relationship between the director and members of senior management, in each case, of a nature that would impair the director's ability to make independent judgments about our executive compensation.

The Compensation Committee operates pursuant to a written charter that sets forth its functions and responsibilities. A copy of the charter can be viewed on our website at http://ir.iongeo.com/phoenix.zhtml?c=101545&p=irol-govhighlights. For a description of the responsibilities of the Compensation Committee, see "Item 1. Election of Directors Committees of the Board Compensation Committee" above.

During 2018, the Compensation Committee met five times and took action by unanimous written consent one time.

Compensation Consultants

The Compensation Committee has the authority and necessary funding to engage, terminate and pay compensation consultants, independent legal counsel and other advisors in its discretion. Prior to retaining any such compensation consultant or other advisor, the Compensation Committee evaluates the independence of such advisor and evaluates whether such advisor has a conflict of interest.

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Role of Management in Establishing and Awarding Compensation

On an annual basis, our Chief Executive Officer, with the assistance of our Human Resources department, recommends to the Compensation Committee any proposed increases in base salary, bonus payments and equity awards for our NEOs other than himself. No NEO is involved in determining his own salary increase, bonus payment or equity award. When making officer compensation recommendations, our Chief Executive Officer takes into consideration compensation benchmarks, which include data relating to the compensation of employees at comparable companies, the level of inherent importance and risk associated with the position and function, and the executive's job performance over the previous year. See " Objectives of Our Executive Compensation Programs Benchmarking" and Elements of Compensation Base Salary" below.

Our Chief Executive Officer, with assistance and input from our senior management, also formulates and proposes to the Compensation Committee an employee bonus incentive plan for the ensuing year. For a description of our process for formulating the employee bonus incentive plan and the factors that we consider, see " *Elements of Compensation Bonus Incentive Plan*" below.

The Compensation Committee reviews and approves all compensation and awards to NEOs and all bonus incentive plans. With respect to equity compensation awarded to employees other than NEOs, the Compensation Committee reviews and approves all grants of restricted stock and stock options above 5,000 shares, generally based upon the recommendation of the Chief Executive Officer, and has delegated option and restricted stock granting authority to the Chief Executive Officer as permitted under Delaware law for grants to non-NEOs of up to 5,000 shares.

Of its own initiative, at least once a year, the Compensation Committee reviews the performance and compensation of our Chief Executive Officer and, following discussions with the Chief Executive Officer and other members of the Board, establishes his compensation level. Where it deems appropriate, the Compensation Committee will also consider market compensation information from independent sources. See " Objectives of Our Executive Compensation Programs Benchmarking" below.

Certain members of our senior management generally attend most meetings of the Compensation Committee, including our Chief Executive Officer and our Executive Vice President, General Counsel & Corporate Secretary. However, no member of management votes on items being considered by the Compensation Committee. The Compensation Committee and Board do solicit the views of our Chief Executive Officer on compensation matters, particularly as they relate to the compensation of the other NEOs and the other members of senior management reporting to the Chief Executive Officer. The Compensation Committee often conducts an executive session during meetings, during which members of management are not present.

Objectives of Our Executive Compensation Programs

General Compensation Philosophy and Policy

Through our compensation programs, we seek to:

attract and retain qualified and productive executive officers and key employees by providing total compensation competitive with that of other executives and key employees employed by companies of similar size, complexity and industrial sector;

encourage our executives and key employees to drive the Company's financial and operational performance;

structure compensation to create meaningful links between corporate performance, individual performance and financial rewards:

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align the interests of our executives with those of our shareholders by providing a significant portion of total pay in the form of equity-based incentives;

encourage long-term commitment to our Company; and

limit corporate perquisites to seek to avoid perceptions both within and outside of our Company of "soft" compensation.

Our governing principles in establishing executive compensation have been:

Long-Term and At-Risk Focus. Compensation opportunities should be composed of long-term, at-risk pay to focus our management on the long-term interests of our Company.

Equity Orientation. Equity-based plans should comprise a major part of the at-risk portion of total compensation to instill ownership thinking and to link compensation to corporate performance and shareholder interests.

Competitive. We emphasize total compensation opportunities consistent on average with our peer group of companies. Competitiveness of annual base pay and annual bonuses is independent of stock performance. However, overall competitiveness of total compensation is generally contingent on long-term, equity-based compensation programs. Base salary, annual bonuses and employee benefits should be close to competitive levels when compared to similarly situated companies.

Focus on Total Compensation. In making decisions with respect to any element of an NEO's compensation, the Compensation Committee considers the total compensation that may be awarded to the NEO, including salary, annual cash bonus and long-term equity-based incentive compensation. The Compensation Committee analyzes all of these elements of compensation (including the compensation mix) as well as the aggregate total amount of actual and projected compensation. In its most recent review of total compensation, the Compensation Committee determined that annual compensation amounts for our Chief Executive Officer and our other NEOs remained generally consistent with the Compensation Committee's expectations. However, the Compensation Committee reserves the right to make changes that it believes are warranted.

Internal Pay Equity. Our core compensation philosophy is to pay our NEOs competitive levels of compensation that best reflect their individual responsibilities and contributions to our Company, while providing incentives to achieve our business and financial objectives. While comparisons to compensation levels at other companies are helpful in assessing the overall competitiveness of our compensation program, we believe that our executive compensation program also must be internally consistent and equitable in order for our Company to achieve our corporate objectives. Over time, there have been variations in the comparative levels of compensation of NEOs and changes in the overall composition of the management team and the overall accountabilities of the individual NEOs; however, we and the Compensation Committee are satisfied that total compensation received by NEOs reflects an appropriate differential for executive compensation.

These principles apply to compensation policies for all of our NEOs and key employees. We do not follow the principles in a mechanistic fashion; rather, we apply experience and judgment in determining the appropriate mix of compensation for each individual. This judgment also involves periodic review of discernible measures to determine the progress each individual is making toward agreed-upon goals and objectives.

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Benchmarking

When making compensation decisions, we also look at the compensation of our Chief Executive Officer and other NEOs relative to the compensation paid to similarly situated executives at companies that we consider to be our industry and market peers—a practice often referred to as "benchmarking." We believe, however, that a benchmark should be just that—a point of reference for measurement—but not the determinative factor for our executives' compensation. The purpose of the comparison is not to supplant the analyses of internal pay equity, shareholder interests and the individual performance of the NEOs that we consider when making compensation decisions. Because the comparative compensation information is just one of the several analytic tools that are used in setting executive compensation, the Compensation Committee has discretion in determining the nature and extent of its use. Further, given the limitations associated with comparative pay information for setting individual executive compensation, including the difficulty of assessing and comparing wealth accumulation through equity gains, the Compensation Committee may elect not to use the comparative compensation information at all in the course of making compensation decisions.

In most years, at least once each year, our Human Resources department, under the oversight of the Compensation Committee, reviews data from market surveys, independent consultants and other sources to assess our competitive position with respect to base salary, annual bonuses and long-term incentive compensation. When reviewing compensation data in the fall of 2018, we utilized data primarily from Gartner Inc. At that same time, the Company also engaged the services of Aon Hewitt a leading compensation consultant, to analyze our compensation program relative to industry practice (see " Long-Term Stock-Based Incentive Compensation", below).

Reviewing compensation data provides a starting point for our compensation analysis. We believe that the data contain relevant compensation information from companies that are representative of the sector in which we operate, have relative size as measured by market capitalization and experience relative complexity in the business and the executives' roles and responsibilities. We look extensively at a number of other factors beyond the data, including our estimates of the compensation at our most comparable competitors and other companies that were closest to our Company in size, profitability and complexity. We also consider an individual's current performance, the level of responsibility, risk of attrition, and the employee's skills and experience, collectively, in making compensation decisions.

In the case of our Chief Executive Officer and some of our other NEOs, we also consider our Company's performance during the person's tenure and the anticipated level of compensation that would be required to replace the person with someone of comparable experience and skill.

In addition to our periodic review of compensation, we also regularly monitor market conditions and will adjust compensation levels from time to time as necessary to remain competitive and retain our most valuable employees. When we experience a significant level of competition for retaining current employees or hiring new employees, as was the case in 2018, we will typically reevaluate our compensation levels within that employee group in order to ensure our competitiveness.

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Elements of Compensation

The primary components of our executive compensation program are as follows:

Below is a summary of each component:

Base Salary

General. The general purpose of base salary for our NEOs is to create a base of cash compensation for the officer that is consistent on average with the range of base salaries for executives in similar positions and with similar responsibilities at comparable companies. In addition to salary norms for persons in comparable positions at comparable companies, base salary amounts may also reflect the nature and scope of responsibility of the position, the expertise and experience of the individual employee and the competitiveness of the market for the employee's services. Base salaries of executives other than our Chief Executive Officer may also reflect our Chief Executive Officer's evaluation of the individual NEO's job performance. As a result, the base salary level for each individual may be above or below the target market value for the position. The Compensation Committee also recognizes that the Chief Executive Officer's compensation should reflect the greater policy-and decision-making authority that he holds and the higher level of responsibility he has with respect to our strategic direction and our financial and operating results. As of December 31, 2018, our Chief Executive Officer's annual base salary was 55% higher than the annual base salary for the next highest-paid NEO and 70% higher than the average annual base salary for all of our other NEOs. The Compensation Committee does not intend for base salaries to be the vehicle for long-term capital and value accumulation for our executives.

2018 Actions. In typical years, base salaries are reviewed at least annually and may also be adjusted from time to time to realign salaries with market levels after taking into account individual responsibilities and changes in responsibilities, performance and contribution to ION, experience, impact on total compensation, relationship of compensation to other ION officers and employees, and changes in external market levels. No NEO received an increase in base salary in 2018. The chart

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below depicts the base salaries of our NEOs, together with information on their base salaries vis-à-vis the median salaries of comparable NEOs based on survey data.

Mr. Hanson's salary throughout 2018 was \$600,000. The 2018 MTCS Survey indicated that the mean CEO base salary for surveyed
companies in the Services and Drilling sector was \$641,000.
Mr. Bate's salary throughout 2018 was \$375,000. The 2018 MTCS Survey indicated that the mean CFO base salary for surveyed companies in the Services and Drilling sector was \$448,000.
Mr. Powers' salary throughout 2018 was \$275,000. The 2018 MTCS Survey indicated that the mean Top Legal Executive base salary for surveyed companies in the Services and Drilling sector was \$397,000.
Mr. Usher's salary throughout 2018 was \$378,560. The 2018 MTCS Survey indicated that the mean Chief Operating Officer Subsidiary/Group/Division base salary for surveyed companies in the Services and Drilling sectors was \$412,000.
Mr. Williamson's salary throughout 2018 was \$387,213. The 2018 MTCS Survey indicated that the mean Chief Operating Officer Subsidiary/Group/Division base salary for surveyed companies in the Services and Drilling sectors was \$412,000.

Annual Bonus Incentive Plan(1)

For several consecutive years, the Compensation Committee has approved an annual employee bonus incentive plan. Our annual bonus incentive plan is intended to promote the achievement, each year, of the Company's performance objectives as set forth in the annual operating plan. These objectives are defined early in the year, along with a target bonus pool, and these are communicated to eligible employees. The Compensation Committee believes that placing a portion of our employees' cash compensation at-risk, and tying it to the Company's achieving important objectives under our operating plan, incentivizes our employees in a way that aligns their interests with the interests of our shareholders.

Early in the year, management prepares an operating budget for that year and individual operating budgets for each operating unit. The budgets take into consideration our views on market opportunities, customer and sale opportunities, technology enhancements for new products, product manufacturing and delivery schedules and other operating factors known or foreseeable at the time. The Board analyzes the proposed budgets with management extensively and, after analysis and consideration, the Board approves a consolidated operating plan for the year. During this same time, our Chief Executive Officer works with various members of senior management to formulate our bonus incentive plan for the year, consistent with the operating plan approved by the Board. The annual bonus incentive plan is subject to approval by the Compensation Committee. Bonuses attributable to a

(1)

The Compensation Committee has discretion in circumstances it determines are appropriate to authorize discretionary bonus awards apart from awards that would otherwise be payable under the terms of the annual bonus incentive plan. (An example would be signing bonuses for new hires.) These discretionary awards can be payable in cash, stock options, restricted stock, restricted stock units, SARs, or a combination thereof. Any stock options, restricted stock, restricted stock units or SARs awarded would be granted under one of our existing long-term equity compensation plans or stock appreciation rights plans. Discretionary bonuses of this sort are not discussed in this section.

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given year are generally paid in February of the next year. (For instance, 2018 bonuses were paid in February of 2019.)

The Company's bonus program thus includes a three-step process:

- At the first quarterly meeting of the Board of Directors (generally in early February), the Compensation Committee approves a target total bonus pool (the "Target Pool") for that calendar year. The Target Pool is based in part on approximate percentages of base salary and our expected headcount. The Target Pool consists of two variable components: the Company's execution of defined long-term strategic initiatives ("Key Initiatives"), and the Company's reaching a defined cash-generation target ("Cash Generation Target"). The Key Initiatives and Cash Generation Target are derived from our annual operating plan, which is approved by the Board at that same quarterly meeting. The Target Pool, Key Initiatives, and Cash Generation Target are forward looking; that is, they are based on the Compensation Committee's goals and expectations for the Company's performance that year.
- The determination of the actual amount of the bonus pool (the "Actual Pool") is largely backward looking. At the February meeting of the Board of Directors, in addition to approving the Target Pool for that calendar year, the Compensation Committee determines what the Actual Pool for the prior year should be. The Compensation Committee does this with reference to the Target Pool for the prior year, and the Company's success in achieving the Key Initiatives and the Cash Generation Target for the prior year. However, the Compensation Committee has the authority to fund the Actual Pool in an amount over the Target Pool, an amount under the Target Pool, or not at all. In determining whether to deviate from the Target Pool, the Compensation Committee may consider events that unfolded during the prior year that impacted our performance as a whole that year (such as extraordinary cash generating events (e.g. sales of assets, equity raises), unanticipated governmental actions or economic conditions, indicators of growth or recession in our business segments, and other factors).
- Once the Actual Pool is funded, individual bonuses are determined by business unit managers by evaluating each eligible employee's individual and team performance during the prior year (except that no manager participates in determining his or her own bonus). The computation of individual awards for NEOs is approved by the Compensation Committee in accordance with the compensation philosophy and policy described above.

Our bonus incentive plans are designed for payouts that generally track the financial performance of our Company and, to a lesser extent, achievement of the Company's strategic objectives. The general intent of the plans is to reward key employees based on the Company's and the employee's performance, in each case measured against internal targets and plans. In most years when our Company's financial performance is strong, cash bonus payments under the annual incentive plan are generally higher. Likewise, when our financial performance is low as compared to our internal targets and plans, cash bonus payments are generally lower. There are occasionally exceptions to this general trend. (For instance in 2017, the Company exceeded the Cash Generation Target and executed all Key Initiatives, but, in view of the difficult business climate that had prevailed for the past several years, the Compensation Committee elected to fund the Actual Pool at \$7.2 million nearly \$3 million less than the amount calculated under the approved terms of the 2017 bonus incentive plan.)

2018 Bonus Incentive Plan. The purpose of the 2018 bonus incentive plan was to provide an incentive for our participating employees to achieve their highest level of individual and business unit performance, to align the employees to accomplish and share in the achievement of our Company's 2018 strategic and financial goals, and to prevent attrition of our high-performing employees to competitors. Designated employees, including our NEOs, were eligible to participate in our 2018 bonus incentive plan.

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The Target Pool under the 2018 plan was set at \$8.8 million in February 2018. Approximately 35% of this amount (\$3.1 million) was tied to the Key Initiatives for 2018, and 65% (\$5.7 million) was tied to the Cash Generation Target for 2018.

The Key Initiatives for 2018 were (1) achieving a \$10 million year-over-year increase in year-end cash balance, (2) developing a strategic framework to enable successful diversification of certain of our product lines into adjacent markets, (3) fostering the long-term integrity of our multi-client business by growing our data library, (4) capitalizing on the refocusing going on in our industry by establishing collaborative projects with multiple industry partners, and (5) implementing several cultural initiatives and objectives designed to foster a company-wide QHSE (quality, health, safety, environment) culture. The Compensation Committee found that the Company met, or exceeded, its goals as to all of the Key Initiatives except for Item 1 (achieving a \$10 million year-over-year increase in year-end cash balance).

The Cash Generation Target for 2018 required that the Company generate \$37 million in cash in 2018 excluding cash from external funding arrangements, interest payments and any other special items or modifications as approved by the Compensation Committee from time to time. As in prior years, if the Company exceeded the Cash Generation Target, the Target Pool could increase by a factor of 65% (from \$8.8 million, if 100% funded, up to a maximum of \$14.5 million, or 165% funded). The table below illustrates the level to which the Target Pool would be funded, based on achievement of the Key Initiatives and the Cash Generation Target.

Cash generation was selected as the most important goal for our 2018 plan because the Compensation Committee believes that generating cash is of paramount importance to our shareholders. Additionally, the Compensation Committee believed that strong cash flow would indicate that our Company was capitalizing on the improving business climate that appeared to be taking shape for 2018. Accordingly, in addition to tying 65% of the Target Pool to the Cash Generation Target, the Compensation Committee also selected one Key Initiative (achieving a \$10 million year-over-year increase in year-end cash balance) that was directly tied to cash generation. The other four Key Initiatives were not directly related to cash generation in 2018 and were selected to ensure that the Company's cash generation efforts did not result in long-term harm to the Company, and to encourage an appropriate balance between short-term cash generation and the long-term viability of our Company.

This same upside cap (165% achievement) was in the 2017 plan. In contrast, there was no upside for over performance in 2016 (that is, the maximum funding opportunity was 100%), and the upside cap was 150% in 2015.

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In February 2019, the Compensation Committee reviewed the Company's actual performance against each of the plan performance goals established at the beginning of 2018 and evaluated the individual performance of each NEO during 2018.

The Company did not meet its Cash Generation Target or the "Cash Threshold" set forth in the above table in 2018. Due to this fact, and to the Company's not achieving a year-over-year increase in cash balance (our year end cash balance for 2018 was \$33.6 million, compared with \$42.1 million⁽³⁾ for 2017), the bonus pool, based on Target Pool criteria, would have been \$2.5 million. However, the Compensation Committee elected to fund the Actual Pool at \$4.25 million. In setting the actual pool at \$4.25 million, the Compensation Committee took into account several factors. There were a number of unforeseen events in 2018 that caused cash generation to be lower than anticipated (notable among these were a delay in licensing rounds in Panama, the accession of Andres Manuel Lopez Obrador to the presidency of Mexico, and the collapse in oil prices in the last half of the year). The Compensation Committee believed that increasing the Actual Pool was warranted given the Company's strong performance in executing our strategic initiatives, and the risk of attrition of our key employees.

NEOs' bonus targets range from 60% to 100% of their respective annual base salaries. In years prior to 2015, every participating NEO other than our Chief Executive Officer could earn up to 200% of their bonus targets in a given year, depending on their individual performance and the performance of the Company. Commencing in 2015, in view of the extremely challenging business climate that the Company faced, the Compensation Committee reduced the maximum amount earnable by these NEOs to 125% of their respective targets. This cap was continued through 2016 but lifted in 2017 in view of the improved performance of the Company and improved business climate. In 2017, and again in 2018, the Compensation Committee determined that each NEO, including our Chief Executive Officer, was eligible to receive up to 200% of his bonus target. (The Compensation Committee has the discretion to determine the amounts of individual bonus awards.)

Where an employee is primarily involved in a particular business unit, the financial performance criteria under the bonus incentive plan are weighted toward the operational performance of the employee's business unit rather than consolidated company performance. The "Non-Equity Incentive Plan Compensation" column of the 2018 Summary Compensation Table below reflects the payments that our NEOs earned and received under our 2018 bonus incentive plan. (The "Bonus" column of the same table would reflect any discretionary cash bonus payments received by our NEOs during 2018; there were none in 2018.)

In addition to overall company performance, and, where applicable, business unit performance, when considering the 2018 bonus incentive plan awards paid to our NEOs, the Compensation Committee also considered the individual performances and accomplishments of each officer. In considering the bonus award paid to Mr. Hanson, the Compensation Committee considered Mr. Hanson's achievement of four of the five Key Initiatives for the Company, as well as his leadership in executing a successful equity raise. As previously stated, the five Key Initiatives were (1) achieving a \$10 million year-over-year increase in year-end cash balance, (2) developing a strategic framework to enable successful diversification of certain of our product lines into adjacent markets, (3) fostering the long-term integrity of our multi-client business by growing our data library, (4) capitalizing on the refocusing going on in our industry by establishing collaborative projects with multiple industry partners, and (5) implementing several cultural initiatives and objectives designed to foster a company-wide QHSE (quality, health, safety, environment) culture.

When considering the bonus award paid to Mr. Bate, the Compensation Committee took into consideration his performance against the objectives set for Mr. Bate. Mr. Bate's objectives included

The \$42.1 million excludes \$10 million in cash that the Company had on hand on December 31, 2017, because there was \$10 million outstanding under our revolving credit facility on that date (compared with \$0 outstanding on December 31, 2018).

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(1) achieving a \$10 million year-over-year increase in year-end cash balance, (2) successfully retiring the Company's \$28.5 million Third Lien Notes prior to their May 2018 maturity date, (3) implementing a comprehensive Investor Relation Program (including roadshows and adding coverage of the Company's stock by at least one additional analyst), and (4) improving the Company's year-end liquidity through a combination of incremental operating cash flow, enhancing or replacing the Company's revolver with PNC, current short term borrowing facility, or other financing transactions. In the bonus awarded to Mr. Bate, the Compensation Committee determined that Mr. Bate achieved three of his four objectives.

When considering the bonus award paid to Mr. Powers, the Compensation Committee took into consideration his performance against the objectives set for Mr. Powers. Mr. Powers' objectives included (1) successfully executing all legal tasks necessary to complete an equity raise and retirement of the Company's \$28.5 million Third Lien Notes by their target dates, (2) recapturing momentum in the Company's legal proceedings against WesternGeco, (3) reinvigorating the legal department with two new lawyer hires in the legal department, and (4) successfully executing all legal tasks with respect to two significant collaboration agreements with industry partners. In the bonus awarded to Mr. Powers, the Compensation Committee determined that Mr. Powers had achieved three of his four objectives and partially achieved one of his four objectives.

When considering the bonus award paid to Mr. Usher, the Compensation Committee took into consideration his performance against the objectives set for Mr. Usher. Mr. Usher's objectives included (1) contributing to the Company's achieving a \$10 million year-over-year increase in year-end cash balance through execution of the Operations Optimization operating Plan, (2) developing a framework for enabling successful diversification of certain of the Company product lines into adjacent markets, (3) developing partnerships and alliances in adjacent markets that accelerate our market penetration and commercial success, (4) successfully commercializing the Company's SailWing system, and (5) securing pilot programs for non-seismic uses of our Marlin program. In the bonus awarded to Mr. Usher, the Compensation Committee determined that Mr. Usher had achieved three of his five objectives and partially achieved an additional one of his other five.

When considering the bonus award paid to Mr. Williamson, the Compensation Committee took into consideration his performance against the objectives set for Mr. Williamson. Mr. Williamson's objectives included (1) ensuring the long-term integrity of the Company's multi-client business through continued investment in the data library, (2) expanding the Company's offerings to License Round Management for host governments, (3) developing the Company's capability to deliver a significant uplift in multi-client and proprietary data using FWI based technology, and (4) establishing one significant collaboration arrangement with an industry partner.

In the bonus awarded to Mr. Williamson, the Compensation Committee determined that Mr. Williamson achieved three of his four objectives and partially achieved one of his four objectives.

The total compensation paid to each NEO is set forth in the graph titled "Summary Compensation Table".

The Compensation Committee reviews the annual bonus incentive plan each year to ensure that the key elements of the plan continue to meet the objectives described above.

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Long-Term Stock-Based Incentive Compensation

We have structured our long-term incentive compensation to provide for an appropriate balance between rewarding performance and encouraging employee retention and stock ownership. There is no pre-established policy or target for the allocation between either cash or non-cash or short-term and long-term incentive compensation; however, at executive management levels, the Compensation Committee strives for compensation to focus increasingly on longer-term incentives. In conjunction with the Board, executive management is responsible for setting and achieving long-term strategic goals. In support of this responsibility, compensation for executive management, and most particularly our Chief Executive Officer, tends to be weighted towards rewarding long-term value creation for shareholders.

The below table illustrates the mix of total compensation received by Mr. Hanson, our CEO, and our other current NEOs during 2018:

LTIP and SAR Plan Changes

The Compensation Committee approved significant grants of equity-based compensation in 2018, including to our NEOs, in the form of restricted stock and SARs. However, these awards were structured differently than the Company's awards in the past.

This was made possible by amendments to our Second Amended and Restated 2013 Long-Term Incentive Plan (the "2013 LTIP") that our shareholders approved in November of 2018. (The 2013 LTIP, as amended in 2018, is sometimes referred to as the "2018 LTIP"). Additionally, in that same month, the Company put into place our 2018 SAR Plan to replace the 2008 SAR Plan which expired that month.

During the recent protracted industry downturn, the Company had taken several steps to streamline the business and reduce costs. As part of this effort, as of late 2018, the Company hadn't issued equity under our LTIP for almost three years except in limited cases involving new hires or promotions that would reduce our cash outlay.

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As the industry continued to pick up in 2018, some of the Company's key employees received attractive offers from other companies, and the Compensation Committee determined that equity-based awards, primarily in the form of restricted stock and SARS, were the best means to stem attrition in our upper and middle management. Equity-based awards provide value to our shareholders by allowing us to attract and retain first rate talent, while tying our employees' financial compensation to the performance of the Company.

In the fall of 2018, the Company engaged Aon Hewitt, a leading compensation consultant, to analyze our compensation program relative to industry practice, and Aon Hewitt concluded that, given the metrics (dollar value) of the compensation that the Company would need to adequately retain and attract talent for our key positions, the pool of available equity under the Company's 2013 LTIP was insufficient. Their analysis showed that to attract and retain top talent under a plan that would be approved by ISS (a leading proxy advisory firm), the Company would need to make an annual grant of approximately 800,000 shares compromised of stock options and restricted stock awards, which, over three years, would have required an additional 2.4 million shares for the LTIP.

Aon Hewitt recommended a more creative, non-ISS-compliant option that would require half as many shares to achieve the same result: granting all awards under the LTIP as performance-based restricted stock, rather than having to make 2 /3 of the grants as stock options. (This ratio of stock options was required by the 2013 LTIP; ISS and other independent proxy advisory firms tend to mandate that a certain amount of shares be dedicated to stock options so that the recipients don't benefit unless the stock price increases.)

Standard practice, and the historical practice of the Company, is to award restricted stock that vests over time, regardless of the stock's performance, and to couple that with stock options that are worthless if the stock doesn't appreciate. However, each share of restricted stock is intrinsically more valuable to an employee than each single stock option, because, in the case of a stock option, even if the stock appreciates, such that the option is not worthless, the employee only receives the benefit of the spread between the exercise price of the option and the value of the stock.

Accordingly, at the Compensation Committees recommendation, the Board sought, from the shareholders, amendments to our 2013 LTIP that would add 1.2 million shares to the 2013 LTIP, and eliminate the restriction on the number of shares in the 2013 LTIP that could be issued as full value awards. These amendments were approved by shareholders in a special meeting held on November 30, 2018.

After the special meeting, the Compensation Committee approved awards of restricted stock and SARS to several employees, including all of our NEOs; but the form of these awards were different than in prior years.

All of the restricted stock and SARs awards granted to our NEOs on December 1, 2018, contain not only our traditional time-based vesting restrictions (the shares vest equally on the first, second and third anniversary of the grant, subject to continued employment), but also contain very aggressive performance-based vesting restrictions: one-third of any such award will vest only if ION's common stock attains, and maintains, a share price of \$17.50 on or before the third anniversary of the grant date; two-thirds of any such award will vest only if ION's common stock attains, and maintains, a share price of \$22.50 on or before the third anniversary of the grant date; and full vesting as to any such award will occur only if ION's common stock attains, and maintains, a share price of \$27.50 on or before the third anniversary of the grant date (December 1, 2021). The foregoing performance-based vesting restriction will be satisfied if and only if the volume weighted average price per share, at the close of 20 consecutive trading days, meets or exceeds the target price, and are in addition to the time-based vesting restrictions.

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Our long-term incentive plans have provided the principal method for our NEOs to acquire equity or equity-linked interests in our Company.

Restricted Stock and Restricted Stock Units. We use restricted stock and restricted stock units to focus executives on our long-term performance and to help align their compensation more directly with shareholder value. Historically, vesting of restricted stock and restricted stock units typically occurred ratably over three years, based solely on continued employment of the recipient-employee, and the terms of our LTIP (both prior to and after the 2018 amendments) require restricted stock and restricted stock units granted under that plan to follow that vesting schedule unless the Compensation Committee approves a different schedule when approving the grant. As noted above, the grants of restricted stock and restricted stock units that were awarded on December 1, 2018, in addition to being subject to the traditional three-year time vesting restriction, also are subject to performance-based vesting restrictions that require our stock price to attain, and maintain, a certain price within the next three years.

The only restricted stock awards granted to our NEOs in 2018 that were not subject to the time-based and performance-based vesting restrictions noted in the immediately preceding section were certain shares of restricted stock which were issued on March 1, 2018, as part of our 2017 Equity Investment Program. These shares were subject to a ninety-day time-based vesting restriction, but no performance-based restriction. (To encourage the Company's executive officers and other key employees to purchase common stock of the Company and further align their interests with those of the Company's stockholders, in 2017, the Board authorized and approved an equity investment program (the "EIP"), pursuant to which all of the NEOs, and certain other key employees of the Company, were permitted, but not obligated, to purchase unregistered shares of common stock of the Company directly from the Company at market prices. In connection with any such purchases, the Compensation Committee authorized and approved a grant, by the Company, to such purchasing NEOs and other key employees, of a certain number of shares of restricted stock. The Compensation Committee also authorized and approved to grant the EIP participants a certain number of shares of restricted stock in connection with certain purchases of shares of the Company's common stock in the open market. Specifically, for each five (5) shares directly purchased from the Company or in the open market between December 13, 2017 and December 31, 2017, the Company agreed to issue one (1) share of restricted stock, subject to certain limitations as to the total number of restricted shares to be issued by the Company.)

Awards of restricted stock units have been made to certain of our foreign employees in lieu of awards of restricted stock. Restricted stock units provide certain tax benefits to our foreign employees as the result of foreign law considerations, so we expect to continue to award restricted stock units to designated foreign employees for the foreseeable future.

Stock Options. Under our equity plans, stock options may be granted having exercise prices equal to the closing price of our stock on the date before the date of grant. In any event, all awards of stock options are made at or above the market price at the time of the award. The Compensation Committee will not grant stock options having exercise prices below the market price of our stock on the date of grant, and will not reduce the exercise price of stock options (except in connection with adjustments to reflect recapitalizations, stock or extraordinary dividends, stock splits, mergers, spin-offs and similar events, as required by the relevant plan) without the consent of our shareholders. Our stock options generally vest ratably over four years, based on continued employment, and the terms of our LTIP (prior to and after the 2018 amendments) require stock options granted under that plan to follow that vesting schedule unless the Compensation Committee approves a different schedule when approving the grant. Prior to the exercise of an option, the holder has no rights as a shareholder with respect to the shares subject to such option, including voting rights and the right to receive dividends or dividend equivalents. New option grants normally have a term of ten years.

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The purpose of stock options is to provide equity compensation with value that has been traditionally treated as entirely at-risk, based on the increase in our stock price and the creation of shareholder value. (However, as described above, the vast majority of our grants of restricted stock and restricted stock units that were granted in 2018 are also entirely at-risk, due to the aggressive performance-based vesting restrictions). Stock options also allow our NEOs and key employees to have equity ownership and to share in the appreciation of the value of our stock, thereby aligning their compensation directly with increases in shareholder value. Stock options only have value to their holder if the stock price appreciates in value from the date options are granted.

Stock option award decisions are generally based on past business and individual performance. In determining the number of options to be awarded, we also consider the grant recipient's qualitative and quantitative performance, the size of stock option and other stock based awards in the past, and expectations of the grant recipient's future performance. No NEOs received option awards in 2018.

Stock Appreciation Rights. In order to achieve market-based compensation for our key employees in line with the recommendations of Aon Hewitt, the Compensation Committee elected to have a substantial portion of the equity-based compensation paid in SARs in 2018. The SARs grants approved by the Compensation Committee are 100% cash-settled and were granted pursuant to our 2018 SAR Plan. The vesting of the SARs issued in 2018 are achieved through both a market condition and a service condition, which are identical to the time-based vesting restriction and the performance-based vesting restriction on the restricted stock that was issued in December 2018, and which is described above. As with our stock options, exercise prices for our SARs awards are equal to the closing price of our stock on the date before the date of grant. New SARs grants normally have a term of ten years.

Approval and Granting Process. As described above, the Compensation Committee reviews and approves all stock appreciation rights, stock option, restricted stock and restricted stock unit awards made to NEOs, regardless of amount. With respect to equity compensation awarded to employees other than NEOs, the Compensation Committee reviews and approves all grants of stock appreciation rights, restricted stock, stock options and restricted stock units above 5,000 shares, generally based upon the recommendation of our Chief Executive Officer. The Compensation Committee has granted to our Chief Executive Officer the authority to approve grants to any employee other than an NEO of (i) up to 5,000 shares of restricted stock and (ii) stock options for not more than 5,000 shares. Our Chief Executive Officer is also required to provide a report to the Compensation Committee of all awards of options and restricted stock made by him under this authority. We believe that this policy is beneficial because it enables smaller grants to be made more efficiently. This flexibility is particularly important with respect to attracting and hiring new employees, given the increasingly competitive market for talented and experienced technical and other personnel in locales in which our employees work.

All grants of stock appreciation rights, restricted stock, restricted stock units and stock options to employees or directors are granted on one of four designated quarterly grant dates during the year: March 1, June 1, September 1 or December 1. The Compensation Committee approved these four dates because they are not close to any dates on which earnings announcements or other announcements of material events would normally be made by us. For an award to a current employee, the grant date for the award is the first designated quarterly grant date that occurs after approval of the award. For an award to a newly hired employee who is not yet employed by us at the time the award is approved, the grant date for the award is the first designated quarterly grant date that occurs after the new employee commences work. We believe that this process of fixed quarterly grant dates is beneficial because it serves to remove any perception that the grant date for an award could be capable of manipulation or change for the benefit of the recipient. In addition, having all grants occur on a maximum of four days during the year simplifies certain fair value accounting calculations related to the grants, thereby minimizing the administrative burden associated with tracking and calculating the fair values, vesting schedules and tax-related events upon vesting of restricted stock and also lessening the opportunity for inadvertent calculation errors.

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Clawback Policy

We have a Compensation Recoupment Policy (commonly referred to as a "clawback" policy), which provides that, in the event of a restatement of our financial results due to material noncompliance with applicable financial reporting requirements, the Board will, if it determines appropriate and subject to applicable laws and the terms and conditions of our applicable stock plans, programs or arrangements, seek reimbursement of the incremental portion of performance-based compensation, including performance-based bonuses and long-term equity-based incentive awards, paid to current or former NEOs within three years of the restatement date, in excess of the compensation that would have been paid had the compensation amount been based on the restated financial results.

Personal Benefits, Perquisites and Employee Benefits

Our Board and executives have concluded that we will not offer most perquisites traditionally offered to executives of similarly sized companies. As a result, perquisites and any other similar personal benefits offered to our NEOs are substantially the same as those offered to our general salaried employee population. These offered benefits include medical and dental insurance, life insurance, disability insurance, a vision plan, charitable gift matching (up to designated limits), a 401(k) plan with a company match of certain levels of contributions, flexible spending accounts for healthcare and dependent care and other customary employee benefits. Business-related relocation benefits may be reimbursed on a case-by-case basis. We intend to continue applying our general policy of not providing specific personal benefits and perquisites to our executives; however, we may, in our discretion, revise or add to any executive's personal benefits and perquisites if we deem it advisable.

Risk Management Considerations

The Compensation Committee believes that our Company's bonus and equity programs create incentives for employees to create long-term shareholder value. The Compensation Committee has considered the concept of risk as it relates to our compensation programs and has concluded that our compensation programs do not encourage excessive or inappropriate risk-taking. Several elements of the compensation programs are designed to promote the creation of long-term value and thereby discourage behavior that leads to excessive risk:

The compensation programs consist of both fixed and variable compensation. The fixed (or salary) portion is designed to provide a steady income regardless of the Company's stock price performance so that executives do not focus exclusively on stock price performance to the detriment of other important business metrics. The variable (cash bonus and equity) portions of compensation are designed to reward both short- and long-term corporate performance. The Compensation Committee believes that the variable elements of compensation are a sufficient percentage of overall compensation to motivate executives to produce positive short- and long-term corporate results, while the fixed element is also sufficiently high such that the executives are not encouraged to take unnecessary or excessive risks in doing so.

The financial metrics used to determine the amount of an executive's bonus are measures the Compensation Committee believes contribute to long-term shareholder value and ensure the continued viability of the Company. Moreover, the Compensation Committee attempts to set ranges for these measures that encourage success without encouraging excessive risk taking to achieve short-term results. In addition, the overall maximum bonus for each participating NEO other than our Chief Executive Officer is not expected to exceed 150% of the executive's base salary under the bonus plan, and the overall bonus for our Chief Executive Officer under his employment agreement will not exceed 200% of his base salary under the bonus plan, in each case no matter how much the Company's financial performance exceeds the ranges established at the beginning of the year.

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We have strict internal controls over the measurement and calculation of the financial metrics that determine the amount of an executive's bonus, designed to keep it from being susceptible to manipulation by an employee, including our executives.

Stock options become exercisable over a four-year period, and SARs become exercisable over a three-year period, generally conditioned on continuing employment with the Company, and remain exercisable for up to ten years from the date of grant, encouraging executives to look to long-term appreciation in equity values.

Restricted stock and SARs vest over a three-year period, generally conditioned on continuing employment with the Company, which, again, encourages executives to look to long-term appreciation in equity values. Additionally, as noted above, the majority of this year's restricted stock grants and all of this year's SARs grants also require significant appreciation in our stock price for vesting to occur.

Senior executives, including our NEOs, are required to acquire over time and hold shares of our Company's stock having a value of between one and four times the executive's annual base salary, depending on the level of the executive. The Compensation Committee believes that the stock ownership guidelines provide a considerable incentive for management to consider the Company's long-term interests, since a portion of their personal investment portfolio consists of our Common Stock.

In addition, we do not permit any of our NEOs or directors to enter into any derivative or hedging transactions involving our stock, including short sales, market options, equity swaps and similar instruments, thereby preventing executives from insulating themselves from the effects of poor company stock price performance. Please refer to " *Stock Ownership Requirements; Hedging Policy*" below.

We have a compensation recoupment (clawback) policy that provides, in the event of a restatement of our financial results due to material noncompliance with financial reporting requirements, for reimbursement of the incremental portion of performance-based compensation, including performance-based cash bonuses and long-term equity-based incentive awards, paid to current or former NEOs within three years of the restatement date, in excess of the compensation that would have been paid had such compensation amount been based on the restated financial results. Please refer to " *Clawback Policy*" above.

Consideration of Say-On-Pay Result. At our 2018 Annual Meeting of Shareholders held on May 16, 2018, our shareholders approved all of our director nominees and proposals, including a non-binding advisory vote to approve the compensation of our NEOs ("say-on-pay"). In the advisory executive compensation vote, over 99% of the votes cast on the proposal voted in favor of our executive compensation. Our general goal since our 2016 Annual Meeting has been to continue to act consistently with the established practices that were approved by our shareholders. We believe that we have accomplished that goal. At our 2017 Annual Meeting, our shareholders also voted on a non-binding advisory vote on the frequency of advisory votes on executive compensation ("say-on-frequency") and approved "every year". The Board intends to hold advisory votes on executive compensation within the time frame approved by the shareholders. When and if our Board determines that it is in the best interest of our Company to hold our say-on-pay vote with a different frequency, we will propose such a change to our shareholders at the next annual meeting of shareholders to be held following the Board's determination. Presently, under SEC rules, we are not required to hold another say-on-frequency vote again until our 2023 Annual Meeting of Shareholders.

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Indemnification of Directors and Executive Officers

Our Bylaws provide certain rights of indemnification to our directors and employees (including our NEOs) in connection with any legal action brought against them by reason of the fact that they are or were a director, officer, employee or agent of our Company, to the full extent permitted by law. Our Bylaws also provide, however, that no such obligation to indemnify exists as to proceedings initiated by an employee or director against us or our directors unless (a) it is a proceeding (or part thereof) initiated to enforce a right to indemnification or (b) was authorized or consented to by our Board.

As discussed below, we have also entered into employment agreements with certain of our NEOs that provide for us to indemnify the executive to the fullest extent permitted by our Restated Certificate of Incorporation, as amended, and our Bylaws. The agreements also provide that we will provide the executive with coverage under our directors' and officers' liability insurance policies to the same extent as provided to our other executives.

Stock Ownership Requirements; Hedging Policy

We believe that broad-based stock ownership by our employees (including our NEOs) enhances our ability to deliver superior shareholder returns by increasing the alignment between the interests of our employees and our shareholders. Accordingly, the Board has adopted stock ownership guidelines applicable to each of our senior executives, including our NEOs. The policy requires each executive to retain direct ownership of at least 50% of all shares of our Company's stock received upon exercise of stock options and vesting of awards of restricted stock or restricted stock units until the executive owns shares having an aggregate value equal to the following multiples of the executive's annual base salary:

President and Chief Executive Officer 4x Executive Vice President 2x Senior Vice President 1x

The Compensation Committee and our Chief Executive Officer may, in their discretion, grant temporary exemptions from the guidelines to prevent severe hardships to senior executives. As of the date of this Proxy Statement, all of our NEOs were in compliance with the stock ownership requirements. In addition, we do not permit any of our NEOs or directors to enter into any derivative or hedging transactions with respect to our stock, including short sales, market options, equity swaps and similar instruments.

Impact of Regulatory Requirements and Accounting Principles on Compensation

The financial reporting and income tax consequences to our Company of individual compensation elements are important considerations for the Compensation Committee when it is analyzing the overall level of compensation and the mix of compensation among individual elements. The Compensation Committee seeks to balance its objective of ensuring an effective compensation package for the NEOs with the need to maximize the immediate deductibility of compensation while ensuring an appropriate (and transparent) impact on reported earnings and other closely followed financial measures.

Under Section 162(m) of the Internal Revenue Code and the related federal treasury regulations, we may not deduct annual compensation in excess of \$1 million paid to certain employees-generally our Chief Executive Officer, our Chief Financial Officer and our three other most highly compensated NEOs. Prior to January 1, 2018, compensation in excess of \$1 million was deductible if it qualified as "performance based" compensation but this exemption to the deductibility limit was eliminated by the 2017 Tax Cuts and Jobs Act.

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In making its compensation decisions, the Compensation Committee has considered the limitations on deductibility within the requirements of Section 162(m) and its related Treasury regulations. As a result, for periods prior to January 1, 2018, the Compensation Committee has designed much of the total compensation packages for the NEOs to qualify for the exemption of "performance-based" compensation from the deductibility limit. However, the Compensation Committee does have the discretion to design and use compensation elements that may not be deductible within the limitations under Section 162(m), if the Compensation Committee considers the tax consequences and determines that those elements are in our best interests.

The Compensation Committee believes that the potential deductibility of the compensation payable under the annual bonus plan and the Company's other incentive compensation plans and arrangements should be only one of a number of relevant factors taken into consideration in establishing those plans and arrangements for our executive officers and not the sole governing factor. For that reason, for the 2019 fiscal year, the Compensation Committee intends to structure our annual bonus plan and the Company's other incentive compensation plans and arrangements in a manner similar to the 2018 fiscal year, acknowledging that a portion of those compensation payments may not be deductible under Section 162(m), in order to assure appropriate levels of total compensation for our executive officers based on the Company's performance.

Likewise, the impact of Section 409A of the Internal Revenue Code is taken into account, and our executive compensation plans and programs are, in general, designed to comply with the requirements of that section so as to avoid possible adverse tax consequences that may result from non-compliance.

For accounting purposes, we apply the guidance in ASC Topic 718 to record compensation expense for our equity-based compensation grants. ASC Topic 718 is used to develop the assumptions necessary and the model appropriate to value the awards as well as the timing of the expense recognition over the requisite service period, generally the vesting period, of the award.

Executive officers will generally recognize ordinary taxable income from stock option awards when a vested option is exercised. We generally receive a corresponding tax deduction for compensation expense in the year of exercise. The amount included in an NEO's wages and the amount we may deduct is equal to the Common Stock price when the stock options are exercised less the exercise price, multiplied by the number of shares under the stock options exercised. We do not pay or reimburse any NEO for any taxes due upon exercise of a stock option. We have not historically issued any tax-qualified incentive stock options under Section 422 of the Internal Revenue Code.

Executives will generally recognize taxable ordinary income with respect to their shares of restricted stock at the time the restrictions lapse (unless the recipient elects to accelerate recognition as of the date of grant). Restricted stock unit awards are generally subject to ordinary income tax at the time of payment or issuance of unrestricted shares of stock. We are generally entitled to a corresponding federal income tax deduction at the same time the executive recognizes ordinary income.

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COMPENSATION COMMITTEE REPORT

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis included in this Proxy Statement and required by Item 402(b) of Regulation S-K with the management of ION. Based on such review and discussions, the Compensation Committee has recommended to the Board that the Compensation Discussion and Analysis be included in this Proxy Statement and incorporated into ION's Annual Report on Form 10-K for the year ended December 31, 2018.

David H. Barr, Chairman James M. Lapeyre, Jr. Franklin Myers John N. Seitz

SUMMARY COMPENSATION TABLE

The following table summarizes the compensation paid to or earned by our named executive officers at December 31, 2018.

						Non-Equity Incentive		
				Stock	Option	Plan	All Other	
			Bonus	Awards			ompensation	Total
Name and Principal Position	Year	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$)
R. Brian Hanson	2018	600,000		1,888,032	262,400	582,000	7,577	3,340,009
President, Chief Executive Officer								
and	2017	558,689				1,200,000	7,577	1,766,266
Director	2016	540,000		341,900	203,817	720,000	7,950	1,813,667
Steven A. Bate	2018	375,000		1,092,322	130,427	273,100	9,548	1,880,397
Executive Vice President and	2017	350,484				450,000	7,950	808,434
Chief Financial Officer	2016	337,500		170,950	101,909	337,500	7,950	955,809
Matthew R. Powers	2018	275,000		365,943	56,027	160,200	5,654	862,824
Executive Vice President, General	2017	220,664		168,600	291,540	165,000	5,423	851,227
Counsel and Corporate Secretary								
Christopher T. Usher	2018	378,560		1,023,188	130,427	220,600	7,482	1,760,257
Executive Vice President and Chief	2017	353,808				347,000	5,504	706,312
Operating Officer, Operations	2016	340,704		59,686	50,954	272,500	5,504	729,348
Optimization								
Kenneth G. Williamson	2018	387,213		1,086,632	130,427	211,500	9,590	1,825,362
Executive Vice President and	2017	361,905				508,000	7,950	877,855
Chief Operating Officer,	2016	348,492		70,875	71,336	260,000	7,950	758,653
E&P Technology & Services								

Discussion of Summary Compensation Table

<u>Stock Awards Column.</u> All of the amounts in the "Stock Awards" column reflect the grant-date fair value of awards of restricted stock made during the applicable fiscal year (excluding any impact of assumed forfeiture rates) under our LTIP. While unvested, a holder of restricted stock is entitled to the same voting rights as all other holders of Common Stock. In each case, unless stated otherwise below, the awards of shares of restricted stock vest in one-third increments each year, over a three-year period. The values contained in the Summary Compensation Table under the Stock Awards column are based on the grant date fair value of all stock awards (excluding any impact of assumed forfeiture rates). The grants and awards listed immediately after this paragraph are grants that were made in 2016 and 2017.

On March 1, 2016, Mr. Hanson received an award of 50,000 shares of restricted stock.

On June 1, 2016, Mr. Hanson received an award of 20,000 shares of restricted stock.

On March 1, 2016, Mr. Bate received an award of 25,000 shares of restricted stock.

On June 1, 2016, Mr. Bate received an award of 10,000 shares of restricted stock.

On March 1, 2017, Mr. Powers received an award of 12,000 shares of restricted stock.

On March 1, 2016, Mr. Usher received an award of 12,500 shares of restricted stock.

On June 1, 2016, Mr. Usher received an award of 1,300 shares of restricted stock.

On March 1, 2016, Mr. Williamson received an award of 17,500 shares of restricted stock.

Grants and awards made in 2018 are described in the " 2018 Grants of Plan-Based Awards" table below.

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Option Awards Column. All of the amounts shown in the "Option Awards" column reflect stock options granted under our 2013 LTIP and stock appreciation rights granted under our 2018 SAR Plan. In each case, unless stated otherwise below, the options vest 1/4 each year over a four-year period and the SARs vest 1/3 per year over a three-year period and also contain a performance-based restriction further described in the footnotes to the next following table. The time-based vesting restrictions are generally contingent on the grantee's continued employment (with certain exceptions that allow earlier vesting, such as in the event of a change of control in the Company's ownership or the death, disability or retirement of the grantee). The values contained in the Summary Compensation Table under the Stock Options column are based on the grant date fair value of all option awards (excluding any impact of assumed forfeiture rates). For a discussion of the valuation assumptions for the awards, see Note 10, Shareholders' Equity and Stock-Based Compensation Valuation Assumptions, in our Notes to Consolidated Financial Statements included in our Annual Report on Form 10-K for the year ended December 31, 2018. All of the exercise prices for the options equal or exceed the fair market value per share of ION Common Stock on the date of grant. In addition to the grants and awards in 2018 described in the "2018 Grants of Plan-Based Awards" table below:

On March 1, 2016, Mr. Hanson received an award of options to purchase 100,000 shares of our Common Stock for an exercise price of \$3.10 per share.

On March 1, 2016, Mr. Bate received an award of options to purchase 50,000 shares of our Common Stock for an exercise price of \$3.10 per share.

On March 1, 2017, Mr. Powers received an award of options to purchase 36,000 shares of our Common Stock for an exercise price of \$13.15 per share.

On March 1, 2016, Mr. Usher received an award of options to purchase 25,000 shares of our Common Stock for an exercise price of \$3.10 per share.

On March 1, 2016, Mr. Williamson received an award of options to purchase 35,000 shares of our Common Stock for an exercise price of \$3.10 per share.

Other Columns.

All payments of non-equity incentive plan compensation reported for 2018 were made in February 2019 with regard to the 2018 fiscal year and were earned and paid pursuant to our 2018 incentive plan.

We do not sponsor for our employees (i) any defined benefit or actuarial pension plans (including supplemental plans), (ii) any non-tax-qualified deferred compensation plans or arrangements or (iii) any nonqualified defined contribution plans.

Our general policy is that our executive officers do not receive any executive "perquisites," or any other similar personal benefits that are different from what our salaried employees are entitled to receive. We provide the named executive officers with certain group life, health, medical and other non-cash benefits generally available to all salaried employees, which are not included in the "All Other Compensation" column in the Summary Compensation Table pursuant to SEC rules. The amounts shown in the "All Other Compensation" column solely consist of employer matching contributions to ION's 401(k) plan.

2018 GRANTS OF PLAN-BASED AWARDS

		Estimated Future Payouts Under Non-Equity Incentive Plan Awards(1)			Estimated Payou Under E Incent Plan Awa	nts quity ive rds(2)		All Other Option Awards: Number of Securities Underlying	or Base Price of Option	Grant Date Fair Value of Stock and Option
Name	Grant Date	Threshold (\$)	Target (\$)	Maximumhh (\$)	resholdFarge (#) (#)	etMaxim (#)	um Units (#)(2)	Options (#)(3)	Awards (\$/Sh)	Awards (\$)(4)
R. Brian Hanson	3/1/2018 12/1/2018		600,000	1,200,000	180,0	00	7,270	192,000	8.85	204,287 1,885,400
Steven A. Bate	3/1/2018 12/1/2018		281,250	562,500	89,4	30	9,035	95,435	8.85	253,884 921,883
Matthew R. Powers	3/1/2018 12/1/2018		165,000	330,000	38,4	43	242	40,995	8.85	6,800 396,247
Christopher T. Usher	3/1/2018 12/1/2018		227,136	454,272	89,4	30	6,605	95,435	8.85	185,601 921,883
Kenneth G. Williamson	3/1/2018 12/1/2018		290,410	580,820	89,4	30	6,605	95,435	8.85	248,264 921,883

Reflects the estimated threshold, target and maximum award amounts for payouts under our 2018 incentive plan to our NEOs. Under the plan, every participating NEO had the opportunity to earn a maximum of 200% of his target depending on performance of the Company against the designated performance goal, and performance of the executive against personal performance criteria. Mr. Hanson's employment agreement does not specify that he will earn a bonus upon achievement of a threshold consolidated performance goal. Because award determinations under the plan were based in part on outcomes of personal evaluations of employee performance by our Chief Executive Officer and the Compensation Committee, the computation of actual awards generated under the plan upon achievement of threshold and target company performance criteria differed from the above estimates. See "Compensation Discussion and Analysis Elements of Compensation Bonus Incentive Plan" above. For actual payout amounts to our named executive officers under our 2018 bonus incentive plan, see the "Non-Equity Incentive Plan Compensation" column in the "Summary Compensation Table" above.

All stock awards granted in March of 2018 reflect the number of shares of restricted stock granted under our 2013 LTIP. All stock awards granted in December of 2018 reflect the number of shares of restricted stock granted under our 2018 LTIP. While unvested, a holder of restricted stock is entitled to the same voting rights as all other holders of Common Stock. The shares vest, if at all, in equal increments upon the first, second and third anniversary of the grant. Each vesting tranche is contingent upon the grantee remaining employed by the Company through each applicable anniversary. In addition, the shares granted in December of 2018 require the Company's volume weighted average stock price to meet or exceed, for twenty consecutive days prior to December 1, 2021, \$17.50 for 1/3 of the award to vest; \$22.50 for 2/3 of the award to vest; and \$27.50 for complete vesting. The performance-based vesting restriction described in the foregoing sentence is in addition to the time-based vesting restriction. Both the time-based vesting restriction and the performance-based vesting restriction are subject to certain exceptions that allow earlier vesting (such as in the event of death, disability, or a change in control of the Company's ownership).

All stock appreciation rights awards granted reflect grants under our 2018 SAR Plan. In each case, the SARs vest, if at all, upon the satisfaction of the same time and performance-based vesting restrictions as are noted in footnote (2) above. Both the time-based vesting restriction and the performance-based vesting restriction are subject to certain exceptions that allow earlier vesting (such as in the event of death, disability, retirement, or a change in control of the Company's ownership). The maximum value of each such award is \$18.65 per share.

The values contained in the table are based on the grant date fair value of the award computed in accordance with ASC Topic 718 for financial statement reporting purposes, but exclude any impact of assumed forfeiture rates. For a discussion of valuation assumptions, see Note 12, "Shareholders' Equity and Stock-Based Compensation", in our Notes to Consolidated Financial Statements included in our Annual Report on Form 10-K for the year ended December 31, 2018.

EMPLOYMENT AGREEMENTS

In recent years, we have not entered into employment agreements with employees other than our Chief Executive Officer and Chief Financial Officer. We have generally entered into employment agreements with employees only when the employee holds an executive officer position and we believe that an employment agreement is desirable for us to obtain a measure of assurance as to the executive's continued employment in light of prevailing market competition for the particular position held by the executive officer, or where we determine that an employment agreement is necessary and appropriate to attract an executive in light of market conditions, the prior experience of the executive or practices at ION with respect to other similarly situated employees.

The following discussion describes the material terms of our existing executive employment agreements with our executive officers:

R. Brian Hanson

In connection with his appointment as our President and Chief Executive Officer on January 1, 2012, Mr. Hanson entered into a new employment agreement. The agreement provides for Mr. Hanson to serve as our President and Chief Executive Officer for an initial term of three years, with automatic two-year renewals thereafter. Any change of control of our Company after January 1, 2013 will cause the remaining term of Mr. Hanson's employment agreement to adjust automatically to a term of three years, which will commence on the effective date of the change of control.

The agreement provides for Mr. Hanson to receive an initial base salary of \$450,000 per year and be eligible to receive an annual performance bonus under our incentive compensation plan, with a target incentive plan bonus amount equal to 75% of his base salary and with a maximum incentive plan bonus amount equal to 150% of his base salary.

Under the agreement, and as approved by the Compensation Committee, Mr. Hanson will be entitled to receive grants of (i) options to purchase shares of our Common Stock and (ii) shares of our restricted stock. Mr. Hanson will also be eligible to participate in other equity compensation plans that are established for our key executives, as approved by the Compensation Committee. In the agreement, we also agreed to indemnify Mr. Hanson to the fullest extent permitted by our Restated Certificate of Incorporation, as amended, and Bylaws, and to provide him coverage under our directors' and officers' liability insurance policies to the same extent as other company executives.

We may at any time terminate our employment agreement with Mr. Hanson for "Cause" if Mr. Hanson (i) willfully and continuously fails to substantially perform his obligations, (ii) willfully engages in conduct materially and demonstrably injurious to our property or business (including fraud, misappropriation of funds or other property, other willful misconduct, gross negligence or conviction of a felony or any crime involving moral turpitude) or (iii) commits a material breach of the agreement. In addition, we may at any time terminate the agreement if Mr. Hanson suffers permanent and total disability for a period of at least 180 consecutive days, or if Mr. Hanson dies. Mr. Hanson may terminate his employment agreement for "Good Reason" if we breach any material provision of the agreement, we assign to Mr. Hanson any duties materially inconsistent with his position, we materially reduce his duties, functions, responsibilities, budgetary or other authority, or take other action that results in a diminution in his office, position, duties, functions, responsibilities or authority, we relocate his workplace by more than 50 miles, or we elect not to extend the term of his agreement.

In his agreement, Mr. Hanson agrees not to compete against us, assist any competitor, attempt to solicit any of our suppliers or customers, or solicit any of our employees, in any case during his employment and for a period of two years after his employment ends. The employment agreement also contains provisions relating to protection of our confidential information and intellectual property. The agreement does not contain any tax gross-up benefits.

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For a discussion of the provisions of Mr. Hanson's employment agreement regarding compensation to Mr. Hanson in the event of a change of control affecting our Company or his termination by us without cause or by him for good reason, see " *Potential Payments Upon Termination or Change of Control R. Brian Hanson*" below.

Steven A. Bate

In connection with his appointment as our Executive Vice President and Chief Financial Officer on November 13, 2014, Mr. Bate entered into an employment agreement. The agreement provides for Mr. Bate to serve as our Executive Vice President and Chief Financial Officer for an initial term of three years, with automatic one-year renewals thereafter. Any change of control of our Company after November 13, 2015 will cause the remaining term of Mr. Bate's employment agreement to adjust automatically to a term of two years, which will commence on the effective date of the change of control.

The agreement provides for Mr. Bate to receive an initial base salary of \$375,000 per year and be eligible to receive an annual performance bonus under our incentive compensation plan, with a target incentive plan bonus amount equal to 50% of his base salary beginning in 2015.

Under the agreement, Mr. Bate will be entitled to receive grants of (i) options to purchase shares of our Common Stock and (ii) shares of our restricted stock. Mr. Bate will also be eligible to participate in other equity compensation plans that are established for our key executives, as approved by the Compensation Committee. In the agreement, we also agreed to indemnify Mr. Bate to the fullest extent permitted by our Restated Certificate of Incorporation, as amended, and Bylaws, and to provide him coverage under our directors' and officers' liability insurance policies to the same extent as other company executives.

We may at any time terminate our employment agreement with Mr. Bate for "Cause" if Mr. Bate (i) willfully and continuously fails to substantially perform his obligations, (ii) willfully engages in conduct materially and demonstrably injurious to our property or business (including fraud, misappropriation of funds or other property, other willful misconduct, gross negligence or conviction of a felony or any crime involving moral turpitude) or (iii) commits a material breach of the agreement. In addition, we may at any time terminate the agreement if Mr. Bate suffers permanent and total disability for a period of at least 180 consecutive days, or if Mr. Bate dies. Mr. Bate may terminate his employment agreement for "Good Reason" if we breach any material provision of the agreement, we assign to Mr. Bate any duties materially inconsistent with his position, we materially reduce his duties, functions, responsibilities, budgetary or other authority, or take other action that results in a diminution in his office, position, duties, functions, responsibilities or authority, or we relocate his workplace by more than 50 miles.

In his agreement, Mr. Bate agrees not to compete against us, assist any competitor, attempt to solicit any of our suppliers or customers, or solicit any of our employees, in any case during his employment and for a period of twelve months after his employment ends. The employment agreement also contains provisions relating to protection of our confidential information and intellectual property.

For a discussion of the provisions of Mr. Bate's employment agreement regarding compensation to Mr. Bate in the event of a change of control affecting our Company or his termination by us without cause or by him for good reason, see " *Potential Payments Upon Termination or Change of Control Steven A. Bate*" below.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

The following table sets forth information concerning unexercised stock options (including outstanding stock appreciation rights, or SARs) and shares of restricted stock held by our named executive officers at December 31, 2018:

	Option Awards(1)						Stock Awards(2)(3) Equity			
Name	Options (#)	Underlying	Options	Option Exercise Price	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested	Equity Incentive Plan Awards: Number of Unearned Shares, Units or other Rights That Have Not	Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not	
R. Brian Hanson	16,666	nexercisable	(#)	(\$) 106.05	9/1/2021	23,332	(\$)(3) 120,860	Vested (#) 180,000	Vested (\$) 932,400	
K Siai Raisoi	5,000 6,666 5,000 6,461 25,000	1,666 6,462 75,000 100,000(4)	53,557(4) 192,000(5)	89.40 57.90 61.05 34.20 3.10 3.10 8.85	12/1/2022 12/1/2023 3/1/2024 3/1/2025 3/1/2025 3/1/2026 3/1/2026 12/1/2028	23,332	120,000	100,000	752,100	
Steven A. Bate	5,000 3,333 2,333 2,499 4,000 4,423 25,000	834 1,475 25,000 50,000(4)	24,444(4)) 95,435(5)	95.85 95.85 57.90 61.05 37.05 34.20 3.10 3.10 8.85	6/1/2023 6/1/2023 12/1/2023 3/1/2024 12/1/2024 3/1/2025 3/1/2025 3/1/2026 12/1/2028	11,666	60,430	89,430	463,247	
Matthew R. Powers	333 333 375 1,250	125 3,750 36,000	3,334(4) 40,995(5)	71.85 57.90 61.05 3.10 3.10 13.15 8.85	9/1/2023 12/1/2023 3/1/2024 3/1/2026 3/1/2026 12/1/2027 12/1/2028	8,666	44,890	38,443	199,135	
Christopher T. Usher	3,333 4,000 3,000 1,415 6,250	1,000 1,415 18,750 50,000(4)	11,728(4)) 95,435(5)	89.40 57.90 61.05 34.20 34.20 3.10 3.10 8.85	12/1/2022 12/1/2023 3/1/2024 3/1/2025 3/1/2025 3/1/2026 3/1/2026 12/1/2028	4,599	23,823	89,430	463,247	
Kenneth G. Williamson	3,333 1,466 5,000 2,333			42.45 81.60 68.70 107.85	6/1/2019 12/1/2019 3/1/2020 12/1/2020	5,833	30,215	89,430	463,247	

3,333			87.15	12/1/2021
3,333			89.40	12/1/2022
4,000			57.90	12/1/2023
3,000	1,000		61.05	3/1/2024
3,500	3,501		34.20	3/1/2025
		29,013(4)	34.20	3/1/2025
8,750	26,250		3.10	3/1/2026
	50,000(4)		3.10	3/1/2026
		95,435(5)	8.85	12/1/2028

(1)
All stock option information in this table relates to nonqualified stock options granted under either our 2004 LTIP or 2013 LTIP. All of the unvested options in this table vest, if at all, 25% each year over a four-year period, generally contingent on continued employment of the grantee (with certain exceptions that allow earlier vesting such as in the event of death, disability, or retirement of the grantee or a change in control of the Company's ownership).

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- The amounts shown represent shares of restricted stock granted under our 2013 LTIP or our 2018 LTIP. While unvested, the holder is entitled to the same voting rights as all other holders of Common Stock. All of the restricted stock awards are subject to the time-based vesting restrictions, and the restricted stock awards made in December 2018 are additionally subject to the performance-based vesting restrictions, described in footnote (2) of the preceding table " 2018 GRANTS OF PLAN-BASED AWARDS".
- Pursuant to SEC rules, the market value of each executive's shares of unvested restricted stock was calculated by multiplying the number of shares by \$5.18 (the closing price per share of our Common Stock on the NYSE on December 31, 2018).
- The amounts shown reflect awards of cash-settled SARs granted on March 1, 2015 and March 1, 2016 under our 2008 Stock Appreciation Rights Plan ("2008 SAR Plan"). The vesting of the SARs is achieved through both a market condition and a service condition. The market condition is achieved, in part or in full, in the event that during the four-year period beginning on the date of grant the 20-day trailing volume-weighted average price per share of our Common Stock is (i) greater than 120% of the exercise price for the first 1/3 of the awards, (ii) greater than 125% of the exercise price for the second 1/3 of the awards and (iii) greater than 130% of the exercise price for the final 1/3 of the awards. (The market condition has been achieved for the 2016 grants, but not the 2015 grants.) The exercise condition restricts the ability of the holders to exercise awards until certain service milestones have been reached such that (i) no more than 1/3 of the awards may be exercised, if vested, on and after the first anniversary of the date of grant (except with respect to the March 1, 2016 SARs, the vesting dates of which were accelerated as set forth in the " Compensation Discussion and Analysis" above) and (iii) all of the awards may be exercised, if vested, on and after the third anniversary of the date of grant.
- (5)
 The amounts shown reflect awards of cash-settled SARs granted on December 1, 2018 under our 2018 SAR Plan. The vesting of the SARs is subject to the time-based and performance based restrictions described in footnote (3) of the preceding table " 2018 GRANTS OF PLAN-BASED AWARDS".

2018 OPTION EXERCISES AND STOCK VESTED

The following table sets forth certain information with respect to option and stock exercises by the named executive officers during the year ended December 31, 2018:

	Option	Awards	Stock A	Awards
	Number of Shares Acquired on	Value Realized on	Number of Shares Acquired on	Value Realized on
Name	Exercise (#)	Exercise (\$)(1)	Vesting (#)	Vesting (\$)(2)
R. Brian Hanson(3)	50,000	987,500	30,602	815,065
Steven A. Bate(4)			24,884	660,188
Matthew R. Powers(5)			4,908	62,298
Christopher T. Usher(6)			11,833	310,349
Ken Williamson(7)			16,224	428,883

- (1)

 The value realized upon the exercise of the non-qualified stock options (the "NQSOs") was calculated by (a) subtracting \$3.10 (the NQSOs' exercise price) from \$22.85 (the closing price per share of our Common Stock on June 22, 2018 the date of exercise) to get the realized value per share, and (b) multiplying the realized value per share by the number of shares underlying NQSOs exercised.
- (2)

 The values realized upon vesting of stock awards contained in the table are based on the market value of our Common Stock on the date of vesting.
- The value realized by Mr. Hanson on the vesting of his restricted stock awards was calculated by multiplying (a) 16,666 shares by \$28.45 (the closing price per share of our Common Stock on March 1, 2018, the vesting date), (b) 7,270 shares by \$24.75 (the closing price per share of our Common Stock on May 30, 2018, the vesting date) and (c) 6,666 shares by \$24.15 (the closing price per share of our Common Stock on June 1, 2018, the vesting date).
- The value realized by Mr. Bate on the vesting of his restricted stock awards was calculated by multiplying (a) 12,516 shares by \$28.45 (the closing price per share of our Common Stock on March 1, 2018, the vesting date); (b) 9,035 shares by \$24.75 (the closing price per share of our Common Stock on May 30, 2018, the vesting date) and (c) 3,333 shares by \$24.15 (the closing price per share of our Common Stock on June 1, 2018, the vesting date).
- The value realized by Mr. Powers on the vesting of his restricted stock awards was calculated by multiplying (a) 666 shares by \$28.45 (the closing price per share of our Common Stock on March 1, 2018, the vesting date), (b) 242 shares by \$24.75 (the closing price per share of our Common Stock on May 30, 2018, the vesting date) and (c) 4,000 shares by \$9.34 (the closing price per share of our Common Stock on December 3, 2018, the first business day after the vesting date).
- (6)
 The value realized by Mr. Usher on the vesting of his restricted stock awards was calculated by multiplying (a) 4,795 shares by \$28.45 (the closing price per share of our Common Stock on March 1, 2018, the vesting date), (b) 6,605 shares by \$24.75 (the closing price per share of our Common Stock on May 30, 2018, the vesting date and (c) 433 shares by \$24.15 (the closing price per share of our Common Stock on June 1, 2018, the vesting date).
- (7)
 The value realized by Mr. Williamson on the vesting of his restricted stock awards was calculated by multiplying (a) 7,389 shares by \$28.45 (the closing price per share of our Common Stock on March 1, 2018, the vesting date) and (b) 8,835 shares by \$24.75 (the closing price per share of our Common Stock on May 30, 2018, the vesting date).

POTENTIAL PAYMENTS UPON TERMINATION OR CHANGE OF CONTROL

Under the terms of our equity-based compensation plans and our employment agreements, our Chief Executive Officer and certain of our other named executive officers are entitled to payments and benefits upon the occurrence of specified events including termination of employment (with and without cause) and upon a change in control of our Company. The specific terms of these arrangements, as well as an estimate of the compensation that would have been payable had they been triggered as of December 31, 2018, are described in detail below. In the case of each employment agreement, the terms of these arrangements were established through the course of arms-length negotiations with each executive officer, both at the time of hire and at the times of any later amendment. As part of these negotiations, the Compensation Committee analyzed the terms of the same or similar arrangements for comparable executives employed by companies in our industry group. This approach was used by the committee in setting the amounts payable and the triggering events under the arrangements. The termination of employment provisions of the employment agreements were entered into in order to address competitive concerns by providing those individuals with a fixed amount of compensation that would offset the potential risk of leaving their prior employer or foregoing other opportunities in order to join our Company. At the time of entering into these arrangements, the Compensation Committee considered the aggregate potential obligations of our Company in the context of the desirability of hiring the individual and the expected compensation upon joining us. However, these contractual severance and post-termination arrangements have not affected the decisions the Compensation Committee has made regarding other compensation elements and the rationale for compensation decisions made in connection with these arrangements.

The following summaries set forth estimated potential payments payable to each of our named executive officers upon termination of employment or a change of control of our Company under their current employment agreements and our stock plans and other compensation programs as if his employment had so terminated for these reasons, or the change of control had so occurred, on December 31, 2018. The Compensation Committee may, in its discretion, agree to revise, amend or add to the benefits if it deems advisable. For purposes of the following summaries, dollar amounts are estimates based on annual base salary as of December 31, 2018, benefits paid to the named executive officer in fiscal 2018 and stock and option holdings of the named executive officer as of December 31, 2018. The summaries assume a price per share of ION Common Stock of \$5.18 per share, which was the closing price per share on December 31, 2018, as reported on the NYSE. The actual amounts to be paid to the named executive officers can only be determined at the time of each executive's separation from the Company.

The amounts of potential future payments and benefits as set forth in the tables below, and the descriptions of the assumptions upon which such future payments and benefits are based and derived, may constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are estimates of payments and benefits to certain of our executives upon their termination of employment or a change in control, and actual payments and benefits may vary materially from these estimates. Actual amounts can only be determined at the time of such executive's actual separation from our Company or the time of such change in control event. Factors that could affect these amounts and assumptions include the timing during the year of any such event, the price of our Common Stock, unforeseen future changes in our Company's benefits and compensation methodology and the age of the executive.

R. Brian Hanson

Termination and Change of Control. Mr. Hanson is entitled to certain benefits under his employment agreement upon the occurrence of any of the following events:

we terminate his employment other than for cause, death or disability;

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Mr. Hanson resigns for "good reason"; or

a "change in control" involving our Company occurs and, within 12 months following the change in control, (a) we or our successor terminate Mr. Hanson's employment or (b) Mr. Hanson terminates his employment after we or our successor (i) elect not to extend the term of his employment agreement, (ii) assign to Mr. Hanson duties inconsistent with his CEO position, duties, functions, responsibilities, authority or reporting relationship to the Board under his employment agreement, (iii) become a privately-owned company as a result of a transaction in which Mr. Hanson does not participate within the acquiring group, (iv) are rendered a subsidiary or division or other unit of another company; or (v) take any action that would constitute "good reason" under his employment agreement.

Under Mr. Hanson's employment agreement, a "change in control" occurs upon any of the following (which we refer to in this section as an "Employment Agreement Change of Control"):

- (1) the acquisition by a person or group of beneficial ownership of 40% or more of our outstanding shares of Common Stock other than any acquisitions directly from ION, acquisitions by ION or an employee benefit plan maintained by ION, or certain permitted acquisitions in connection with a "Merger" (as defined in sub-paragraph (3) below);
- changes in directors on our board of directors such that the individuals that constitute the entire board cease to constitute at least a majority of directors of the board, other than new directors whose appointment or nomination for election was approved by a vote of at least a majority of the directors then constituting the entire board of directors (except in the case of election contests);
- consummation of a "Merger" that is, a reorganization, merger, consolidation or similar business combination involving ION unless (i) owners of ION Common Stock immediately following such business combination together own more than 50% of the total outstanding stock or voting power of the entity resulting from the business combination in substantially the same proportion as their ownership of ION voting securities immediately prior to such Merger and (ii) at least a majority of the members of the board of directors of the corporation resulting from such Merger (or its parent corporation) were members of our board of directors at the time of the execution of the initial agreement providing for the Merger; or
- (4) the sale or other disposition of all or substantially all of our assets.

Upon the occurrence of any of the above events and conditions, Mr. Hanson would be entitled to receive the following (less applicable withholding taxes and subject to compliance with non-compete, non-solicit and no-hire obligations):

over a two-year period, a cash amount equal to two times his annual base salary and two times his target bonus amount in effect for the year of termination;

a prorated portion of any unpaid target incentive plan bonus for the year of termination; and

continuation of insurance coverage for Mr. Hanson as of the date of his termination for a period of two years at the same cost to him as prior to the termination.

In addition, upon the occurrence of any of the above events or conditions, the vesting period for all of Mr. Hanson's unvested equity awards granted on or after January 1, 2012 having a remaining vesting period of two years or less as of the date of termination will immediately accelerate to vest in full. In such event, all restrictions on the awards will thereupon be immediately lifted and the exercise period of all outstanding vested stock options (including the option awards that have been so accelerated) granted on or after January 1, 2012 will continue in effect until the earlier of (a) two years

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after the date of termination or (b) the expiration of the full original term, as specified in each applicable stock option agreement.

We believe the double-trigger change-of-control benefit referenced above maximizes shareholder value because it motivates Mr. Hanson to remain in his position for a sufficient period of time following a change of control to ensure a smoother integration and transition for the new owners. Given his experience with our Company and within the seismic industry as our CFO and CEO, we believe Mr. Hanson's severance structure is in our best interest because it ensures that for a two-year period after leaving our employment, Mr. Hanson will not be in a position to compete against us or otherwise adversely affect our business.

Change of Control Under Equity Compensation Plans. Mr. Hanson and our other named executive officers currently hold outstanding awards under one or more of the following five equity compensation plans: our 2004 LTIP, our 2013 LTIP, our 2018 LTIP, our 2008 SAR Plan and our 2018 SAR Plan. Under these plans, a "change of control" will be deemed to have occurred upon any of the following (which we refer to in this section as a "Plan Change of Control"):

- the acquisition by a person or group of beneficial ownership of 40% or more of the outstanding shares of Common Stock other than acquisitions directly from ION, acquisitions by ION or an employee benefit plan maintained by ION, or certain permitted acquisitions in connection with a business combination described in sub-paragraph (3) below;
- changes in directors such that the individuals that constitute the entire board of directors cease to constitute at least a majority of directors of the board, other than new directors whose appointment or nomination for election was approved by a vote of at least a majority of the directors then constituting the entire board of directors (except in the case of election contests);
- consummation of a reorganization, merger, consolidation or similar business combination involving ION, unless (i) owners of our Common Stock immediately following such transaction together own more than 50% of the total outstanding stock or voting power of the entity resulting from the transaction and (ii) at least a majority of the members of the board of directors of the entity resulting from the transaction were members of our board of directors at the time the agreement for the transaction is signed; or
- (4) the sale of all or substantially all of our assets.

Upon any such "Plan Change of Control," all of Mr. Hanson's stock options granted to him under the 2013 LTIP and the 2018 LTIP will become fully exercisable, all unvested restricted stock awards granted to him under the 2013 LTIP will automatically accelerate and become fully vested, and all unvested stock appreciation rights granted to him under the 2008 SAR Plan and the 2018 SAR Plan will become fully exercisable.

Death, Disability or Retirement. Upon his death or disability, all unvested options, restricted stock and stock appreciation rights that Mr. Hanson holds would automatically accelerate and become fully vested. Upon his retirement, all unvested options and stock appreciation rights that Mr. Hanson holds would automatically accelerate and become fully vested. No unvested shares of restricted stock held by Mr. Hanson would automatically accelerate and become fully vested upon his retirement.

Termination by Us for Cause or by Mr. Hanson Other Than for Good Reason. Upon any termination by us for cause or any resignation by Mr. Hanson for any reason other than for "good reason" (as defined in his employment agreement), Mr. Hanson is not entitled to any payment or benefit other than the payment of unpaid salary and possibly accrued and unused vacation pay.

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Mr. Hanson's currently-held vested stock options and stock appreciation rights will remain exercisable after his termination of employment, death, disability or retirement for periods of between three months and one year following such event, depending on the event and the terms of the applicable plan and grant agreement. If Mr. Hanson is terminated for cause, all of his vested and unvested stock options, unvested restricted stock, and vested and unvested stock appreciation rights will be immediately forfeited. We have not agreed to provide Mr. Hanson any additional payments in the event any payment or benefit under his employment agreement is determined to be subject to the excise tax for "excess parachute payments" under U.S. federal income tax rules, or any other "tax gross-ups" under this employment agreement.

Assuming Mr. Hanson's employment was terminated under each of these circumstances or a change of control occurred on December 31, 2018, his payments and benefits would have an estimated value as follows (less applicable withholding taxes):

Scenario	Cash Severance (\$)(1)	Bonus (\$)(2)	Insurance Continuation (\$)(3)	Tax Gross-Ups (\$)	Value of Accelerated Equity Awards (\$)(4)
Without Cause or For Good Reason	1,200,000	1,200,000	35,104	(+)	(+)(-)
Termination after change in control	1,200,000	1,200,000	35,104		1,365,260
Change of Control (if not terminated), Death or					
Disability					1,365,260
Retirement					312,000
Voluntary Termination					

- Payable over a two-year period. In addition to the listed amounts, if Mr. Hanson resigns or his employment is terminated for any reason, he may be paid for his unused vacation days. Mr. Hanson is currently entitled to accrue up to 25 vacation days per year. The above table assumes that there is no earned but unpaid base salary as of the time of termination.
- (2)

 Represents two times the estimate of the target bonus payment Mr. Hanson would be entitled to receive pursuant to our 2018 bonus incentive plan. The actual bonus payment he would be entitled to receive upon his termination may be different from the estimated amount, depending on the achievement of payment criteria under the bonus plan.
- (3)

 The value of insurance continuation contained in the above table is the total cost of COBRA continuation coverage for Mr. Hanson, maintaining his same levels of medical, dental and other insurance as in effect on December 31, 2018, less the amount of premiums to be paid by Mr. Hanson for such coverage.
- As of December 31, 2018, Mr. Hanson held 203,332 unvested shares of restricted stock, unvested stock options to purchase 53,231 shares of Common Stock and 345,557 unvested cash-settled stock appreciation rights. The value of accelerated unvested options was calculated by multiplying 50,000 shares underlying Mr. Hanson's unvested options by \$5.18 (the closing price per share on December 31, 2018) and then deducting the aggregate exercise price for those shares (equal to \$3.10 per share for those 50,000 options). The options having an exercise price greater than \$5.18 per share were calculated as having a zero value. The value of the restricted stock that would accelerate and fully vest in the event of a Change in Control, death or disability was calculated by multiplying 203,332 shares by \$5.18. The value of accelerated unvested stock appreciation rights was calculated by multiplying 100,000 shares by \$5.18 and then deducting the settlement price of \$3.10. Stock appreciation rights having an exercise price greater than \$5.18 were calculated as having a zero value.

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Steven A. Bate

Termination and Change of Control. Mr. Bate is entitled to certain benefits under his employment agreement upon the occurrence of any of the following events:

we terminate his employment other than for cause, death or disability;

Mr. Bate resigns for "good reason"; or

an "Employment Agreement Change of Control" (see " *R. Brian Hanson Termination and Change of Control*" above) involving our Company occurs and, within 12 months following the change in control, (a) we or our successor terminate Mr. Bate's employment or (b) Mr. Bate terminates his employment after we or our successor (i) elect not to extend the term of his employment agreement, (ii) assign to Mr. Bate duties inconsistent with his CFO position, duties, functions, responsibilities, authority or reporting relationship to the Board under his employment agreement, (iii) become a privately-owned company as a result of a transaction in which Mr. Bate does not participate within the acquiring group, (iv) are rendered a subsidiary or division or other unit of another company; or (v) take any action that would constitute "good reason" under his employment agreement.

Upon the occurrence of any of the above events and conditions, Mr. Bate would be entitled to receive the following (less applicable withholding taxes and subject to compliance with non-compete, non-solicit and no-hire obligations):

over a two-year period, a cash amount equal to two times his annual base salary in effect for the year of termination;

a prorated portion of any unpaid target incentive plan bonus for the year of termination; and

continuation of insurance coverage for Mr. Bate as of the date of his termination for a period of eighteen months at the same cost to him as prior to the termination.

Change of Control Under Equity Compensation Plans. Upon a "Plan Change of Control", (see " R. Brian Hanson Change of Control Under Equity Compensation Plans" above), all of Mr. Bate's stock options granted to him under the 2013 LTIP will become fully exercisable, all unvested restricted stock awards granted to him under the 2013 LTIP and the 2018 LTIP will automatically accelerate and become fully vested, and all unvested stock appreciation rights granted to him under the 2008 SAR Plan and the 2018 SAR Plan will become fully exercisable. In addition, any change of control of our Company will cause the remaining term of Mr. Bate's employment agreement to adjust automatically to two years, commencing on the effective date of the change of control.

Upon his death or disability, all unvested options, restricted stock and stock appreciation rights that Mr. Bate holds would automatically accelerate and become fully vested. Upon his retirement, all unvested options and stock appreciation rights that Mr. Bate holds would automatically accelerate and become fully vested. No unvested shares of restricted stock held by Mr. Bate would automatically accelerate and become fully vested upon his retirement.

Upon any termination by us for cause or any resignation by Mr. Bate for any reason other than for "good reason" (as defined in his employment agreement), Mr. Bate is not entitled to any payment or benefit other than the payment of unpaid salary and possibly accrued and unused vacation pay.

Mr. Bate's currently-held vested stock options and stock appreciation rights will remain exercisable after his termination of employment, death, disability or retirement for periods of between three months and one year following such event, depending on the event and the terms of the applicable plan and grant agreement. If Mr. Bate is terminated for cause, all of his vested and unvested stock options, unvested restricted stock, and vested and unvested stock appreciation rights will be immediately forfeited.

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Assuming Mr. Bate employment was terminated under each of these circumstances or a change of control occurred on December 31, 2018, his payments and benefits would have an estimated value as follows (less applicable withholding taxes):

Scenario	Cash Severance (\$)(1)	Bonus (\$)(2)	Insurance Continuation (\$)(3)	Value of Accelerated Equity Awards (\$)(4)
Without Cause or For Good Reason	750,000		18,334	
Termination after change in control	750,000		18,334	679,677
Change of Control (if not terminated), Death or Disability				679,677
Retirement				156,000
Voluntary Termination				

- Payable over a two-year period. In addition to the listed amounts, if Mr. Bate resigns or his employment is terminated for any reason, he may be paid for his unused vacation days. Mr. Bate is currently entitled to accrue up to 30 vacation days per year. The above table assumes that there is no earned but unpaid base salary as of the time of termination.
- (2)

 The actual bonus payment he would be entitled to receive upon his termination may be different from the estimated amount, depending on the achievement of payment criteria under the bonus plan.
- The value of insurance continuation contained in the above table is the total cost of COBRA continuation coverage for Mr. Bate, maintaining his same levels of medical, dental and other insurance as in effect on December 31, 2018, less the amount of premiums to be paid by Mr. Bate for such coverage.
- As of December 31, 2018, Mr. Bate held 101,096 unvested shares of restricted stock, unvested stock options to purchase 26,475 shares of Common Stock and 169,879 unvested cash-settled stock appreciation rights. The value of accelerated unvested options was calculated by multiplying 25,000 shares underlying Mr. Bate's unvested options by \$5.18 (the closing price per share on December 31, 2018) and then deducting the aggregate exercise price for those shares (equal to \$3.10 per share for those 25,000 options). The options having an exercise price greater than \$5.18 per share were calculated as having a zero value. The value of the restricted stock that would accelerate and fully vest in the event of a Change in Control, death or disability was calculated by multiplying 101,096 shares by \$5.18. The value of accelerated unvested stock appreciation rights was calculated by multiplying 50,000 shares by \$5.18 and then deducting the settlement price of \$3.10. Stock appreciation rights having an exercise price greater than \$5.18 per share were calculated as having a zero value.

Matthew R. Powers

Mr. Powers is not entitled to receive any contractual severance pay if we terminate his employment without cause. Upon a "Plan Change of Control" (see " R. Brian Hanson Change of Control Under Equity Compensation Plans" above), all of his unvested stock options granted to him under the 2013 LTIP will become fully exercisable, all unvested restricted stock awards granted to him under the 2013 LTIP and the 2018 LTIP will automatically accelerate and become fully vested, and all unvested stock appreciation rights granted to him under the 2008 SAR Plan and the 2018 SAR Plan will become fully exercisable. Upon his death or disability, all unvested options, restricted stock and stock appreciation rights that Mr. Powers holds would automatically accelerate and become fully vested. Upon his retirement, all unvested options and stock appreciation rights that Mr. Powers holds would

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automatically accelerate and become fully vested. No shares of unvested restricted stock held by Mr. Powers would automatically accelerate and become fully vested upon his retirement.

The vested stock options and stock appreciation rights held by Mr. Powers will remain exercisable after his termination of employment, death, disability or retirement for periods of between three months and one year following such event, depending on the event and the terms of the applicable stock plan and grant agreement. If Mr. Powers is terminated for cause, all of his vested and unvested stock options, unvested restricted stock, and vested and unvested stock appreciation rights will be immediately forfeited.

Assuming his employment was terminated under each of these circumstances or a change of control occurred on December 31, 2018, his payments and benefits would have an estimated value as follows (less applicable withholding taxes):

Scenario	Cash Severance (\$)(1)	Value of Accelerated Equity Awards (\$)(2)
Without Cause		
Change of Control (regardless of termination), Death or Disability		256,159
Retirement		12,135
Voluntary Termination		

Voluntary Termination

- (1)

 If Mr. Powers resigns or his employment is terminated for any reason, he may be paid for his unused vacation days. Mr. Powers is currently entitled to accrue up to 25 vacation days per year. The above table assumes that there is no earned but unpaid base salary as of the time of termination.
- As of December 31, 2018, Mr. Powers held 47,109 unvested shares of restricted stock, unvested stock options to purchase 29,500 shares of Common Stock and 44,329 unvested cash-settled stock appreciation rights. The value of accelerated unvested options was calculated by multiplying 2,500 shares underlying Mr. Powers' unvested options by \$5.18 (the closing price per share on December 31, 2018) and then deducting the aggregate exercise price for those shares (equal to \$3.10 per share for 2,500 options). The options having an exercise price greater than \$5.18 per share were calculated as having a zero value. The value of the restricted stock that would accelerate and fully vest in the event of a Change in Control, death or disability was calculated by multiplying 47,109 shares by \$5.18. The value of accelerated unvested stock appreciation rights was calculated by multiplying 3,334 shares by \$5.18 and then deducting the settlement price of \$3.10. Stock appreciation rights having an exercise price greater than \$5.18 per share were calculated as having a zero value.

Christopher T. Usher

Mr. Usher is not entitled to receive any contractual severance pay if we terminate his employment without cause. Upon a "Plan Change of Control" (see " *R. Brian Hanson Change of Control Under Equity Compensation Plans*" above), all of his unvested stock options granted to him under the 2013 LTIP will become fully exercisable, all restricted stock awards granted to him under the 2013 LTIP and the 2018 LTIP will automatically accelerate and become fully vested, and all unvested stock appreciation rights granted to him under the 2008 SAR Plan and the 2018 SAR Plan will become fully exercisable. Upon his death or disability, all unvested options, restricted stock and stock appreciation rights that Mr. Usher holds would automatically accelerate and become fully vested. Upon his

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retirement, all unvested options and stock appreciation rights that Mr. Usher holds would automatically accelerate and become fully vested. No unvested shares of restricted stock held by Mr. Usher would automatically accelerate and become fully vested upon his retirement.

The vested stock options and stock appreciation rights held by Mr. Usher will remain exercisable after his termination of employment, death, disability or retirement for periods of between three months and one year following such event, depending on the event and the terms of the applicable stock plan and grant agreement. If Mr. Usher is terminated for cause, all of his vested and unvested stock options, unvested restricted stock, and vested and unvested stock appreciation rights will be immediately forfeited.

Assuming his employment was terminated under each of these circumstances or a change of control occurred on December 31, 2018, his payments and benefits would have an estimated value as follows (less applicable withholding taxes):

Scenario	Cash Severance (\$)(1)	Value of Accelerated Equity Awards (\$)(2)
Without Cause	(1)()	(1)(1)
Change of Control (regardless of termination), Death or Disability		617,070
Retirement		130,000
Voluntary Termination		

- (1)

 If Mr. Usher resigns or his employment is terminated for any reason, he may be paid for his unused vacation days. Mr. Usher is currently entitled to accrue up to 25 vacation days per year. The above table assumes that there is no earned but unpaid base salary as of the time of termination.
- As of December 31, 2018, Mr. Usher held 94,029 unvested shares of restricted stock, unvested stock options to purchase 13,208 shares of Common Stock and 157,163 unvested cash-settled stock appreciation rights. The value of accelerated unvested options was calculated by multiplying 12,500 shares underlying Mr. Usher's unvested options by \$5.18 (the closing price per share on December 31, 2018) and then deducting the aggregate exercise price for those shares (equal to \$3.10 per share for those 12,500 options). The options having an exercise price greater than \$5.18 per share were calculated as having a zero value. The value of the restricted stock that would accelerate and fully vest in the event of a Change in Control, death or disability was calculated by multiplying 94,029 shares by \$5.18. The value of accelerated unvested stock appreciation rights was calculated by multiplying 50,000 shares by \$5.18 and then deducting the settlement price of \$3.10. Stock appreciation rights having an exercise price greater than \$5.18 per share were calculated as having a zero value.

Kenneth G. Williamson

Mr. Williamson is not entitled to receive any contractual severance pay if we terminate his employment without cause. Upon a "Plan Change of Control" (see " *R. Brian Hanson Change of Control Under Equity Compensation Plans*" above), all of his unvested stock options granted to him under the 2013 LTIP will become fully exercisable, all unvested restricted stock awards granted to him under the 2013 LTIP and the 2018 LTIP will automatically accelerate and become fully vested, and all unvested stock appreciation rights granted to him under the 2008 SAR Plan and the 2018 SAR Plan will become fully exercisable. Upon his death or disability, all unvested options, restricted stock and

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stock appreciation rights that Mr. Williamson holds would automatically accelerate and become fully vested. Upon his retirement, all unvested options and stock appreciation rights that Mr. Williamson holds would automatically accelerate and become fully vested. No unvested shares of restricted stock held by Mr. Williamson would automatically accelerate and become fully vested upon his retirement.

The vested stock options and stock appreciation rights held by Mr. Williamson will remain exercisable after his termination of employment, death, disability or retirement for periods of between three months and one year following such event, depending on the event and the terms of the applicable stock plan and grant agreement. If Mr. Williamson is terminated for cause, all of his vested and unvested stock options, unvested restricted stock, and vested and unvested stock appreciation rights will be immediately forfeited.

Assuming his employment was terminated under each of these circumstances or a change of control occurred on December 31, 2018, his payments and benefits would have an estimated value as follows (less applicable withholding taxes):

Scenario	Cash Severance (\$)(1)	Value of Accelerated Equity Awards (\$)(2)
Without Cause		
Change of Control (regardless of termination), Death or Disability		633,862
Retirement		140,400
Voluntary Termination		

- (1)

 If Mr. Williamson resigns or his employment is terminated for any reason, he may be paid for his unused vacation days.

 Mr. Williamson is currently entitled to accrue up to 25 vacation days per year. The above table assumes that there is no earned but unpaid base salary as of the time of termination.
- As of December 31, 2018, Mr. Williamson held 95,263 unvested shares of restricted stock, unvested stock options to purchase 19,251 shares of Common Stock and 174,448 unvested cash-settled stock appreciation rights. The value of accelerated unvested options was calculated by multiplying 17,500 shares underlying Mr. Williamson's unvested options by \$5.18 (the closing price per share on December 31, 2018) and then deducting the aggregate exercise price for those shares (equal to \$3.10 per share for those 17,500 options). The options having an exercise price greater than \$5.18 per share were calculated as having a zero value. The value of the restricted stock that would accelerate and fully vest in the event of a Change in Control, death or disability was calculated by multiplying 95,263 shares by \$5.18. The value of accelerated unvested stock appreciation rights was calculated by multiplying 50,000 shares by \$5.18 and then deducting the settlement price of \$3.10. Stock appreciation rights having an exercise price greater than \$5.18 per share were calculated as having a zero value.

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2018 PENSION BENEFITS AND NONQUALIFIED DEFERRED COMPENSATION

None of our named executive officers participates or has account balances in (i) any qualified or non-qualified defined benefit plans or (ii) any non-qualified defined contribution plans or other deferred compensation plans maintained by us.

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EQUITY COMPENSATION PLAN INFORMATION (as of December 31, 2018)

The following table provides certain information regarding our equity compensation plans under which equity securities are authorized for issuance, categorized by (i) the equity compensation plans previously approved by our shareholders and (ii) the equity compensation plans not previously approved by our shareholders:

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights (b)	Equity Compensation Plans (Excluding
Equity Compensation Plans Approved by Shareholders	· ·	, ,	, ,
2004 Long-Term Incentive Plan ("2004 LTIP")	263,674	\$ 79.57	1
Third Amended and Restated 2013 Long-Term Incentive Plan ("2018			
LTIP")	522,216	\$ 12.99	732,720
2010 Employee Stock Purchase Plan ("2010 ESPP")			47,241
Subtotal	785,890		779,961
Equity Compensation Plans Not Approved by Shareholders			
Subtotal			
Total	785,890		779,961

A description of our Stock Appreciation Rights Plans has not been provided in this sub-section because awards of SARs made under those plans may be settled only in cash.

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CEO PAY RATIO DISCLOSURE

As required by Item 402(u) of Regulation S-K, we are providing the following information about the relationship of the median of the annual total compensation of Mr. R. Brian Hanson, our Chief Executive Officer (our "CEO"):

For 2018, our last completed fiscal year:

the median of the annual total compensation of all employees of our company (other than our CEO), was \$95,487; and

the annual total compensation of our CEO was \$3,340,009.

Based on this information, for 2018, the ratio of the annual total compensation of Mr. R. Brian Hanson, our Chief Executive Officer, to the median of the annual total compensation of all employees was 35 to 1.

The "median employee" that was used for purposes of calculating the ratio of the annual total compensation of our CEO to the median of the annual total compensation of all employees is the same employee that was identified for purposes of our 2018 disclosure. There has been no change in our employee population or employee compensation arrangements since that median employee was identified that we believe would significantly impact our pay ratio disclosure.

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ITEM 2 ADVISORY (NON-BINDING) VOTE TO APPROVE EXECUTIVE COMPENSATION

As required by Section 14A of the Exchange Act, we are asking our shareholders to approve, on an advisory basis, the compensation of our named executive officers as we have described it in the "Executive Compensation" section of this Proxy Statement. This advisory vote is sometimes referred to as "Say on Pay." While this vote is not binding on our Company, management and the Compensation Committee will review the voting results for purposes of obtaining information regarding investor sentiment about our executive compensation philosophy, policies and practices. If there are a significant number of negative votes, we will seek to understand the concerns that influenced the negative votes, and consider them in making decisions about our executive compensation programs in the future. At our 2018 Annual Meeting, our shareholders approved our non-binding advisory vote to approve the compensation of our named executive officers, with approximately 99% of the votes cast on the proposal voting in favor of its approval.

We believe that the information we have provided within the Executive Compensation section of this Proxy Statement demonstrates that our executive compensation program is designed appropriately and is working to ensure management's interests are aligned with our shareholders' interests to support long-term value creation. As described above in detail under " *Compensation Discussion and Analysis*," our compensation program reflects a balance of short-term incentives (including performance-based cash bonus awards), long-term incentives (including equity awards that vest over up to four years), and protective measures, such as clawback and anti-hedging policies and stock ownership guidelines, that are designed to support our long-term business strategies and drive creation of shareholder value. We believe that our program is (i) aligned with the competitive market for talent, (ii) sensitive to our financial performance and (iii) oriented to long-term incentives, in order to maintain and improve our long-term profitability. We believe our program delivers reasonable pay that is strongly linked to our performance over time relative to peer companies and rewards sustained performance that is aligned with long-term shareholder interests. Our executive compensation program is also designed to attract and to retain highly-talented executive officers who are critical to the successful implementation of our Company's strategic business plan.

We routinely evaluate the individual elements of our compensation program in light of market conditions and governance requirements and make changes as appropriate for our business. For example, in 2009 and in 2015 we reduced base salaries for most company employees, with the largest reductions borne by our executives, including our named executive officers. In addition, our employment contract with our Chief Executive Officer does not contain tax gross-ups or single trigger change of control provisions. We are continuously seeking to improve our executive compensation programs and align our programs with shareholder interests. We believe that our executive compensation program continues to drive and promote superior financial performance for our Company and our shareholders over the long term through a variety of business conditions.

We have regularly sought approval from our shareholders regarding portions of our compensation program that we have used to motivate, retain and reward our executives. Since 2000, our shareholders have voted on and approved our equity compensation plans (and amendments to those plans) fourteen times, in addition to approving our overall executive compensation program for each of the last eight years. Those incentive plans make up a significant portion of the overall compensation that we provide to our executives. Over the years, we have made numerous changes to our executive compensation program in response to shareholder input. Because the vote is advisory, however, it will not be binding upon our Board or the Compensation Committee, and neither our Board nor the Compensation Committee will be required to take any action as a result of the outcome of the vote on this proposal. The Compensation Committee will carefully evaluate the outcome of the vote when considering future executive compensation arrangements. After our Annual Meeting in May 2019, our next say-on-pay vote will occur at our next Annual Meeting scheduled to be held in May 2020.

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Accordingly, our Board strongly endorses the Company's executive compensation program and recommends that shareholders vote in favor of the following advisory resolution:

RESOLVED, that the shareholders approve the compensation paid to the named executive officers of the Company, pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the compensation discussion and analysis, the compensation tables and any related material disclosed in the Company's Proxy Statement for the 2019 Annual Meeting of Shareholders.

We encourage our shareholders to review closely the Compensation Discussion and Analysis, the accompanying compensation tables and the related narrative disclosure before voting on this proposal. The Compensation Discussion and Analysis describes and explains our executive compensation policies and practices and the process that was used by the Compensation Committee of our Board to reach its decisions on the compensation of our named executive officers for 2018. It also contains a discussion and analysis of each of the primary components of our executive compensation program base salary, annual cash incentive awards and long-term incentive awards and the various post-employment arrangements that we have entered into with certain of our named executive officers.

The Board recommends that shareholders vote "FOR" the advisory (non-binding) vote to approve the compensation of our named executive officers, as described in this Proxy Statement.

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ITEM 3 RATIFICATION OF APPOINTMENT OF INDEPENDENT AUDITORS

We have appointed Grant Thornton LLP ("Grant Thornton") as our independent registered public accounting firm (independent auditors) for the fiscal year ending December 31, 2019. Grant Thornton served as our independent auditors for 2018.

The Board recommends that shareholders vote "FOR" ratification of the appointment of Grant Thornton as our independent auditors for 2019.

In the event shareholders do not ratify the appointment, the appointment will be reconsidered by the Audit Committee. Regardless of the outcome of the vote, however, the Audit Committee at all times has the authority within its discretion to recommend and approve any appointment, retention or dismissal of our independent auditors.

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REPORT OF THE AUDIT COMMITTEE

The following Report of the Audit Committee does not constitute soliciting material and shall not be deemed filed or incorporated by reference into any other filings under the Securities Act or the Exchange Act, except to the extent ION specifically incorporates this Report by reference therein.

ION's management is responsible for ION's internal controls, financial reporting process, compliance with laws, regulations and ethical business standards and the preparation of consolidated financial statements in accordance with accounting principles generally accepted in the United States. ION's independent registered public accounting firm is responsible for performing an independent audit of ION's financial statements in accordance with generally accepted auditing standards and the effectiveness of ION's internal control over financial reporting, and issuing an opinion thereon. The Board of ION appointed the undersigned directors as members of the Audit Committee and adopted a written charter setting forth the procedures and responsibilities of the Audit Committee. Each year the Audit Committee reviews its Charter and reports to the Board on its adequacy in light of applicable rules of the NYSE. In addition, each year ION furnishes a written affirmation to the NYSE relating to Audit Committee membership, the independence and financial management expertise of the Audit Committee and the adequacy of the Charter of the Audit Committee.

The Charter of the Audit Committee specifies that the primary purpose of the Audit Committee is to assist the Board in its oversight of: (1) the integrity of the financial statements of ION; (2) compliance by ION with legal and regulatory requirements; (3) the independence, qualifications and performance of ION's independent registered public accountants; and (4) the performance of ION's internal auditors and internal audit function. In carrying out these responsibilities during 2018, and early in 2019 in preparation for the filing with the SEC of ION's Annual Report on Form 10-K for the year ended December 31, 2018, the Audit Committee, among other things:

reviewed and discussed the audited financial statements with management and ION's independent registered public accounting firm;

reviewed the overall scope and plans for the audit and the results of the examinations of ION's independent registered public accounting firm;

met with ION management periodically to consider the adequacy of ION's internal control over financial reporting and the quality of its financial reporting and discussed these matters with its independent registered public accounting firm and with appropriate ION financial personnel and internal auditors;

discussed with ION's senior management, independent registered public accounting firm and internal auditors the process used for ION's Chief Executive Officer and Chief Financial Officer to make the certifications required by the SEC and the Sarbanes-Oxley Act of 2002 in connection with the Form 10-K and other periodic filings with the SEC;

reviewed and discussed with ION's independent registered public accounting firm (1) their judgments as to the quality (and not just the acceptability) of ION's accounting policies, (2) the written disclosures and the letter from the independent registered public accounting firm required by applicable requirements of the Public Company Accounting Oversight Board regarding such firm's communication with the Audit Committee concerning independence, and the independence of the independent registered public accounting firm, and (3) the matters required to be discussed with the Audit Committee under auditing standards generally accepted in the United States, including the matters required by Statement of Public Company Accounting Oversight Board ("PCAOB") AS No. 1301, "Communications with Audit Committees";

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based on these reviews and discussions, as well as private discussions with ION's independent registered public accounting firm and internal auditors, recommended to the Board the inclusion of the audited financial statements of ION and its subsidiaries in the 2018 Form 10-K for filing with the SEC;

recommended the selection of Grant Thornton LLP as ION's independent registered public accounting firm for the fiscal year ending December 31, 2019; and

determined that the non-audit services provided to ION by its independent registered public accounting firm (discussed below under " *Principal Auditor Fees and Services*") are compatible with maintaining the independence of the independent auditors.

The Audit Committee met five times during 2018. The Audit Committee schedules its meetings with a view to ensuring that it devotes appropriate attention to all of its tasks. The Audit Committee's meetings include, whenever appropriate, executive sessions with ION's independent registered public accountants and with ION's internal auditors, in each case without the presence of ION's management. The Audit Committee has also established procedures for (a) the receipt, retention and treatment of complaints received by ION regarding accounting, internal accounting controls or auditing matters and (b) the confidential, anonymous submission by ION's employees of concerns regarding questionable accounting or auditing matters. However, this oversight does not provide the Audit Committee with an independent basis to determine that management has maintained appropriate accounting and financial reporting principles or policies, or appropriate internal controls and procedures designed to assure compliance with accounting standards and applicable laws and regulations. Furthermore, the Audit Committee's consideration and discussions with management and the independent registered public accounting firm do not assure that ION's financial statements are presented in accordance with generally accepted accounting principles or that the audit of ION's financial statements has been carried out in accordance with generally accepted auditing standards.

S. James Nelson, Jr., *Chairman* David H. Barr James M. Lapeyre, Jr. 75

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PRINCIPAL AUDITOR FEES AND SERVICES

In connection with the audit of the 2018 financial statements, we entered into an engagement agreement with Grant Thornton that sets forth the terms by which Grant Thornton would perform audit services for our Company. The following table shows the fees billed to us or accrued by us for the audit and other services provided by Grant Thornton for 2018 and 2017:

Fees	2018	2017
Audit Fees(a)	\$ 1,345,966	\$ 1,110,900
All Other Fees		
Total	\$ 1,345,966	\$ 1,110,900

Audit fees consist primarily of the audit and quarterly reviews of the consolidated financial statements, the audit of the effectiveness of internal control over financial reporting, audits of subsidiaries, statutory audits of subsidiaries required by governmental or regulatory bodies, attestation services required by statute or regulation, comfort letters, consents, assistance with and review of documents filed with the SEC, work performed by tax professionals in connection with the audit and quarterly reviews, and accounting and financial reporting consultations and research work necessary to comply with generally accepted auditing standards.

Our Audit Committee Charter provides that all audit services and non-audit services must be approved by the Audit Committee or a member of the Audit Committee. The Audit Committee has delegated to the Chairman of the committee the authority to pre-approve audit, audit-related and non-audit services not prohibited by law to be performed by our independent auditors and associated fees, so long as (i) the estimate of such fees does not exceed \$50,000, (ii) the Chairman reports any decisions to pre-approve those services and fees to the full Audit Committee at a future meeting and (iii) the term of any specific pre-approval given by the Chairman does not exceed 12 months from the date of pre-approval.

All non-audit services were reviewed with the Audit Committee or the Chairman, which concluded that the provision of such services by Grant Thornton, was compatible with the maintenance of such firm's independence in the conduct of its auditing functions.

Other Matters

A representative of Grant Thornton will be available at the Annual Meeting, will be afforded an opportunity to make a statement if he/she desires to do so and will be available to respond to appropriate questions.

This Proxy Statement has been approved by the Board of Directors and is being made available to shareholders by its authority.

Matthew Powers

Executive Vice President, General Counsel and Corporate Secretary

Houston, Texas April 11, 2019

The 2018 Annual Report to Shareholders includes our financial statements for the fiscal year ended December 31, 2018. We have mailed a notice of the 2018 Annual Report to Shareholders and this Proxy Statement to all of our shareholders of record. The 2018 Annual Report to Shareholders does not form any part of the material for the solicitation of proxies.