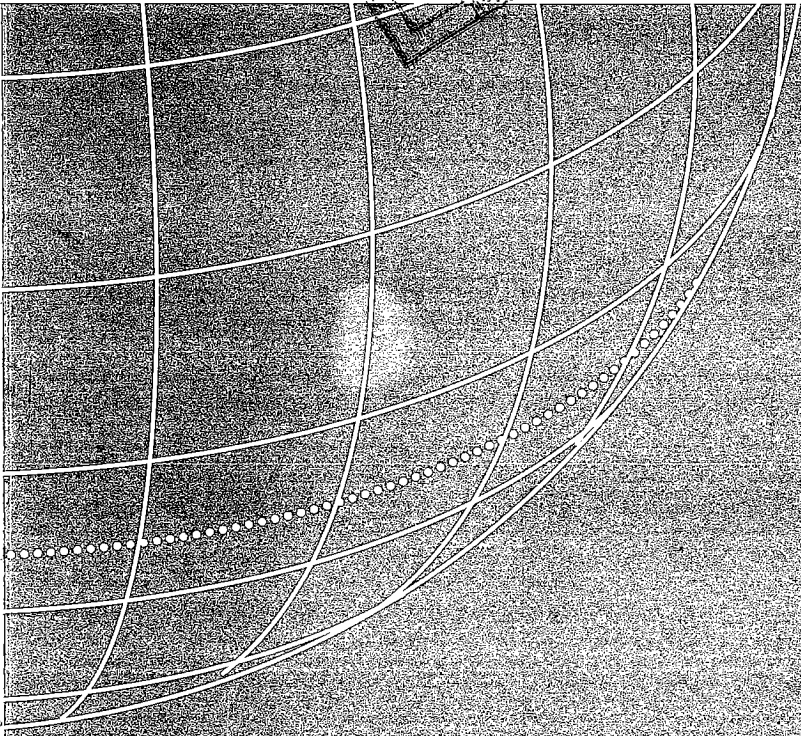
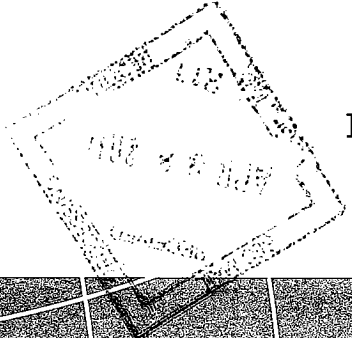


ANNUAL REPORT 2010  
NOTICE OF 2011 ANNUAL MEETING  
PROXY STATEMENT



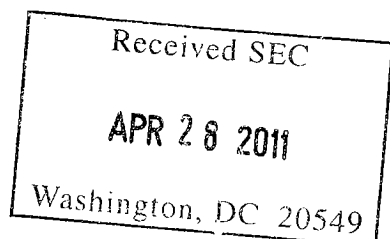
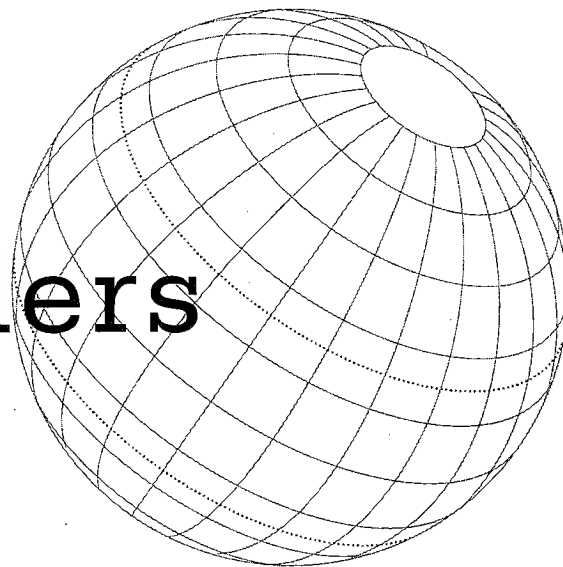
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- LETTER TO SHAREHOLDERS
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- NOTICE OF 2011 ANNUAL MEETING
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- 10-K REPORT
- CORPORATE INFORMATION



**Robert P. Peebler**  
Chief Executive Officer

# Letter to Shareholders



The year 2010 was a turnaround year for ION. It was a year of rebuilding and renewal. It was a year in which, despite significant obstacles -- not the least of which were the continuing impact of the economic meltdown and the Macondo disaster, ION was able to not only resolve our balance sheet issues and restore the company to profitability, but also to put many pieces in place that we believe will serve as a springboard for our continued growth in 2011 and beyond.

In my letter to you for 2009, a very tough year for ION, I highlighted our top priorities for 2010. Those priorities included successfully completing our land joint venture with BGP, regaining momentum in our marine systems business, and building our Integrated Seismic Solutions (ISS) business 'beyond the BasinSPAN™'. We considered achievement of these goals to be critical to our financial recovery in 2010 and to our long-term growth. I am pleased to report that in 2010 we achieved all of these goals and made significant strides in most aspects of our business.

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## 2010 HIGHLIGHTS

- + Successful launch of the INOVA joint venture
- + Winning the 12-streamer BGP order, the largest streamer sale in the Company's history
- + Another record year for our data processing business
- + A remarkable recovery in our data library business, including a record quarter in Q4
- + Completing groundbreaking Arctic multi-client projects
- + Significant progress underwriting a large multi-client program in the Marcellus shale play
- + A strong balance sheet with our net debt approaching zero

## [+] RETURN TO PROFITABILITY

By all measures, 2010 was an improved financial year for ION. With the exception of 2009, our business has typically been back-end loaded, driven by year-end spending by oil companies. We saw a return to this 'normal' behavior in 2010. We began the year battling the economic headwinds of 2009, but we showed a modest profit in the second quarter, posted a solid profit in the third quarter, and rode that momentum to finish the year strong and firmly in the black.

For the full year, our revenues were up 6% over 2009. Excluding the revenues of the Legacy Land Systems (INOVA) segment, our total revenues increased 25% year over year. Gross margins improved to 37% compared to 31% for 2009. In 2010, we took several special charges primarily associated with the formation of and investment in our land equipment joint venture with BGP and debt refinancing, partially offset by a gain on a legal settlement. Including these special items, we reported a net loss of (\$38.8) million, or (\$0.27) per share. Excluding these special items, we reported net income of \$22.8 million, or \$0.16 per diluted share. Our adjusted EBITDA for 2010 increased 94%

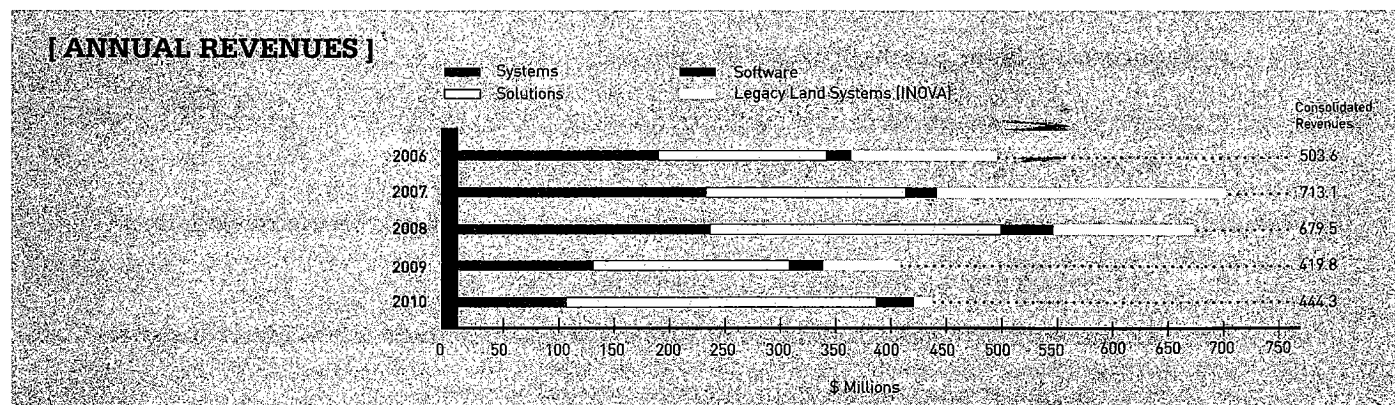
to \$140.1 million compared to \$72.2 million in 2009. A reconciliation of these special items and adjusted EBITDA can be found in the tables to our 2010 Year-end Results press release issued on February 16, 2011.

Our strong performance in 2010 was led by our Solutions segment, whose revenues increased 54% over prior year, due to strong data processing and data library revenues, while Software segment revenues increased 9%.

## [+] SUCCESSFUL LAUNCH OF INOVA

While our operating segments contributed to our improved financial performance in 2010, perhaps the greatest contributor to our financial recovery was the completion in March of our land equipment joint venture with BGP, INOVA Geophysical Equipment Limited. This was a strategic move that not only helped us overcome our short-term financial challenges, but also put us in a much stronger position to capitalize on the anticipated resurgence of the land seismic business.

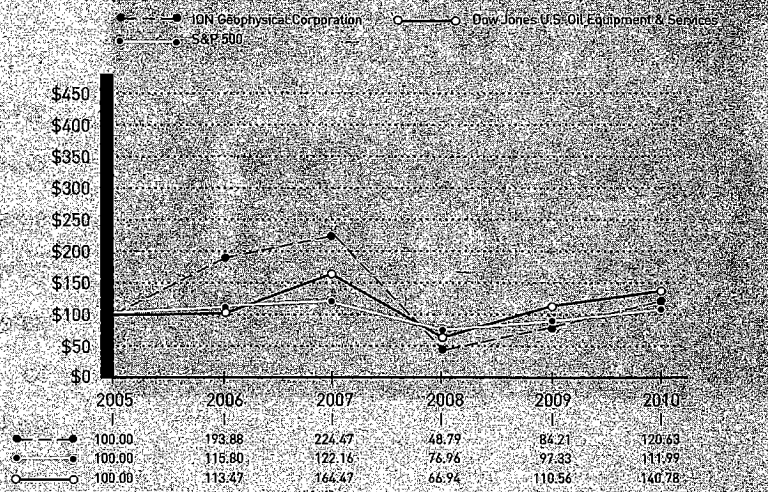
INOVA is owned 49% by ION and 51% by BGP, the world's largest land seismic contractor and a wholly-



**[ SHAREHOLDER RETURNS ]**

This graph compares our cumulative total stockholder return on our common stock for the five years ending December 31, 2010, assuming reinvestment of dividends, with (i) the S&P 500 Index and (ii) the Dow Jones U.S. Oil Equipment and Services Index, an index of companies that we believe are comparable in terms of industry and their lines of business.

The graph assumes that \$100 was invested in our common stock and the above indices on January 1, 2006. We have not paid any dividends on our common stock during the applicable period. Historic stock price performance is not necessarily indicative of future stock price performance.



owned subsidiary of China National Petroleum Corporation (CNPC). We announced our intention in October 2009 to form the joint venture and set a goal to complete the deal by the end of March, less than six months later. Many said it simply couldn't be done, but through fierce determination and hard work on the part of ION and BGP employees, we were able to gain government approvals in the United States, China, and other countries; prepare, negotiate, and sign the definitive agreements; and successfully launch the joint venture, with INOVA leadership and a solid business plan in place, by March 2010.

BGP paid us a little more than \$108 million for their 51% stake when the transaction closed. On top of this, both parties agreed it would be mutually beneficial to align our companies beyond the joint venture – at the broader corporate level of ION. So when we completed the deal, BGP paid ION \$66 million for shares of our common stock, resulting in their owning a little over 16% of our company. In total, roughly \$175 million in cash was paid

to ION by BGP when the deal closed in late March 2010. We used these proceeds to pay off a \$35 million note from our 2008 acquisition of ARAM and \$118 million owed on our previous revolving credit facility. We used the remaining amount – roughly \$20 million in cash – to further strengthen our balance sheet.

CNPC also arranged for China Merchants Bank to provide us with a new replacement revolving credit facility and to replace our 'Term A' long-term debt. The new revolver has a \$100 million credit line and better terms and conditions than our previous revolver. At year end, we still had no outstanding balance on our revolver and had increased our total liquidity to \$184.4 million. Through cash infusions, debt retirements, and the replacement of our revolver and long-term debt with improved deals, during 2010 we deleveraged the company, significantly strengthened our balance sheet, and put in place the capital structure we should need to fund our growth as the seismic sector emerges from the downcycle of the past two years.



In addition to the financial uplift, the INOVA joint venture provides other important, long-term benefits to ION. Having privileged access to a close-in acquisition services company is something we lacked historically. We had top-notch land technologists, but without direct access to a land contractor, they often found themselves missing a level of insight into the contractor's pain points in the field. Joining forces with the world's largest land contractor allows INOVA the opportunity to field test its technologies in almost every conceivable acquisition environment. The joint venture also gave us an entry into markets, such as the Middle East and Africa, that are BGP strongholds but where ION, from a land equipment perspective, has historically had little penetration. We believe that, by marrying ION's technological prowess with BGP's field operations experience and expertise, INOVA is well situated to eventually become the technology provider of choice to land seismic contractors around the world, a group representing aggregate purchases of roughly \$1 billion in acquisition technology each year.

## [+] REGAINING MOMENTUM IN MARINE SYSTEMS

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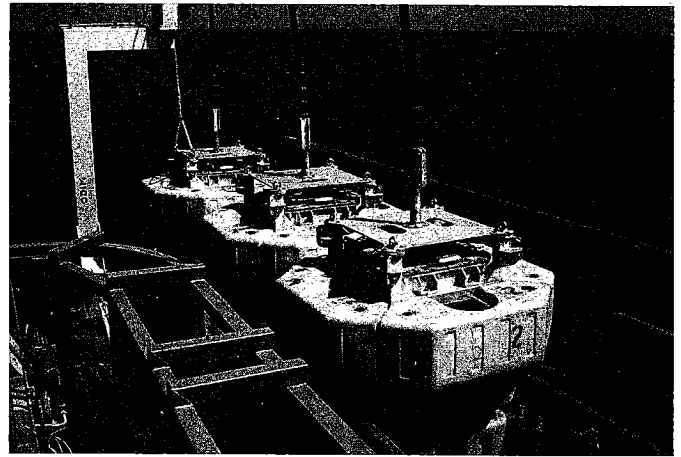
While the recession took a toll on the marine seismic business in general, decreasing the number of seismic vessels deployed and depressing demand for new seismic equipment, our towed streamer product sales remained steady in 2010, and we continued to increase penetration of our Orca<sup>®</sup> command and control software, which is now installed on an estimated 35% of all seismic vessels operating around the world.

I am optimistic about this business moving forward. As hydrocarbons become more difficult to locate and extract, E&P operations are becoming more complex, requiring more sophisticated seismic acquisition technologies, including wide-azimuth, multi-streamer surveys. One of our key goals for 2010 was to outfit a multi-streamer vessel with our Intelligent Acquisition<sup>™</sup> [IA] technologies. In August, we announced that we had signed a contract with BGP to outfit their new flagship, 12-streamer vessel, the Prospector, with our DigiSTREAMER<sup>™</sup> seismic data acquisition system. By the end of the year, we had shipped the positioning equipment and finalized streamer testing. In early 2011, we shipped the streamers to South Korea to be installed on their new vessel in early spring.

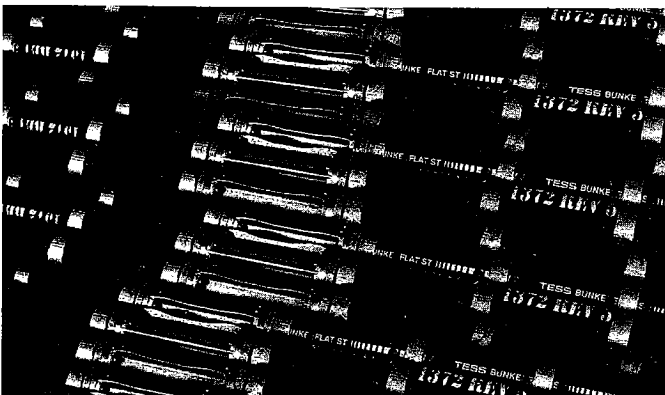
This sale was the largest streamer sale in ION's history. Perhaps of equal importance, the sale made a big statement that BGP is a true partner to us beyond just the land equipment business. It demonstrates that even while we work together to develop the next

generation land equipment, our partners at BGP are serious about supporting ION – and their stake in our company.

Another key area of future growth for ION in the marine seismic arena is in seabed seismic where our VectorSeis® Ocean (VSO) OBC (ocean bottom cable) technologies are deployed. While the industry as a whole is just now starting to see signs of recovery from the global economic downturn, the seabed market has grown steadily. A primary reason for this growth is the enhanced imaging E&P companies routinely obtain using multicomponent seabed technology. The broader bandwidth data, at both the low and high ends of the frequency spectrum, superior signal-to-noise ratios, and ability to acquire converted-wave data have been well documented through published papers and articles over the years. The second reason for the steady growth in the OBC market is the continued advancement of recording system technology that allows for the design and efficient acquisition of OBC surveys with larger spreads. The challenge that lies ahead in the OBC market is to narrow the cost differential between towed streamer and OBC acquisitions.

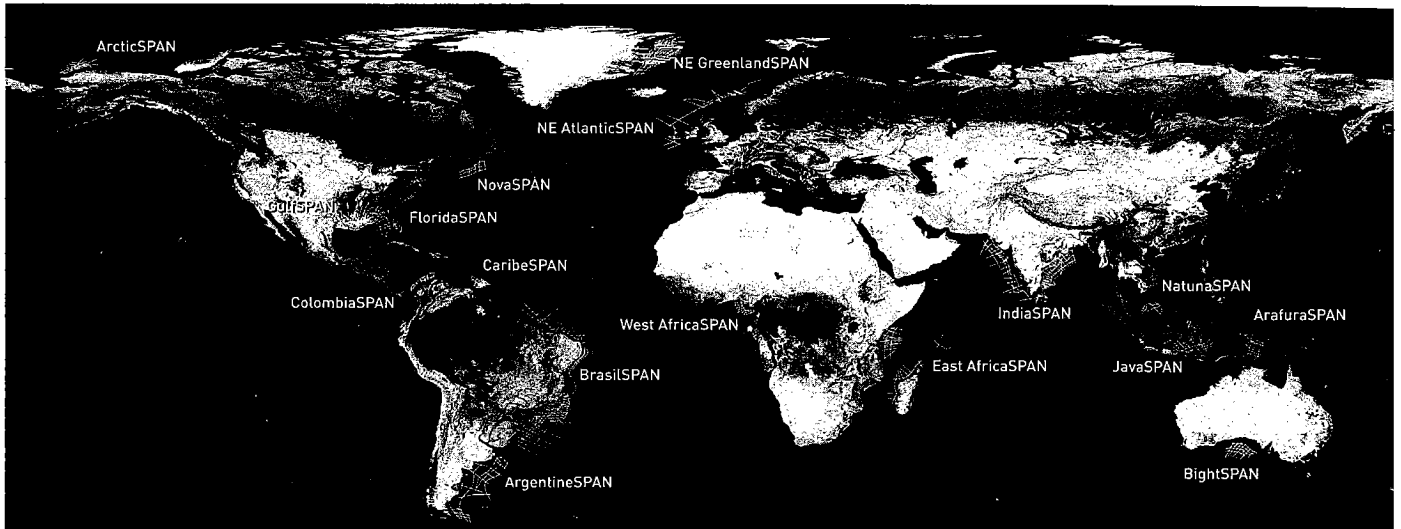


In late 2009, we launched VSO II, featuring advanced capabilities to improve the system's operational efficiency and further enhance VSO's health, safety, and environmental (HSE) advantages over conventional OBC systems. From 2004 until late 2009, VSO was available to the industry exclusively through ION's service provider partner, Reservoir Exploration Technology (RXT). Since the relationship began, RXT deployed VSO on numerous projects worldwide, including in the Gulf of Mexico, North Sea, Brazil, Caspian, and West Africa. RXT's exclusivity ended in the latter part of 2009, and in 2010, the system became available for purchase by all contractors, dramatically opening up the market for sales of VSO II. Selling VSO II is one of our top priorities in 2011.



#### [+] BUILDING ISS 'BEYOND THE BASINSPAN'

Since introducing GulfSPAN™ in 2004, our BasinSPAN data library has grown to include 37 SPAN programs, delivering a total of over 250,000 kilometers of high-quality seismic data to E&P operators exploring virtually all of the major frontier basins around the world. BasinSPANS have been a



key component of our portfolio and through the end of 2010 have generated over \$800 million in revenues. Of note, our ISS division, responsible for BasinSPANs, had a record quarter in the fourth quarter of 2010, generating nearly \$60 million in data library sales in basins across the world, including East and West Africa, Brazil and the Arctic regions.

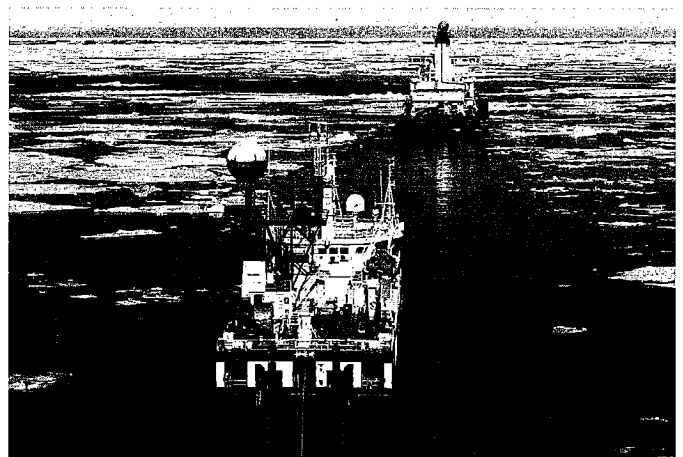
While there is still room for new BasinSPAN programs and extensions of those we already have in place, one of our objectives is to expand the ISS offering to other promising areas. In 2010, we made significant headway in this regard, with full-scope programs in two high-growth E&P segments: the Arctic and North American shale plays.

**[+] BREAKING ARCTIC BARRIERS**

The Arctic is one of the most hydrocarbon-rich, untapped petroleum resources in the world. Despite its tremendous potential, however, the region presents unique and formidable imaging challenges. E&P firms exploring the Arctic invest millions of

dollars for exploration licenses but have traditionally had to make decisions with little or no knowledge of petroleum systems or geology due to the lack of seismic data.

Since we conducted our first Arctic survey in 2006, we've been challenging industry conventions to deliver data for E&P companies to accurately assess prospectivity in the Arctic. In 2009, our ISS group, working with our marine systems group, our Concept Systems software group, and our GX Technology data processing group, developed a unique solution that allows streamers to be towed under ice. We first





utilized this solution in 2009 offshore NE Greenland, gathering 5,300 kilometers of historically unattainable seismic data, far surpassing production expectations.

In 2010, we built on that success with two additional in-ice Arctic programs. During our second season in NE Greenland, we surpassed our 2009 production record, acquiring an additional 6,500+ kilometers of data further north in heavier ice. Of note, we acquired data in the never-before-explored areas of the Beaufort Sea, beyond the traditional acquisition season when others had concluded their surveys in search of warmer water. In both programs, we expanded the traditional acquisition boundaries into new territory and extended the shooting window far beyond what was previously possible.

ION has carved out a niche in this lucrative market, and we plan to fully exploit our unique and proprietary technologies in 2011.

#### [+] SEISMIC IN SHALE PLAYS

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Much attention is being focused on exploration and production in unconventional reservoirs, including shale plays, particularly in North America. Economic viability in shale plays has been achieved primarily through advancements in two engineering technologies -- horizontal drilling and hydraulic fracture stimulation. Initially, seismic wasn't considered to be a critical tool in unconventional reservoir development. At most, it addressed the secondary concerns of locating faults and other hazard avoidance. In recent years, however, that mindset has begun to change. Operators are finding

that their former operating models are not sustainable with current and forecasted gas prices.

While shales initially were considered to be more or less homogeneous, experience has shown that they are, in fact, very diverse, and with that comes the need to understand the rock physics and mechanical aspects of the reservoir. These rock properties can be estimated indirectly through various seismic attributes, and, with this insight, our clients are able to more efficiently develop their resource plays and more judiciously manage their capital expenditures.

Since 2003, our GX Technology imaging solutions group has worked with E&P companies on over 170 shale data processing projects in virtually all the major North American shale plays, delivering over 15,000 square miles of seismic data. But data processing and interpretation is just one aspect of an overall shale solution. Our goal is to provide operators with a complete, integrated seismic solution for shales, and in 2010 we set our sights on developing a full-scope multi-client program in one of the most active and challenging shale plays.



In December, we announced the commencement of a new 3D multi-client seismic survey in the Marcellus shale play in central Pennsylvania. ION will manage and execute the entire program, providing a proven mix of survey design, planning and permitting, data acquisition using INOVA's FireFly® cableless system and VectorSeis digital sensors, and data processing and reservoir analysis from GXT. We commenced mobilization for the 200-square-mile initial phase of the program before the end of the year and expect to complete data acquisition by the end of the first half of 2011. I think it's interesting to note that before we even announced the program, it doubled in size, an indicator of the growing value E&P companies have for the use of seismic in shale exploration and production.

In addition to our activities in North American shales, in 2010 we developed a beachhead in the emerging shale gas market in Europe, specifically in Poland. In July, we announced that our GX Technology subsidiary had signed a Memorandum of Understanding with the leading geophysical and geological research institutions in Poland to investigate the feasibility of developing a basin-scale, 2D regional seismic study covering a large portion of Poland. Through this joint effort, we hope to be able to propose a world-class regional study to the Polish Ministry of the Environment that will include new high-end 2D seismic acquisition, processing, and interpretation, providing the most complete and extensive understanding of the regional subsurface there to date.

Our programs in the Arctic and shale plays exemplify how we are utilizing the resources and expertise of the whole of ION to solve the toughest oil company challenges. We are an asset-light, technology-driven company whose employees are committed to solving the toughest problems in geophysics. We work shoulder-to-shoulder with both E&P operators and seismic acquisition contractors to identify and implement innovative solutions to resolve their global operational and imaging challenges in the toughest environments and most complex geologies. We have a long-term goal of generating a significant portion of our revenues through our solutions business. I see this as the future of ION, and 2010 was a watershed year for making this vision a reality.

#### **[+] CONTINUED LEADERSHIP IN DATA PROCESSING**

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Our GXT imaging solutions group had a record year in 2010, despite the moratorium in the Gulf of Mexico, which temporarily suppressed our processing backlog during the second half of the year. Fortunately, we had several projects underway in other parts of the world, including Mexico, that helped to offset reductions in our business in the Gulf of Mexico.

In the first quarter of 2010, GXT was awarded a multi-year contract with Petróleos Mexicanos (PEMEX), the national oil company of Mexico. Under this contract, GXT is delivering a broad range of seismic data processing and imaging services for multiple offshore and onshore projects over a three-year period. In order to execute the work, we established a local

presence in Villahermosa, Mexico, where PEMEX's exploration headquarters are located.

We've already seen an increase in the velocity of data processing proposals in early 2011, so I envision another strong year ahead for our data processing group.

#### [+] PRIORITIES FOR 2011

Unlike 2010, we are starting 2011 with a little wind to our backs. I assume that the economy will slowly but surely strengthen. A recent survey by Barclay's Capital indicated an anticipated capex spending increase of 11% in 2011 among the 402 E&P companies surveyed.

Although the political uncertainty surrounding deepwater exploration in the Gulf of Mexico and the political unrest in the Middle East are potential headwinds for 2011, we are hedging our bets by focusing on business on land and offshore in other high-growth regions, including the Arctic, West Africa, Brazil, and the North Sea.

Building on the momentum we began in 2010, our 2011 priorities are to continue to...

- **Aggressively execute against our solutions strategy, focusing on highest growth segments.** Looking ahead, I see plenty of opportunities for us to demonstrate our ability to work with our E&P customers to solve their toughest problems, at the

same time pulling through sales of our products and services. The Arctic contains an estimated one-quarter to one-third of the world's remaining reserves. I see us profiting from the commercialization of the Arctic Solution we've spent the last three years building. Onshore, with projects like the one we've just begun in the Marcellus, I see us strengthening our foothold in the shale plays in North America and leveraging that knowledge and expertise to gain an early foothold in Europe and other geographies.

- **Support the success of INOVA.** We're starting to see improvements in the overall land seismic market, with a clear trend toward higher channel and source point counts required for higher resolution imaging, a long-term trend that bodes well for INOVA. With four consecutive quarters of revenue growth under INOVA's belts, we expect the land equipment business, now led by INOVA, to return to profitability in 2011. Through a combination of an improving land market, a healthy R&D budget, and a partner (BGP) to provide input to product development and to field test new products, the future looks bright for INOVA.
- **Strengthen our relationship with BGP.** ION and BGP have a history of collaboration in both land and marine seismic data acquisition. In 2009, ION outfitted BGP's 2D Challenger vessel with a number of systems

from our portfolio of Intelligent Acquisition [IA] marine seismic acquisition technologies. In 2010, we strengthened our relationship through the formation of INOVA and through our collaborative effort to outfit their new 12-streamer 3D vessel with DigiSTREAMER. In 2011, we will look for ways to further strengthen this relationship, to the benefit of ION, BGP, and INOVA.

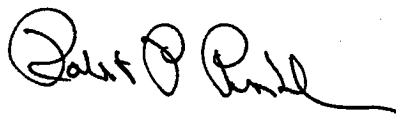
- **Focus on restoring momentum in our marine systems business.** We plan to leverage the foothold we gained in 2010 in the growing 3D streamer market to continue to grow sales of our Intelligent Acquisition [IA] technologies in 2011. We will also exploit the success we've had in carving out a niche in Arctic streamer operations, renewed interest in ocean bottom surveys, and our strong partnerships with companies like Fugro, Polarcus, and BGP. I will keep you updated on our progress in these areas.

- **Expand our data processing global footprint.** GXT continues to expand its 'global footprint', adding processing centers in some of the most active regions of the world. In February 2011, we announced the opening of our newest processing center, in Rio de Janeiro, to serve the seismic needs of oil companies operating offshore Brazil, the location of the world's largest oilfield discoveries of the past 35 years. We will continue to look for opportunities to provide

our cutting-edge data processing services to oil companies operating in hydrocarbon hot spots around the world.

We understand that the seismic business can be complex, especially to those outside the business. We also understand that to invest in a company, you must understand what we do and our business drivers, including the technologies and competitive dynamics that determine the forecasts and the outcomes we obtain. To increase transparency into our business, in 2010 we launched a new ION Investor Education Center on our website, [www.iongeo.com](http://www.iongeo.com). There you will find narrated presentations about our corporate strategy and each segment of our business. I hope you will visit the site. We will continue to look for ways to educate our shareholders in 2011.

Thank you for your continued confidence in ION.



Bob Peebler

# [ FINANCIAL HIGHLIGHTS ]

|  | years ended December 31               |                |                |
|--|---------------------------------------|----------------|----------------|
|  | 2010                                  | 2009           | 2008           |
|  | (in thousands, except per share data) |                |                |
| <b>STATEMENT OF OPERATIONS DATA</b>                              |                                       |                |                |
| Product revenues   | \$ 165,202                            | \$ 237,664     | \$ 417,511     |
| Service revenues   | 279,120                               | 182,117        | 262,012        |
| <b>Net revenues</b>  | <b>444,322</b>                        | <b>419,781</b> | <b>679,523</b> |
| Cost of products   | 94,658                                | 165,923        | 289,795        |
| Cost of services   | 183,931                               | 121,720        | 181,980        |
| <b>Gross profit</b>  | <b>165,733</b>                        | <b>132,138</b> | <b>207,748</b> |
| Operating expenses:  |                                       |                |                |
| Research, development and engineering                            | 25,227                                | 44,855         | 49,541         |
| Marketing and sales  | 30,405                                | 34,945         | 47,854         |
| General and administrative                                       | 57,254                                | 72,510         | 70,893         |
| Impairment of goodwill and intangible assets                     | —                                     | 38,044         | 252,283        |
| <b>Total operating expenses</b>                                  | <b>112,886</b>                        | <b>190,354</b> | <b>420,571</b> |
| Income (loss) from operations                                    | 52,847                                | (58,216)       | (212,823)      |
| Interest expense, net  | (30,770)                              | (33,950)       | (11,284)       |
| Loss on disposition of land division                             | (38,115)                              | —              | —              |
| Fair value adjustment of warrant                                 | 12,788                                | (29,401)       | —              |
| Equity in losses of INOVA Geophysical                            | (23,724)                              | —              | —              |
| Gain on legal settlement   | 24,500                                | —              | —              |
| Impairment of cost method investments                            | (7,650)                               | (4,454)        | —              |
| Other income (expense)   | 228                                   | (4,023)        | 4,200          |
| Loss before income taxes   | (9,896)                               | (130,044)      | (219,907)      |
| Income tax expense (benefit)                                     | 26,942                                | (19,985)       | 1,131          |
| Net loss   | (36,838)                              | (110,059)      | (221,038)      |
| Preferred stock dividends  | 1,936                                 | 3,500          | 3,889          |
| Preferred stock beneficial conversion charge                     | —                                     | —              | 68,786         |
| Net loss applicable to common shares                             | \$ (38,774)                           | \$ (113,559)   | \$(293,713)    |
| Net loss per basic and diluted share                             | \$ (0.27)                             | \$ (1.03)      | \$ (3.06)      |
| Weighted average number of common and diluted shares outstanding | 144,278                               | 110,516        | 95,887         |
| <b>Balance Sheet Data (end of year)</b>                          |                                       |                |                |
| Working capital  | \$ 179,266                            | \$ (59,018)    | \$ 267,155     |
| Total assets   | 624,442                               | 748,186        | 861,431        |
| Notes payable and long-term debt                                 | 108,660                               | 277,381        | 291,909        |
| Stockholders' equity   | 380,447                               | 282,468        | 325,070        |
| <b>Other Data</b>  |                                       |                |                |
| Capital expenditures   | \$ 7,372                              | \$ 2,966       | \$ 17,539      |
| Investment in multi-client library                               | 64,426                                | 89,635         | 110,362        |
| Depreciation and amortization (other than multi-client library)  | 24,795                                | 47,911         | 33,052         |
| Amortization of multi-client library                             | 85,940                                | 48,449         | 80,532         |

The selected consolidated financial data set forth above with respect to our consolidated statements of operations for 2010, 2009 and 2008, and with respect to our consolidated balance sheets at December 31, 2010, 2009 and 2008 have been derived from our audited consolidated financial statements. Our results of operations and financial condition have been affected by acquisitions and dispositions, debt refinancings and impairments of assets during the periods presented, which affect the comparability of the financial information shown. For a detailed discussion of these items impacting the comparability of the financial information, please see Item 6, "Selected Financial Data" in our Annual Report on Form 10-K for the year ended December 31, 2010. Also, this information should not be considered as being indicative of future operations, and should be read in conjunction with Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and the notes thereto included elsewhere in our Annual Report on Form 10-K for the year ended December 31, 2010.

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**ION GEOPHYSICAL CORPORATION**  
2105 CityWest Boulevard, Suite 400  
Houston, Texas 77042-2839  
(281) 933-3339

**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS**  
**To Be Held May 27, 2011**

To ION's Stockholders:

The 2011 Annual Meeting of Stockholders of ION Geophysical Corporation will be held at 2105 CityWest Boulevard, Houston, Texas, on Friday, May 27, 2011, at 10:30 a.m., local time, for the following purposes:

1. To elect three directors to our Board of Directors, each to serve for a three-year term;
2. To approve certain amendments to ION's 2004 Long-Term Incentive Plan to provide for enforceability of our compensation recoupment (clawback) policy and to increase the total number of shares of ION's common stock available for issuance under the plan from 10.2 million shares to 15.2 million shares;
3. To hold an advisory (non-binding) vote on the compensation of our named executive officers;
4. To hold an advisory (non-binding) vote on the frequency of stockholder advisory votes on executive compensation;
5. To ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm (independent auditors) for 2011; and
6. To 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 April 1, 2011, 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. For your reference, directions to the meeting location are included in this proxy statement.

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,

David L. Roland  
*Senior Vice President, General Counsel  
and Corporate Secretary*

April 21, 2011  
Houston, Texas



**Important Notice Regarding the Availability of Proxy Materials  
For the Annual Stockholders' Meeting to be held on May 27, 2011**

**The proxy statement, proxy card and our 2010 annual report to stockholders are available at [www.iongeo.com](http://www.iongeo.com) under "Investor Relations — Investor Materials — Stockholders' Meeting."**

The Annual Meeting of Stockholders of ION Geophysical Corporation will be held on May 27, 2011, at 2105 CityWest Boulevard, Houston, Texas, beginning at 10:30 a.m., local time.

The matters intended to be acted upon are:

1. To elect three directors to our Board of Directors, each to serve for a three-year term;
2. To approve certain amendments to ION's 2004 Long-Term Incentive Plan to provide for enforceability of our compensation recoupment (clawback) policy and to increase the total number of shares of ION's common stock available for issuance under the plan from 10.2 million shares to 15.2 million shares;
3. To hold an advisory (non-binding) vote on the compensation of our named executive officers;
4. To hold an advisory (non-binding) vote on the frequency of stockholder advisory votes on executive compensation;
5. To ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm (independent auditors) for 2011; and
6. To 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 amendments to the 2004 Long-Term Incentive Plan, the approval of the compensation of our named executive officers, the approval of an executive compensation vote to be held every three years, and the ratification of the appointment of Ernst & Young LLP. However, notwithstanding the Board's recommendation and the fact the stockholder vote on frequency of executive compensation vote is a non-binding advisory vote only, the Board intends to accept the results of the stockholder vote on that proposal and hold the next advisory vote on executive compensation within the timeframe approved by the stockholders at our 2011 Annual Meeting.

The following proxy materials are being made available at the website location specified above:

1. The proxy statement for the 2011 Annual Meeting of Stockholders and the 2010 annual report to stockholders; and
2. The form of proxy card being distributed to stockholders in connection with the 2011 Annual Meeting of Stockholders.

Directions to the annual meeting are also provided in the accompanying proxy statement under "*About the Meeting — Where will the Annual Meeting be held?*".





## **ION GEOPHYSICAL CORPORATION**

**2105 CityWest Boulevard, Suite 400**

**Houston, Texas 77042-2839**

**(281) 933-3339**

April 21, 2011

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### **PROXY STATEMENT FOR ANNUAL MEETING OF STOCKHOLDERS To Be Held May 27, 2011**

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Our Board of Directors is furnishing you this proxy statement to solicit proxies on its behalf to be voted at the 2011 Annual Meeting of Stockholders of ION Geophysical Corporation ("ION"). The meeting will be held at 2105 CityWest Boulevard, Houston, Texas, on May 27, 2011, at 10:30 a.m., local time. The proxies also may be voted at any adjournments or postponements of the meeting.

The mailing address of our principal executive offices is 2105 CityWest Boulevard, Suite 400, Houston, Texas 77042-2839. We are mailing the proxy materials to our stockholders beginning on or about April 21, 2011.

All properly completed and returned proxies for the annual meeting will be voted at the meeting in accordance with the directions given in the proxy, unless the proxy is revoked before the meeting.

Only owners of record of our shares of common stock on April 1, 2011, are entitled to vote at the meeting; or at adjournments or postponements of the meeting. Each owner of common stock on the record date is entitled to one vote for each share of common stock held. On April 1, 2011, there were 155,846,294 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.

## ABOUT THE MEETING

### What is a proxy?

A proxy is your legal designation of another person to vote the stock you own on your behalf. That other person is referred to as a "proxy." Our Board of Directors has designated Robert P. Peebler and James M. Lapeyre, Jr. as proxies for the 2011 Annual Meeting of Stockholders. By completing and returning the enclosed proxy card, you are giving Mr. Peebler and Mr. Lapeyre the authority to vote your shares in the manner you indicate on your proxy card.

### Who is soliciting my proxy?

Our Board of Directors is soliciting proxies on its behalf to be voted at the 2011 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 ION's 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 Inc. to assist with the solicitation of proxies from banks, brokers, nominees and other holders, for a fixed fee of \$9,500 plus reasonable out-of-pocket expenses, which fees and expenses will be paid by ION. We may also ask our proxy solicitor to solicit proxies on our behalf by telephone for a fixed fee of \$6 per phone call and \$3.50 per telephone vote, plus reasonable expenses.

### What is a proxy statement?

A proxy statement is a document that the regulations of the Securities and Exchange Commission require us to give you when we ask you to sign a proxy card designating individuals as proxies to vote on your behalf.

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

If your shares are registered directly in your name, you are a stockholder 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.

### What different methods can I use to vote?

Most stockholders have a choice of voting over the Internet, by telephone, or by using a traditional proxy card. Please check your proxy card or the information forwarded by your bank, broker or other holder of record to see which options are available to you.

(a) *In Writing:* All stockholders can vote by written proxy card.

(b) *By Telephone and Internet:* Owners of shares held in street name may vote by telephone or the Internet if their bank or broker makes those methods available, in which case the bank or broker will enclose the instructions with the proxy statement. The telephone and Internet voting procedures, including the use of control numbers, are designed to authenticate stockholders' identities, to allow stockholders to vote their shares, and to confirm that their instructions have been properly recorded.

(c) *In Person:* All stockholders may vote in person at the meeting. If your shares are held in street name and you wish to vote in person, you will need to ask your broker or bank for a legal proxy. You will need to bring the legal proxy with you to the meeting.

### **Where will the Annual Meeting be held?**

ION's 2011 Annual Meeting of Stockholders will be held on the 4th Floor of 2105 CityWest Boulevard in Houston, Texas.

*Directions:* The site for the meeting is located on CityWest Boulevard off of 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 with the security desk and then take the elevators to the 4th floor.

### **Does my vote matter?**

Yes! Corporations are required to obtain stockholder approval for the election of directors and other important matters. Stockholder participation is not a mere formality. Stockholder voting is essential for ION to continue to function. It is also important that you vote to assure that a quorum is obtained so that corporate business can be transacted at the meeting.

### **What is the effect of not voting?**

It depends on how ownership of your shares is registered. If you are a stockholder of record, your unvoted shares will not be represented at the 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.

If you own your shares in street name, your broker or bank may represent your shares at the 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, the proposal to approve the amendments to our 2004 Long-Term Incentive Plan, the advisory vote on executive compensation and the advisory vote on the frequency of executive compensation votes 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 Ernst & Young LLP 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 2011 Annual Meeting of Stockholders is April 1, 2011. The record date is established by the Board of Directors 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 meeting and vote at the meeting and any adjournments or postponements of the meeting.

### **How can I revoke a proxy?**

A stockholder can revoke a proxy by taking any one of the following three actions before it is voted at the meeting:

- (a) giving written notice to the Corporate Secretary of ION,
- (b) delivering a later-dated proxy, or
- (c) voting in person at the meeting.

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 stockholders to hold a validly convened Annual Meeting. If you have signed and returned your proxy card, your shares will be counted toward the quorum. If a quorum is not present, the chairman may adjourn the meeting, without notice other than by announcement at the meeting, until the required quorum is present.

As of the record date, 155,846,294 shares of common stock were outstanding. Thus, the presence of the holders of common stock representing at least 77,923,148 shares will be required to establish a quorum.

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

In voting on the election of three director nominees to serve until the 2014 Annual Meeting of Stockholders, stockholders may vote in one of the following ways:

- (a) 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 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. You may not abstain from voting for purposes of the election of directors. Stockholders 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 voting on the proposal to approve the amendments to ION's 2004 Long-Term Incentive Plan and what vote is needed to approve the proposal?**

In voting to approve the amendments to ION's 2004 Long-Term Incentive Plan, stockholders may vote in one of the following ways:

- (a) in favor of the approval of the amendments,
- (b) against the approval of the amendments, or
- (c) abstain from voting on the approval of the amendments.

The proposal to approve the amendments to ION's 2004 Long-Term Incentive Plan 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 meeting, so long as the total votes cast on the proposal exceed 50% of the shares of common stock outstanding.

The Board recommends a vote **"FOR"** this proposal.

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

In casting an advisory vote on the compensation of our named executive officers, stockholders may vote in one of the following ways:

- (a) in favor of the executive compensation,
- (b) against the executive compensation, or
- (c) abstain from voting.

The advisory vote on 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 casting an advisory vote on the frequency of stockholder votes on executive compensation?**

For the non-binding advisory vote on the frequency of future stockholder votes on executive compensation, stockholders may cast their vote in favor of one of the following four alternatives:

- (a) every year,
- (b) every two years,
- (c) every three years, or
- (d) abstain from voting.

The advisory vote regarding the frequency of future stockholder votes to approve executive compensation will be determined by a plurality of the votes cast in the advisory vote. This means that the alternative that receives the greatest number of votes will be considered the frequency that is recommended by our stockholders.

The Board recommends that you vote in favor of **"EVERY THREE YEARS"** with respect to the advisory vote regarding the frequency of the stockholder vote on executive compensation. However, notwithstanding the Board's recommendation and the fact that this is a non-binding advisory vote only, the Board intends to accept the results of the stockholder vote on this proposal and hold the next advisory vote on executive compensation within the timeframe approved by the stockholders at our 2011 Annual Meeting.

**What are my voting choices when voting on the ratification of the appointment of Ernst & Young LLP 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 Ernst & Young LLP as independent auditors for 2011, stockholders may vote in one of the following ways:

- (a) in favor of ratification,
- (b) against ratification, or
- (c) abstain from voting on ratification.

The proposal to ratify the appointment of Ernst & Young LLP 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 meeting.

The Board recommends a vote **"FOR"** this proposal.

**Will any other business be transacted at the 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 ION's Bylaws for submitting proposals to be considered at the meeting have passed and no proposals were submitted. However, should any other matters properly come before the meeting, and any adjournments or postponements of the meeting, shares with respect to which voting authority has been granted to the proxies will be voted by the proxies in accordance with their judgment.

**What if a stockholder does not specify a choice for a matter when returning a proxy?**

Stockholders should specify their choice for each matter on the enclosed form of proxy. If no instructions are given, proxies that are signed and returned will be voted **"FOR"** the election of all director nominees, **"FOR"** the approval of the amendments to ION's 2004 Long-Term Incentive Plan, **"FOR"** the non-binding advisory vote on executive compensation, **"EVERY THREE YEARS"** with respect to the non-binding advisory vote on frequency of future stockholder votes on executive compensation, and **"FOR"** the proposal to ratify the appointment of Ernst & Young LLP as independent auditors for 2011.

**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 executed proxy card 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.

An abstention will have the same legal effect as a vote against the proposal to amend the 2004 Long-Term Incentive Plan because it will represent a share present in person or represented by proxy at the meeting and a vote cast on the proposal, thereby increasing the number of affirmative votes required to approve the proposal. Broker non-votes will have no effect on the outcome of the proposal to amend the 2004 Long-Term Incentive Plan, so long as the total votes cast on that proposal represent more than 50% of our outstanding shares of common stock entitled to vote.

With respect to (i) the proposal regarding the advisory vote on executive compensation, (ii) the proposal regarding the advisory vote on the frequency of future stockholder votes on executive compensation and (iii) the proposal to ratify the appointment of the independent auditors, an abstention from voting on any 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 likewise have no effect on the outcome of the vote on these proposals.

**What is the deadline for submitting proposals to be considered for inclusion in the 2012 proxy statement?**

Stockholder proposals requested to be included in ION's 2012 proxy statement must be received by ION not later than December 23, 2011. Proposals should be directed to David L. Roland, Senior Vice President, General Counsel and Corporate Secretary, ION Geophysical Corporation, 2105 CityWest Boulevard, Suite 400, Houston, Texas 77042-2839.

**What is the deadline for submitting a nomination for director of ION for consideration at the Annual Meeting of Stockholders in 2012?**

A proper director nomination may be considered at ION's 2012 Annual Meeting of Stockholders only if the proposal for nomination is received by ION not later than December 23, 2011. All nominations should be directed to David L. Roland, Senior Vice President, General Counsel and Corporate Secretary, ION Geophysical Corporation, 2105 CityWest Boulevard, Suite 400, Houston, Texas 77042-2839.

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

The notice of Annual Meeting, proxy statement and 2010 Annual Report to Stockholders are also posted on ION's Internet website in the Investor Relations section at [www.iongeo.com](http://www.iongeo.com).

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

A copy of our 2010 Annual Report on Form 10-K is enclosed with our proxy statement and 2010 Annual Report to Stockholders. You may obtain an additional copy of our 2010 Form 10-K at no charge by sending a written request to David L. Roland, Senior Vice President, General Counsel and Corporate Secretary, ION Geophysical Corporation, 2105 CityWest Boulevard, Suite 400, Houston, Texas 77042-2839. Our Form 10-K is also available (i) through the Investor Relations section of our website at [www.iongeo.com](http://www.iongeo.com) and (ii) with exhibits on the SEC's website at <http://www.sec.gov>.

Please note that the contents of these and any other websites referenced in this proxy statement are not incorporated into this filing. Further, our references to the URLs for these and other websites listed in this proxy statement are intended to be inactive textual references only.

## **ITEM 1 — ELECTION OF DIRECTORS**

Our Board of Directors consists of eight members. 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 stockholders elect the directors in a designated class annually. Directors in Class III, which is the class of directors to be elected at this meeting, will serve on the Board until our Annual Meeting in 2014.

The current Class III directors are Michael C. Jennings, Robert P. Peebler and John N. Seitz, and their terms will expire at the 2011 Annual Meeting. At its meeting on February 11, 2011, the Board approved the recommendation of the Governance Committee that Messrs. Jennings, Peebler and Seitz be nominated to stand for reelection at the Annual Meeting to hold office until our 2014 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 the Board of Directors, or the Board of Directors may reduce the number of Directors.

**The Board of Directors recommends a vote "FOR" the election of Michael C. Jennings, Robert P. Peebler and John N. Seitz.**

The biographies of each of the nominees and continuing directors below contains information regarding the person's service as a director, business experience, education, director positions, and the experiences, qualifications, attributes or skills that caused the Governance Committee and the Board to determine that the person should serve as a director for the Company:

### **Class III Director Nominees For Re-Election For Term Expiring In 2014**

**MICHAEL C. JENNINGS**

Director since December 2010  
Age 45

Mr. Jennings joined our Board of Directors in December 2010. Mr. Jennings is currently the President, Chief Executive Officer and Chairman of the Board of Directors of Frontier Oil Corporation, an independent oil refining and marketing company. Prior to his appointment to President and Chief Executive Officer in January 2009, Mr. Jennings served as Frontier's Executive Vice President and Chief Financial Officer. From 2000 until joining Frontier in 2005, Mr. Jennings was employed by Cameron International Corporation as Vice President and Treasurer. From 1998 until 2000, he was Vice President Finance & Corporate Development of Unimin Corporation, a producer of industrial minerals. From 1995 to 1998, Mr. Jennings was employed by

Cameron International Corporation as Director, Acquisitions and Corporate Finance. Mr. Jennings is a member of the Audit and Finance Committees of our Board of Directors. He holds a Bachelor of Arts degree in economics and government from Dartmouth College and a Master of Business Administration degree in finance and accounting from the University of Chicago.

Mr. Jennings' experience in the global oil refining, marketing and oilfield services businesses enables him to advise the Board on customer and industry issues and perspectives. Given his extensive experience in executive, financial, treasury and corporate development matters, Mr. Jennings is able to provide the Board with expertise in corporate leadership, financial management, corporate planning and strategic development, thereby supporting the Board's efforts in overseeing and advising on strategic and financial matters.

ROBERT P. PEEBLER

Director since 1999  
Age 63

Mr. Peebler has been our Chief Executive Officer since 2003 and a member of our Board of Directors since 1999. From 2003 until December 2008 and more recently commencing again in January 2010, Mr. Peebler also served as our President. Prior to joining ION on a full-time basis, Mr. Peebler was the founder, President and Chief Executive Officer of Energy Virtual Partners, an asset development and management company for oil and gas properties. Prior to founding Energy Virtual Partners in April 2001, Mr. Peebler was Vice President of e-Business Strategy and Ventures of the Halliburton Company, a provider of products and services to the petroleum and energy industries. Mr. Peebler joined Halliburton in 1996 when Halliburton acquired Landmark Graphics Corporation, a provider of workstation-based software for oil and gas exploration and production, where he had served as CEO since 1992. Mr. Peebler began his career with Schlumberger, a global oilfield and information services company, in wireline operations and spent 17 years with Schlumberger in various positions, including as head of U.S. wireline operations and executive in charge of strategic marketing for the corporate energy services group. Mr. Peebler is a member of the Finance Committee of our Board of Directors. He holds a Bachelor of Science degree in electrical engineering from the University of Kansas.

Mr. Peebler's day-to-day leadership and involvement with our company provides him with personal knowledge regarding our operations. In addition, Mr. Peebler has worked more than 30 years in and around seismic and other oilfield service companies and his extensive experience enables the Board to not only be informed with regard to our company's operations and prospects, but also to better understand the direction of the industry.

JOHN N. SEITZ

Director since 2003  
Age 59

Mr. Seitz joined our Board of Directors in 2003. Mr. Seitz is a founder and Vice Chairman of the Board of Endeavour International Corporation, an exploration and development company with activities in the North Sea and selected North American basins. From 2003 until 2006, Mr. Seitz served as co-CEO of Endeavour. 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 and serves on the Board of Managers of Constellation Energy Partners LLC, a company focused on the acquisition, development and exploitation of oil and natural gas properties and related midstream assets. He also currently serves on the Board of Directors of Gulf United Energy, Inc., an OTC-listed independent energy company with interests in oil and natural gas properties in Peru and Colombia. Mr. Seitz is a member of the Compensation and Governance Committees of our Board of Directors. 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 exploration and production companies such as Endeavour and Anadarko 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 Incumbent Directors — Term Expiring In 2012**

HAO HUIMIN

Director since January 2011  
Age 47

Mr. Hao joined our Board of Directors on January 1, 2011. Mr. Hao has been employed by China National Petroleum Corporation (“CNPC”), China’s largest oil company, and its affiliates in various positions of increasing responsibility since 1984. Since 2006, Mr. Hao has been Chief Geophysicist of BGP Inc., China National Petroleum Corporation (“BGP”). BGP is a subsidiary of CNPC and is the world’s largest land seismic contractor. From 2004 to 2006, Mr. Hao was Vice President of BGP, and from 2002 to 2004, he managed the marine department at BGP. Between 1984 and 2002, Mr. Hao served in various management positions at Dagang Geophysical Company, a seismic contractor company owned by CNPC. Mr. Hao is a member of the Finance Committee of our Board of Directors. He holds a Bachelor of Science degree in geophysical exploration from China Petroleum University and Masters of Business Administration degrees from the University of Houston and Nankai University in China.

Mr. Hao has over 20 years of experience in geophysical technology research and development, particularly in seismic data processing and seismic data acquisition system research and development management. Mr. Hao’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. Hao’s insights with regard to issues relating to China provide our Board with an invaluable resource.

Mr. Hao was appointed to our Board of Directors under the terms of an agreement with BGP in connection with BGP’s purchase of 23,789,536 shares of our common stock in March 2010. 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 January 2011, Mr. Hao replaced Guo Yueliang, BGP’s initial appointee to our Board, and Mr. Hao will serve the remainder of Mr. Guo’s term on our Board, which term is scheduled to expire in 2012.

JAMES M. LAPEYRE, JR.

Director since 1998  
Age 58

Mr. Lapeyre has been Chairman of our Board of Directors since 1999 and a Director since 1998. Mr. Lapeyre has been President 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 of Directors when we bought the DigiCOURSE marine positioning products business from Laitram in 1998. Mr. Lapeyre is Chairman of the Governance Committee and a member of the Audit and Compensation Committees of our Board of Directors. 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 stockholder of our company enables our Board to have direct access to the perspective of our stockholders and ensures that the Board will take into consideration the interests of our stockholders in all Board decisions. In addition, Mr. Lapeyre has extensive knowledge regarding the marine products and technology that we acquired from Laitram in 1998.

## **Class II Incumbent Directors — Term Expiring In 2013**

DAVID H. BARR

Director since December 2010  
Age 61

Mr. Barr joined our Board of Directors in December 2010. 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 2000, 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. Mr. Barr also currently serves on the Board of Directors and Audit, Remuneration and Governance Committees of Hunting PLC (a London Stock Exchange-listed provider of energy services), on the Board of Directors (serving as non-executive Chairman of the Board) and Audit and Compensation Committees of Logan International Inc. (a TSX-listed manufacturer and provider of oilfield tools and services), and on the Board of Directors and Compensation Committee of Probe Holdings, Inc. (a designer and manufacturer of oilfield technology and tools). Mr. Barr is a member of the Compensation and Governance Committees of our Board of Directors.

Mr. Barr's 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  
Age 58

Mr. Myers joined our Board of Directors in 2001. He is currently an Operating Advisor with Paine & Partners, LLC, a private equity firm focused on leveraged buyout transactions. Prior to joining Paine & Partners in October 2009, Mr. Myers was employed by Cameron International Corporation, an international manufacturer of oil and gas flow control equipment, as General Counsel and Corporate Secretary (from 1995 to 1999), President of the Cooper Energy Services Division (from 1998 until 2002), Senior Vice President (from 2001 to 2003), Senior Vice President and Chief Financial Officer (from 2003 to 2008) and Senior Advisor (from 2008 to October 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, Inc., a NYSE-listed provider of heating, ventilation and air conditioning services, and Frontier Oil Corporation, a NYSE-listed oil refining and marketing company. Mr. Myers is Chairman of the Compensation Committee, co-Chairman of the Finance Committee and a member of the Governance Committee of our Board of Directors. 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 and the Chairman of our Compensation Committee. 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 proven 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  
Age 69

Mr. Nelson joined our Board of Directors 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 exploration and production 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 Committee of Oil States International, Inc. (a NYSE-listed diversified oilfield services company) and the Board of Directors and Audit and Compensation Committees of W&T Offshore, Inc. (a NYSE-listed oil and natural gas exploration and production company) and the general partner of Genesis Energy LP (an American Stock Exchange-listed 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 and Audit and Compensation Committees 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 Committee and co-Chairman of the Finance Committee of our Board of Directors. 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 of Directors 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.

## Ownership of Equity Securities of ION

Except as otherwise set forth below, the following table sets forth information as of March 1, 2011, 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 2010 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.

| <u>Name of Owner</u>  | <u>Common Stock(1)</u> | <u>Rights to Acquire(2)</u> | <u>Restricted Stock(3)</u> | <u>Percent of Common Stock(4)</u> |
|---|------------------------|-----------------------------|----------------------------|-----------------------------------|
| BGP Inc., China National Petroleum Corporation(5) . . . . .               | 23,789,536             | —                           | —                          | 15.3%                             |
| FMR LLC(6) . . . . .  | 13,534,055             | —                           | —                          | 8.7%                              |
| BlackRock, Inc.(7) . . . . .  | 10,367,146             | —                           | —                          | 6.7%                              |
| Wells Fargo and Company(8) . . . . .                                      | 8,729,737              | —                           | —                          | 5.6%                              |
| James M. Lapeyre, Jr.(9) . . . . .  | 8,167,125              | 80,000                      | —                          | 5.3%                              |
| Laitram, L.L.C.(10) . . . . .   | 7,605,345              | —                           | —                          | 4.9%                              |
| Robert P. Peebler . . . . .   | 447,411                | 90,000                      | 378,881                    | *                                 |
| David H. Barr(11) . . . . .   | 20,000                 | —                           | —                          | *                                 |
| Hao Huimin(12) . . . . .  | 13,300                 | —                           | —                          | *                                 |
| Michael C. Jennings(13) . . . . .   | 20,000                 | —                           | —                          | *                                 |
| Franklin Myers . . . . .  | 24,000                 | 55,000                      | —                          | *                                 |
| S. James Nelson, Jr. . . . .  | 40,000                 | 70,000                      | —                          | *                                 |
| John N. Seitz . . . . .   | 49,895                 | 80,000                      | —                          | *                                 |
| R. Brian Hanson . . . . .   | 72,741                 | 175,000                     | 100,076                    | *                                 |
| Nikolaos Bernitsas . . . . .  | 51,081                 | 133,750                     | 15,333                     | *                                 |
| David L. Roland . . . . .   | 44,807                 | 66,250                      | 33,333                     | *                                 |
| Ken Williamson . . . . .  | 28,291                 | 136,250                     | 15,333                     | *                                 |
| All directors and executive officers as a group<br>(14 Persons) . . . . . | 8,995,968              | 1,125,650                   | 557,555                    | 6.8%                              |

\* 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 30, 2011.
- (3) Represents unvested shares subject to a vesting schedule, forfeiture risk and other restrictions. Although these shares are subject to forfeiture, the holder has the right to vote the shares until they are forfeited.
- (4) Assumes shares that such person has rights to acquire presently and on or before April 30, 2011, 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 address for FMR LLC ("FMR") is 82 Devonshire Street, Boston, Massachusetts 02109. Fidelity Management & Research Company ("Fidelity"), a wholly-owned subsidiary of FMR, is the beneficial owner of 12,320,485 shares as a result of acting as investment adviser to various investment companies registered under the Investment Company Act of 1940. Edward C. Johnson 3d, as Chairman of FMR LLC, and FMR, through its control of Fidelity, and the funds each has sole power to dispose of the

12,320,485 shares owned by the funds. Members of the family of Edward C. Johnson 3d are the predominant owners, directly or through trusts, of Series B voting common shares of FMR, representing 49% of the voting power of FMR. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR. Neither FMR nor Edward C. Johnson 3d has the sole power to vote or direct the voting of the shares owned directly by the Fidelity funds, which power resides with the funds' Boards of Trustees. Fidelity carries out the voting of the shares under written guidelines established by the Funds' Boards of Trustees. Pyramis Global Advisors, LLC ("PGALLC"), 900 Salem Street, Smithfield, Rhode Island, 02917, an indirect wholly-owned subsidiary of FMR and an investment adviser registered under Section 203 of the Investment Advisers Act of 1940, is the beneficial owner of 280,110 shares as a result of its serving as investment adviser to institutional accounts, non-U.S. mutual funds, or investment companies registered under the Investment Company Act of 1940 owning such shares. Edward C. Johnson 3d and FMR, through its control of PGALLC, each has sole dispositive power over 280,110 shares and sole power to vote or to direct the voting of 280,110 shares owned by the institutional accounts or funds advised by PGALLC as reported above. Pyramis Global Advisors Trust Company ("PGATC"), 900 Salem Street, Smithfield, Rhode Island, 02917, an indirect wholly-owned subsidiary of FMR and a bank as defined in Section 3(a)(6) of the Securities Exchange Act of 1934, is the beneficial owner of 933,460 shares as a result of its serving as investment manager of institutional accounts owning such shares. Edward C. Johnson 3d and FMR, through its control of PGATC, each has sole dispositive power over 933,460 shares and sole power to vote or to direct the voting of 912,040 shares owned by the institutional accounts managed by PGATC as reported above.

- (7) The address for BlackRock, Inc. is 40 East 52nd Street, New York, New York 10022.
- (8) Wells Fargo and Company filed its Schedule 13G/A with the SEC on behalf of itself and the following subsidiaries: Wells Capital Management Incorporated, Wells Fargo Bank, N.A., Wells Fargo Funds Management, LLC, and Wells Fargo Advisors, LLC. The address for Wells Fargo and Company is 420 Montgomery Street, San Francisco, California 94104. Wells Fargo and Company and these subsidiaries reported that they have sole voting power with respect to 7,899,813 shares, sole dispositive power with respect to 8,692,020 shares and shared dispositive power with respect to 12,880 shares.
- (9) These shares of common stock include 5,700 shares over which Mr. Lapeyre holds joint voting power and investment control with his wife, 545,580 shares that Mr. Lapeyre holds as a custodian or trustee for the benefit of his children, 7,605,345 shares owned by Laitram, and 10,500 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 10 below. Mr. Lapeyre has sole voting power over only 1,600,707 of these shares of common stock.
- (10) The address for Laitram, L.L.C. is 220 Laitram Lane, Harahan, Louisiana 70123. Mr. Lapeyre is the President and chief executive officer of Laitram. Please read note 9 above. Mr. Lapeyre disclaims beneficial ownership of any shares held by Laitram.
- (11) Mr. Barr was appointed to the ION Board on December 2, 2010.
- (12) Mr. Hao was appointed to the ION Board on January 1, 2011.
- (13) Mr. Jennings was appointed to the ION Board on December 2, 2010.

#### **Section 16(a) Beneficial Ownership Reporting Compliance**

Section 16(a) of the Securities Exchange Act of 1934, as amended (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 Securities and Exchange Commission ("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, with one exception, during 2010 our directors, executive officers and stockholders 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 had been timely made. A Form 4 for Mr. Morrison reflecting a sale of 2,500 shares of ION stock on November 29, 2010, was filed two days late due to an administrative error.

## **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. Many of these practices and policies are designed to ensure compliance with the listing requirements of the NYSE and applicable governance requirements. 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:

- Seven of our eight Board members are independent of ION and its management. Robert P. Peebler is not independent because he is our current Chief Executive Officer and an employee of ION.
- All members of the key 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 key 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.
- 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 charters of the committees of our Board clearly establish the committees’ respective roles and responsibilities.
- The Board has adopted written Corporate Governance Guidelines to assist its members in fulfilling their responsibilities.
- 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, review all quarterly and annual reports before filing with the SEC.
- We have a 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://www.iongeo.com/content/released/Hotline\\_Policy-ION-Nov\\_5\\_2007.pdf](http://www.iongeo.com/content/released/Hotline_Policy-ION-Nov_5_2007.pdf).
- On an annual basis, each director and each executive officer (as that term is defined in Rule 3b-7 promulgated under the Exchange Act) 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, 2010, 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 2010,

we submitted to the NYSE a certificate of our Chief Executive Officer 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 adopted a compensation recoupment (clawback) policy that applies to our executive officers.
- We have stock ownership guidelines for our non-employee directors and senior management.

*Code of Ethics.* We have adopted a Code of Ethics that applies to all members of our Board of Directors 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. 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 management employees and senior finance and accounting employees affirm their compliance with our Code of Ethics and other principal compliance policies. New employees sign a written certification of compliance with these policies upon commencing employment.

We have made our Code of Ethics, corporate governance guidelines, charters for the committees of our Board (other than our Finance Committee charter) and other information that may be of interest to investors available on the Investor Relations section of our website at [http://www.iongeo.com/Investor\\_Relations/Corporate\\_Governance/](http://www.iongeo.com/Investor_Relations/Corporate_Governance/). Copies of this information may also be obtained by writing to us at ION Geophysical Corporation, Attention: Senior Vice President, General Counsel and Corporate Secretary, 2105 CityWest Boulevard, Suite 400, Houston, Texas 77042-2839. 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, 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.

*Presiding Non-Management Director.* Under NYSE corporate governance listing standards, James M. Lapeyre, Jr. has been designated as the 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.

*Communications to Board and Presiding Non-Management Director.* Stockholders and other interested parties may communicate with the Board and our presiding non-management director or non-management independent directors as a group by writing to "Chairman of the Board" (if the intended recipient is the Board) or "Presiding Non-management Director" (if the intended recipient is the presiding non-management director, or the non-management directors as a whole), c/o Corporate Secretary, ION Geophysical Corporation, 2105 CityWest Boulevard, Suite 400, Houston, Texas 77042-2839. Inquiries sent by mail will be reviewed by our Corporate Secretary and, if they pertain to the functions of the Board or Board committees 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, business solicitations or advertisements, will not be forwarded to those individuals. In addition, material that is considered to be hostile, threatening, illegal or similarly unsuitable

will not be forwarded to them. 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.

*2010 Meetings of the Board and Stockholders.* During 2010, the Board of Directors held nine meetings and the four standing committees of the Board of Directors held a total of 20 meetings. Overall, the rate of attendance by our directors at such meetings exceeded 94%. With the exception of Mr. Guo Yueliang, no director attended less than 75% of these meetings. Mr. Guo was nominated to the Board of Directors by our stockholder BGP pursuant to the terms of an agreement that we entered into with BGP in connection with BGP's purchase of shares of our common stock in March 2010. He served on the Board from April 1, 2010 until January 1, 2011. Mr. Guo, a resident of China, attended 60% of the meetings of the Board held during his tenure. We do not require our Board members to attend our Annual Meeting of Stockholders; however, five of our directors attended our Annual Meeting held in May 2010.

*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 Robert P. Peebler, who is our 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 is independent from management and from our independent registered public accounting firm, as required by NYSE listing standard rules regarding director independence. See "*— Committees of the Board — Audit Committee*" below.

Our Chairman, 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 5.3% of our outstanding common stock as of March 1, 2011. 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 not exceeding 1% of Laitram's 2010 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, 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 stockholder 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. 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.

*Separation of CEO and Chairman of the Board.* Mr. Lapeyre, a non-employee independent director, has served as our Chairman of the Board since 1999. Mr. Peebler has served as our Chief Executive Officer since 2003. 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 of the Board 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 of the Board 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 and having an independent director serve as Chairman of the Board is the appropriate leadership structure for our company at this time and demonstrates our commitment to good corporate governance.

### **Committees of the Board**

The Board of Directors 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. The Governance Committee functions as the Board's nominating committee. In addition, the Board establishes temporary special committees from time to time on an as-needed basis. The Audit Committee, Compensation Committee and Governance Committee are composed entirely of non-employee directors. The Finance Committee consists of four directors, three of whom are non-employee directors. During 2010, the Audit Committee met eight times, the Compensation Committee met eight times, and the Governance Committee met four times. The Finance Committee did not meet during 2010.

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

| <u>Director</u>               | <u>Compensation Committee</u> | <u>Audit Committee</u> | <u>Governance Committee</u> | <u>Finance Committee</u> |
|-------------------------------|-------------------------------|------------------------|-----------------------------|--------------------------|
| James M. Lapeyre, Jr. . . . . | *                             | *                      | **                          |                          |
| David H. Barr . . . . .       | *                             |                        | *                           |                          |
| Hao Huimin . . . . .          |                               |                        |                             | *                        |
| Michael C. Jennings . . . . . |                               | *                      |                             | *                        |
| Franklin Myers . . . . .      | **                            |                        | *                           | **                       |
| S. James Nelson, Jr. . . . .  |                               | **                     |                             | **                       |
| Robert P. Peebler . . . . .   |                               |                        |                             | *                        |
| John N. Seitz . . . . .       | *                             |                        | *                           |                          |

\* Member

\*\* Chair

### ***Audit Committee***

The Audit Committee is a separately-designated standing audit committee as defined in Section 3(a)(58)(A) of 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 stockholders and others, reviewing with management our system of internal controls and financial reporting process, and monitoring our compliance program and system.

The Audit Committee operates under a written charter, which sets forth the functions and responsibilities of the committee. A copy of the charter can be viewed on our website at [http://www.iongeo.com/content/released/audit\\_committee\\_charter\\_ion\\_march52008.pdf](http://www.iongeo.com/content/released/audit_committee_charter_ion_march52008.pdf).

The Board of Directors has determined that each member of the Audit Committee is financially literate and satisfies the definition of “independent” as established in the NYSE corporate governance listing standards and Rule 10A-3 under the Exchange Act. In addition, the Board of Directors 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.

### ***Compensation Committee***

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 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 the chief executive officer are determined in discussion with, and frequently based in part upon the recommendation of, the chief executive officer. The Compensation Committee makes all determinations with respect to the compensation of the 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 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 our corporate human resources 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 stockholders. It reviews any contracts or other transactions with current or former elected officers of the corporation. In connection with the review of any such proposed plan or 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.

The Compensation Committee operates pursuant to a written charter that sets forth the functions and responsibilities of the committee. A copy of the charter can be viewed on our website at [http://www.iongeo.com/content/released/comp\\_committee\\_charterionfeb\\_2008.pdf](http://www.iongeo.com/content/released/comp_committee_charterionfeb_2008.pdf). The Board of Directors has determined that each member of the Compensation Committee satisfies the definition of "independent" as established in the NYSE corporate governance listing standards.

#### ***Compensation Committee Interlocks and Insider Participation***

The members of the Compensation Committee are Franklin Myers (Chairman), David H. Barr, James M. Lapeyre, Jr. and John N. Seitz. No member of the Committee is, or was during 2010, an officer or employee of ION. Mr. Lapeyre is President and Chief Executive Officer and a significant equity owner of Laitram, L.L.C, which has had a business relationship with ION since 1999. During 2010, we paid Laitram and its affiliates a total of approximately \$3.1 million, which consisted of approximately \$2.3 million for manufacturing services, \$700,000 for rent and other pass-through third party facilities charges, and \$100,000 for reimbursement of costs related to providing administrative and other back-office support services in connection with our Louisiana marine operations. See "*Certain Transactions and Relationships*" below. During 2010:

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

#### ***Governance Committee***

The Governance Committee functions as the Board's nominating and corporate governance committee and advises the Board of Directors 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.

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 the 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 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 committee seeks a 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 committee feels are reliable, and professional search firms.

The Governance Committee will consider recommendations for director nominations made by a stockholder 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 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, (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.

Also, our Bylaws permit stockholders to nominate individuals for director for consideration at an annual stockholders' meeting. A proper director nomination may be considered at ION's 2012 Annual Meeting only if the proposal for nomination is received by ION not later than December 23, 2011. All nominations should be directed to David L. Roland, Senior Vice President, General Counsel and Corporate Secretary, ION Geophysical Corporation, 2105 CityWest Boulevard, Suite 400, Houston, Texas 77042-2839.

The Governance Committee operates pursuant to a written charter, which sets forth the functions and responsibilities of the committee. A copy of the charter can be viewed on our website at [http://www.iongeo.com/content/released/Governance\\_Committee\\_Charter-ION.pdf](http://www.iongeo.com/content/released/Governance_Committee_Charter-ION.pdf). The Board of Directors has determined that each member of the Governance Committee satisfies the definition of "independent" as established in the NYSE corporate governance listing standards.

### ***Finance Committee***

The Finance Committee has responsibility for overseeing all areas of corporate finance for ION. The Finance Committee is responsible for reviewing 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 Finance Committee operates pursuant to a written charter that sets forth the functions and responsibilities of the committee. A copy of the charter can be obtained by writing to us at ION Geophysical Corporation, Attention: Corporate Secretary, 2105 CityWest Boulevard, Suite 400, Houston, Texas 77042-2839. The Board of Directors has determined that a majority of the members of the Finance Committee (including its co-Chairmen) satisfies the definition of "independent" as established in 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 stockholders and further focus our emphasis on enhancing stockholder value. Under these requirements, each non-employee director is expected to own at least 36,000 shares of ION stock. New and current directors will have three years to acquire and increase the director's ownership of ION 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 of Directors has adopted a written policy and procedures 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 executive officer, director or nominee for election as a director (other than a tenant or employee). Under the policy, the Governance Committee of the Board is responsible for reviewing the material facts of any Related Party transaction and approve or ratify the transaction. In making its determination to approve or ratify, the Governance 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 Chief Executive Officer and a significant equity owner of Laitram, L.L.C. and has served as President 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 5.3% of our outstanding common stock as of March 1, 2011.

We acquired DigiCourse, Inc., our marine positioning products business, from Laitram in 1998 and renamed it I/O Marine Systems, Inc. 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. Under a lease of commercial property dated February 1, 2006, between Lapeyre Properties, L.L.C. (an affiliate of Laitram) and ION, we agreed to lease certain office and warehouse space from Lapeyre Properties until January 2011. Since January 2011, we have continued to lease this property on the same terms on a month-to-month basis. During 2010, we paid Laitram and its affiliates a total of approximately \$3.1 million, which consisted of approximately \$2.3 million for manufacturing services, \$700,000 for rent and other pass-through third party facilities charges, and \$100,000 for reimbursement for costs related to providing administrative and other back-office support services in connection with our Louisiana marine operations. For the 2009 and 2008 fiscal years, we paid Laitram and its affiliates a total of approximately \$4.0 million and \$4.3 million, respectively, for these services. In the opinion of our management, the terms of these services are fair and reasonable and as favorable to us as those that could have been obtained from unrelated third parties at the time of their performance.

Mr. Hao is Chief Geophysicist of BGP. BGP has been a customer of our products and services for many years. For our fiscal years ended December 31, 2010 and 2009, BGP accounted for approximately 3.8% and 7.7% of our consolidated net sales, respectively. In addition, prior to Mr. Hao being appointed to the Board, we entered into the following transactions with BGP:

- On March 25, 2010, we issued 23,789,536 shares of our common stock to BGP for an effective purchase price of \$2.80 per share in a privately-negotiated transaction 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 March 1, 2011, BGP held beneficial ownership of approximately 15.3% 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 the shares. Under the Investor Rights Agreement, for so long as BGP owns at least 10% of our outstanding shares of common stock, BGP will have the right to nominate one director to serve on our Board. 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 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, under employee stock purchase plans and under our currently outstanding convertible and exercisable securities.
- On March 25, 2010, 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 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) 49% of certain assets owned by BGP relating to the business of the joint venture.
- During 2010, we recorded revenues from BGP of approximately \$16.9 million. Receivables due from BGP were \$3.0 million at December 31, 2010.

## EXECUTIVE OFFICERS

Our current executive officers are as follows:

| <u>Name</u>                   | <u>Age</u> | <u>Position with ION</u>                                       |
|-------------------------------|------------|--|
| Robert P. Peebler . . . . .   | 63         | Chief Executive Officer and Director                           |
| R. Brian Hanson . . . . .     | 46         | Executive Vice President and Chief Financial Officer           |
| Nikolaos Bernitsas . . . . .  | 51         | Senior Vice President, GXT Imaging Solutions                   |
| David Moffat . . . . .        | 54         | Senior Vice President, Marine Imaging Systems Division         |
| David L. Roland . . . . .     | 49         | Senior Vice President, General Counsel and Corporate Secretary |
| Ken Williamson . . . . .      | 46         | Senior Vice President, Integrated Seismic Solutions            |
| Michael L. Morrison . . . . . | 40         | Vice President and Corporate Controller                        |

For a description of the business background of Mr. Peebler, see “*Item 1— Election of Directors — Class III Director Nominees for Re-Election for Term Expiring in 2014*” above.

Mr. Hanson has been our Executive Vice President and Chief Financial Officer since May 2006. 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 of Finance and Chief Financial Officer. Mr. Hanson received a Bachelors degree in engineering from the University of New Brunswick and a Master of Business Administration degree from Concordia University in Montreal.

Mr. Bernitsas has been Senior Vice President of our GXT Imaging Solutions group since January 2007. Mr. Bernitsas originally joined GX Technology Corporation (GXT) in 2000 as Senior Geophysical Advisor, became Senior Vice President, Operations of GXT in 2002 and continued in that position after ION acquired GXT in 2004. Prior to joining GXT, Mr. Bernitsas served as an Imaging Advisor for Vastar Resources, Inc., an exploration and production company, from 1998 to 2000, and in various geophysicist positions at Arco Exploration and Production Technology, a division of Atlantic Richfield Company, from 1990 to 1998. Mr. Bernitsas holds a Bachelor of Science degree in physics from the University of Athens (Greece), a Master of Science degree in geophysics from Ohio University, a Master of Business Administration degree in finance from the University of Texas at Dallas, and a Ph.D. in geophysics from the University of Texas at Austin.

Mr. Moffat has been Senior Vice President of our Marine Imaging Systems Division since June 2007. In 1989, he joined Concept Systems, Ltd., a Scotland-based supplier of advanced real-time navigation and data integration software and services to the E&P industry, and served in various engineering and managerial roles, including after ION’s acquisition of Concept in 2004. From 2006 to 2007, Mr. Moffat was the Vice President and Managing Director of Concept. Prior to joining Concept in 1989, Mr. Moffat was employed in various engineering design and development positions within the electronics defense and data security industry in the United Kingdom. Between 1973 and 1981, he served as an officer in the British Merchant Navy. Mr. Moffat holds a Bachelor of Science degree with Distinction in electronic and communication engineering from Edinburgh Napier University.

Mr. Roland joined ION as Vice President, General Counsel and Corporate Secretary in April 2004 and became a Senior Vice President in January 2007. Prior to joining ION, Mr. Roland held several positions within the legal department of Enron Corp., a multi-national energy trading and infrastructure development business, most recently as Vice President and Assistant General Counsel. Prior to joining Enron in 1998, Mr. Roland was an attorney with Caltex Corporation, an international oil and gas marketing and refining company. Mr. Roland was an attorney with the law firm of Gardere & Wynne (now Gardere Wynne Sewell

LLP) from 1988 until 1994, when he joined Caltex. Mr. Roland holds a Bachelor of Business Administration degree from the University of Houston and a Juris Doctorate degree with Distinction from St. Mary's University.

Mr. Williamson joined ION as Vice President of our GXT Integrated Seismic Solutions group in September 2006 and became a Senior Vice President in January 2007. 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.

Mr. Morrison joined ION in June 2002 as our Assistant Controller, became our Controller and Director of Accounting in November 2002 and Vice President and Corporate Controller in January 2007. Prior to joining ION, Mr. Morrison held several positions at Enron Corp., most recently as Director of Transaction Support. Mr. Morrison had held a variety of positions at Deloitte & Touche, LLP, a public accounting firm, from January 1994 until he joined Enron in June 2000. Mr. Morrison holds a Bachelor of Business Administration degree in accounting from Texas A&M University.



## 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, 2010. 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.*

### Compensation Discussion and Analysis

This Compensation Discussion and Analysis provides an overview of the Compensation Committee of our 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:

| <u>Name</u>                  | <u>Title</u>   |
|------------------------------|--|
| Robert P. Peebler . . . . .  | Chief Executive Officer and Director (our principal executive officer)                 |
| R. Brian Hanson . . . . .    | Executive Vice President and Chief Financial Officer (our principal financial officer) |
| Nikolaos Bernitsas . . . . . | Senior Vice President, GXT Imaging Solutions   |
| David L. Roland . . . . .    | Senior Vice President, General Counsel and Corporate Secretary                         |
| Ken Williamson . . . . .     | Senior Vice President, Integrated Seismic Solutions                                    |

### Executive Summary

The objectives and major elements of our executive compensation program did not materially change from 2010 to 2011. While we regularly review and fine-tune our compensation programs, we believe consistency in our compensation program and philosophy is important to effectively motivate and reward top-level management performance and for the creation of stockholder value. We continue to provide our named executive officers with total annual compensation that includes three principal elements: base salary, performance-based annual incentive cash compensation and long-term equity-based incentive awards. Our compensation program continues to be performance-based, and a significant portion of each executive's total annual compensation is at risk and dependent upon our company's achievement of specific, measurable performance goals. Our performance-based pay is designed to align our executive officers' interests with those of our stockholders and to promote the creation of stockholder value, without encouraging excessive risk-taking. In addition, our equity program, combined with our executive share ownership requirements, reward long-term stock performance.

Our named executive officers did not receive base salary increases during 2009 or 2010. In fact, salaries for each of our executive officers were decreased for a seven-month period in 2009 as part of a company-wide salary reduction program. Base salaries for each of the named executive officers were increased in January 2011, consistent with our usual base salary review process and our practice prior to 2009.

Payments under our annual incentive award program for 2010 reflect our company's performance and the achievement of our 2010 performance goals. As discussed further under the heading "Annual Incentive Compensation" beginning on page 32 of this proxy statement, we met our consolidated financial performance criteria under our 2010 incentive plan and, as a result, our named executive officers received cash incentive payments under the 2010 plan. In evaluating company performance, the Compensation Committee also considered several actions critical to the company's success in 2010. Specifically, the Compensation Committee noted that in March 2010 the company successfully completed its joint venture transactions with BGP and related credit refinancing, which was considered strategically important for the company. After

considering the results of our corporate financial goals, together with the specific accomplishments noted above, the Compensation Committee approved various cash incentive payments for our named executive officers for 2010, including certain discretionary bonus payments in early 2010 in specific recognition of the timely completion of the transactions with BGP.

Grants made under our long-term stock incentive plan during 2010 also reflected our company's successful performance during 2010. The annual grants made to our named executive officers on December 1, 2010 were generally consistent with grants made to named executive officers in previous years. Certain of our named executive officers who are in charge of our principal business units received special grants of stock options on March 1, 2010 to further increase the percentage of their compensation that emphasizes long-term performance and is directly tied to creation of stockholder value.

## **Introduction/Corporate Governance**

### **Compensation Committee**

The Compensation Committee of our Board of Directors reviews and approves, or recommends to the Board for approval, all salary and other remuneration for our executive officers and oversees matters relating to our employee compensation and benefit programs. No member of the Committee is an employee of ION. The Board of Directors has determined that each member of the Committee satisfies the definition of "independent" as established in the NYSE corporate governance listing standards.

The 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://www.iongeo.com/content/released/comp\\_committee\\_charterionfeb\\_2008.pdf](http://www.iongeo.com/content/released/comp_committee_charterionfeb_2008.pdf). The Chairman of the Committee is in charge of the Committee's meeting agendas and, with the assistance of our Corporate Secretary, establishes the Committee's meetings and calendar. For a description of the responsibilities of the Compensation Committee, see "Item 1. — Election of Directors — Committees of the Board — Compensation Committee" above.

During 2010, the Compensation Committee met in person or by conference call eight times. In addition, the Committee took action by unanimous written consent, as permitted under Delaware law and our Bylaws, two times during 2010, primarily to approve individual non-executive employee grants of restricted stock and stock options. We believe that each of these individual grants made by unanimous written consent of the Committee complied with the applicable grant date requirements under Financial Accounting Standards Board (FASB) Accounting Standards Codification Topic (ASC) 718, "Compensation — Stock Compensation" ("ASC Topic 718").

### **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 Committee evaluates the independence of such advisor and also evaluates whether such advisor has a conflict of interest. From 2005 to 2008, the Compensation Committee retained Towers Perrin (now known as Towers Watson) as its independent compensation advisor to advise the Committee on our compensation practices and to assist in developing and implementing our executive compensation program and philosophy. Towers Perrin evaluated our long-term incentive strategy and our stock plans, analyzed our outstanding stock options, restricted stock and other stock-based awards, and provided the Committee with recommendations on our overall long-term incentive strategy and the number of shares to propose to add to our stock plans for future grants to employees and directors, which the Committee and the Board of Directors later approved. In addition, the firm provided the Committee with a summary of changes to disclosure requirements related to executive officer and director compensation. At the request of the Committee, the firm also performed an analysis of competitive compensation levels for our Chief Executive Officer.

During 2008, the Governance Committee of our Board retained Hewitt Associates to perform an analysis of prevailing industry compensation levels for our directors. During 2009, the Committee engaged Performensation Consulting, an equity compensation consultant, to assist the company and the Compensation Committee in designing a proposed new employee stock purchase plan and a proposed program to permit our current employees to exchange outstanding stock options having exercise prices substantially above the current market price of our common stock, and receive shares of our common stock (the "Replenishment Program"). The proposal to approve the Replenishment Program had provided that, even if approved by our stockholders, our Board of Directors or Compensation Committee could still decide not to implement the program. The proposal obtained stockholder approval but we ultimately decided not to implement the program because (i) the increase in the market price of our common stock after the date of mailing (in April 2009) of the proxy material for our 2009 annual meeting of shareholders had effectively reduced the number of participants who would have benefited from participating in the program and (ii) the expenditures involved in implementing the program and the compensation charges against our earnings that would result from the program outweighed the projected benefits that the program would provide ION and our employees.

During 2010, the Compensation Committee engaged ISS Corporate Services, Inc., a wholly-owned subsidiary of RiskMetrics Group, Inc., to provide the company with benchmarking and modeling services related to its 2010 annual meeting proposals to (i) amend ION's 2004 Long-Term Incentive Plan to increase the total number of shares of ION's common stock available for issuance under the plan, (ii) approve the proposed employee stock purchase plan and (iii) approve the proposed Replenishment Program.

During the first quarter of 2011, we engaged Performensation Consulting to provide advisory services with regard to the preparation of this proxy statement and to provide the Compensation Committee with analysis on the number of shares to propose to stockholders to add to our stock plan at our 2011 Annual Meeting for future grants to employees and directors.

In addition, when reviewing benchmark compensation data in connection with our annual review of employee salaries, in October 2010 our Human Resources department reviewed market survey data from Towers Watson, Mercer, Radford and Stone Partners. See "*Objectives of Our Executive Compensation Programs — Benchmarking*" below.

From 2008 to 2010, none of Towers Watson, Hewitt Associates, Performensation Consulting, ISS, Mercer, Radford or Stone Partners advised our company or our executive officers on matters outside of these engagements.

### **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 executive officers other than himself. No executive officer 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 industry standards for similar sized organizations serving similar markets, as well as comparable positions, 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 the assistance of our Human Resources department and input from our executive officers and other members of 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 — Annual Incentive Compensation*" below.

The Committee reviews and approves all compensation and awards to executive officers and all bonus incentive plans. With respect to equity compensation awarded to employees other than executive officers, 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-executive officers of up to 5,000 shares.

On 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 of Directors, 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, our Senior Vice President — Global Human Resources, and our General Counsel/Corporate Secretary. However, no member of management votes on items before the Compensation Committee. The Compensation Committee and Board of Directors do solicit the views of our Chief Executive Officer on compensation matters, particularly as they relate to the compensation of the other named executive officers and the other members of senior management reporting to the Chief Executive Officer. The Committee often conducts an executive session during each meeting, 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 achieve the following general goals:

- 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 industry of business;
- encourage our executives and key employees to achieve strong financial and operational performance;
- offer performance-based compensation to create meaningful links between corporate performance, individual performance and financial rewards;
- align the interests of our executives with those of our stockholders by providing a significant portion of total pay in the form of stock-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.* Premium compensation opportunities should be composed of long-term, at-risk pay to focus our management on the long-term interests of our company. Base salary, annual incentives and employee benefits should be at competitive levels when compared to similarly-situated companies.

*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 stockholder interests.

*Competitive.* We emphasize total compensation opportunities consistent on average with our peer group of companies. Competitiveness of annual base pay and annual incentives is independent of stock performance. However, overall competitiveness of total compensation is generally contingent on long-term, stock-based compensation programs.

*Focus on Total Compensation.* In making decisions with respect to any element of an executive officer's compensation, the Committee obtains information on and considers the total compensation that may be awarded to the executive officer, including salary, annual bonus and long-term incentive compensation. These total compensation reports are prepared by our Human Resources department and present the dollar amount of each component of the named executive officers' compensation, including current cash compensation (base salary, past bonus and eligibility for future bonus), equity awards and other compensation. The overall purpose of these total compensation reports is to bring together, in one place, all of the elements of actual and potential compensation of our named executive officers, as well as information about wealth accumulation, so that the Compensation Committee may analyze both the individual 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 reports, the Committee determined that annual compensation amounts for our Chief Executive Officer and our other named executive officers remained generally consistent with the Committee's expectations. However, the Committee reserves the right to make changes that it believes are warranted.

*Internal Pay Equity.* Our core compensation philosophy is to pay our executive officers 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 (discussed below) 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. Each year our Human Resources department reports to the Compensation Committee the total compensation paid to our Chief Executive Officer and all other senior executives, which includes a comparison for internal pay equity purposes. Over time there have been variations in the comparative levels of compensation of executive officers and changes in the overall composition of the management team and the overall accountabilities of the individual executive officers; however, we and the Committee are satisfied that total compensation received by executive officers reflects an appropriate differential for executive compensation.

These principles apply to compensation policies for all of our executive officers 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.

## **Benchmarking**

When making compensation decisions, we also look at the compensation of our Chief Executive Officer and other executive officers 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, total wealth accumulation and the individual performance of the executive officers 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 Committee may elect to not 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 incentives and long-term incentive compensation. When reviewing compensation data in October 2010, we utilized data primarily from Radford

salary surveys, the Mercer U.S. Compensation Planning Survey, Towers Watson executive salary surveys and Stone Partners' Oilfield Manufacturing and Services Industry Executive Compensation Survey. The survey information from most of these resources covered a broad range of industries and companies. However, the 2010 Oilfield Manufacturing and Services Industry Executive Compensation Survey compiled proxy compensation data from 50 oilfield services companies and survey results from the following 19 oilfield services companies:

|                                    |                                |
|------------------------------------|--------------------------------|
| Baker Hughes, Inc.                 | National Oilwell Varco, Inc.   |
| Bristow Group, Inc.                | Newpark Resources, Inc.        |
| Cameron International Corp.        | Oil States International, Inc. |
| Complete Production Services, Inc. | Pioneer Drilling Company       |
| Core Laboratories NV               | Pride International, Inc.      |
| Exterran Holdings, Inc.            | Superior Energy Services, Inc. |
| Helmerich & Payne, Inc.            | TETRA Technologies, Inc.       |
| ION Geophysical Corporation        | Trico Marine Services, Inc.    |
| J-W Operating Company              | Vantage Drilling Company       |
| Logan Oil Tools, Inc.              |                                |

The overall results of the compensation surveys provide the starting point for our compensation analysis. We believe that the surveys 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. Beyond the survey numbers, we look extensively at a number of other factors, 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 corporate responsibility, 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 executive officers, 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, we will typically reevaluate our compensation levels within that employee group in order to ensure our competitiveness.

### Elements of Compensation

The primary components of our compensation are:

- base salary;
- performance-based annual incentive cash compensation; and
- long-term equity-based incentive compensation, such as stock options, restricted stock, restricted stock units and stock appreciation rights.

Below is a summary of each component:

#### **Base Salary**

*General.* The general purpose of base salary for our executive officers 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 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 executive officer'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. At December 31, 2010, our Chief Executive Officer's annual base salary was 43% higher than the annual base salary for the next highest-paid executive officer and 54% higher than the average annual base salary for all of our other executive officers. In addition, minimum base salaries for certain of our executive officers are determined by employment agreements with these officers.

Base salary is designed to provide an income level that is comparable to the income of executives in similar positions and with similar responsibilities at comparable companies. The base salaries for our executives reflect levels that we have concluded were appropriate based upon our general experience and market data. We do not intend for base salaries to be the vehicle for long-term capital and value accumulation for our executives.

*2009 and 2010 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 market levels. Salary increases for executive officers do not follow a preset schedule or formula but do take into account changes in the market and individual circumstances.

Commencing in late 2008, our business experienced a significant decline, due in large part to the global recession and the decline in oil and gas prices. We took a number of actions to reduce costs in our businesses and seek to improve our operating performance. In late 2008, we decided to defer any future base salary increases for employees. In April 2009, we implemented a base salary reduction program in a further effort to reduce our operating costs. Under the salary reduction program, base salaries for employees were reduced by certain percentages ranging from a 12% reduction in base salary for our Chief Executive Officer, Chief Financial Officer and Chief Operating Officer, a 10% reduction for other executives and management and a 5% reduction for most other employees. The program remained in effect until October 2009, when management and the Board determined that developments and outlook for our business had improved to the extent that the program should end. During 2010, we decided that employee base salaries would not be increased until early 2011. As a result, none of our executive officers received an increase in his base salary during 2009 or 2010. Each of our named executive officers received an increase in base salary in January 2011, as described below:

| <u>Named Executive Officer</u> | <u>Action</u>   |
|--------------------------------|---|
| Robert P. Peebler              | In late 2010, compensation surveys from Radford, Towers Watson and Stone Partners indicated that the weighted average 50th percentile for CEO base salary for surveyed companies with revenues less than \$1 billion was \$551,000. Based on the results of the reports, and in recognition of our performance to date and Mr. Peebler's unique experience, expertise, and capabilities, in January 2011 the Compensation Committee increased Mr. Peebler's annual base salary from \$575,000 to \$625,000. |
| R. Brian Hanson                | In late 2010, compensation surveys from Radford, Towers Watson and Stone Partners indicated that the weighted average 50th percentile for CFO base salary for surveyed companies with revenues less than \$1 billion was \$303,000. Based on the results of the reports, and in recognition of Mr. Hanson's capabilities and achievements, in January 2011 the Compensation Committee increased Mr. Hanson's annual base salary from \$327,000 to \$353,000.  |

**Named Executive Officer****Action**

|                    |   |
|--------------------|---|
| Nikolaos Bernitsas | In late 2010, compensation surveys from Radford and Stone Partners indicated that the weighted average 50th percentile for business unit leader base salary for surveyed companies with revenues less than \$1 billion was \$278,000. Based on the results of the reports, and in recognition of Mr. Bernitsas' abilities and performance, in January 2011 the Compensation Committee increased Mr. Bernitsas' annual base salary from \$272,140 to \$310,000.      |
| David L. Roland    | In late 2010, compensation surveys from Radford, Towers Watson and Stone Partners indicated that the weighted average 50th percentile for General Counsel base salary for surveyed companies with revenues less than \$1 billion was \$268,000. Based on the results of the reports, and in recognition of Mr. Roland's experience and expertise, in January 2011 the Compensation Committee increased Mr. Roland's annual base salary from \$270,000 to \$286,000. |
| Ken Williamson     | In late 2010, compensation surveys from Radford and Stone Partners indicated that the weighted average 50th percentile for business unit leader base salary for surveyed companies with revenues less than \$1 billion was \$278,000. Based on the results of the reports, and in recognition of Mr. Williamson's expertise and capabilities, in January 2011 the Compensation Committee increased Mr. Williamson's annual base salary from \$272,712 to \$300,000. |

**Annual Incentive Compensation**

Our employee annual bonus incentive plan is intended to promote the achievement each year of company performance objectives and performance objectives of the employee's particular business unit, and to recognize those employees who contributed to the company's achievements. The plan provides cash compensation that is at-risk on an annual basis and is contingent on achievement of annual business and operating objectives and individual performance. The plan provides all participating employees the opportunity to share in the company's performance through the achievement of established financial and individual objectives. The financial and individual objectives within the plan are intended to measure an increase in the value of our company and, in turn, our stock.

In recent years, we have adopted an annual incentive plan with regard to each year. Performance under the annual incentive plan is measured with respect to the designated plan fiscal year. Payments under the plan are paid in cash in an amount reviewed and approved by the Compensation Committee and are ordinarily made in a single installment in the first quarter following the completion of a fiscal year, after the financial results for that year have been determined.

Our annual incentive plan is usually consistent with our operating plan for the same year. In late 2009, we prepared a consolidated company operating budget for 2010 and individual operating budgets for each operating unit. The budgets took into consideration market opportunities, customer and sale opportunities, technology enhancements for new products, product manufacturing and delivery schedules and other operating factors. The Board of Directors analyzed the proposed budgets with management extensively and, after analysis and consideration, the Board approved the consolidated 2010 operating plan. During late 2009 and early 2010, our Chief Executive Officer worked with our Human Resources department and members of senior management to formulate our 2010 incentive plan, consistent with the 2010 operating plans approved by the Board.

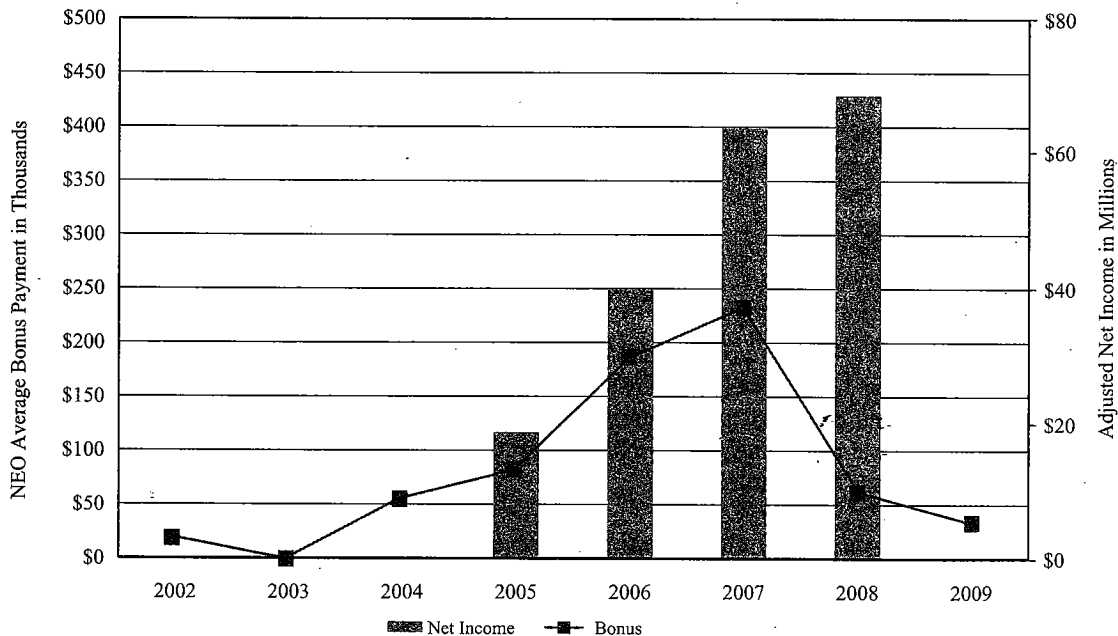
At the beginning of 2010, the Compensation Committee approved our 2010 annual incentive plan for executives and certain designated non-executive employees. The computation of awards generated under the plan is required to be approved by the Committee. In February 2011, the Committee reviewed the company's actual performance against each of the plan performance goals established at the beginning of the year and evaluated each individual's performance during the preceding year. The results of operations of the company



for that year and individual performance evaluations determined the appropriate payout under the annual incentive plan.

The Compensation Committee has discretion in circumstances it determines are appropriate to authorize discretionary incentive compensation awards that might exceed amounts that would otherwise be payable under the terms of the incentive plan. These discretionary awards can be payable in cash, stock options, restricted stock, restricted stock units, stock appreciation rights or a combination thereof. Any stock options, restricted stock or restricted stock units awarded would be granted under one of our existing long-term equity compensation plans. Any stock appreciation rights awarded would be granted under our Stock Appreciation Rights Plan. The Committee also has the discretion, in appropriate circumstances, to grant a lesser incentive award, or no incentive award at all, under the incentive plan. The Committee intends to review our annual incentive compensation program annually to ensure that the key elements of the program continue to meet the objectives described above.

As described above, our cash incentive plans are designed to track consistently with the financial performance of our company. The general intent of the plans is to reward key employees when the company performs well and not reward them when the company does not perform well. The graph shown below illustrates how the amount of the average annual incentive plan cash payment to named executive officers has varied over the years in relation to our financial performance. As clearly demonstrated in the graph, in most years when company financial performance is strong, incentive payments are relatively higher. Likewise, when our financial performance is relatively weaker, incentive payments are low. In 2008, we achieved an improved financial performance over the previous year, but incentive payments were relatively low because we did not achieve our internal financial and growth objectives. This demonstrates a clear and consistent link between our executive officer compensation and our performance.



Below is a general description of our 2010 incentive plan and a general summary of the company performance criteria applicable to the plan:

#### 2010 Incentive Plan

The purpose of the 2010 incentive plan was to:

- provide an incentive for our participating employees to achieve their highest level of individual and team performance in order to accomplish our company's 2010 strategic and financial goals, and
- reward the employees for those achievements and accomplishments.

Designated employees, including our named executive officers, were eligible to participate in our 2010 incentive plan. The 2010 incentive plan was designed to equate the size of the incentive award to the performance of the individual participant and the performance of our company as a whole. Every participating named executive officer had the opportunity to earn an incentive payment based on their performance against criteria as defined by our Chief Executive Officer, and achievement of our company's performance against designated consolidated financial objectives. Award determinations for the named executive officers under the plan were also based on evaluations of employee performance by our Chief Executive Officer. Under the 2010 incentive plan, 25% of the funds allocated for distribution were available to award to eligible employees regardless of the company's 2010 financial performance, and 75% of the funds were available for distribution to eligible employees only to the extent the company satisfied the designated 2010 financial performance criteria. As a result, the amount of total dollars available for distribution under the incentive plan was largely dependent on the company's achievement of the pre-defined financial objectives.

As reported in the chart below, our 2010 incentive plan established a 2010 target consolidated operating income performance goal. The Committee selected consolidated operating income as the most appropriate performance goal for our incentive plan because of its direct correlation with the interests of our stockholders and our overall company performance. Under the plan, every participating named executive officer other than our Chief Executive Officer had the opportunity to earn up to 100% of his base salary depending on performance of our company against the designated performance goal and performance of the executive against personal criteria determined at the beginning of 2010 by our Chief Executive Officer. Under separate terms approved by the Compensation Committee and contained in his employment agreement, our Chief Executive Officer participated in the plan with potential to earn a target incentive payment of 75% of his base salary, depending on achievement of the company's target consolidated performance goal and pre-designated personal critical success factors, and a maximum of 150% of his base salary upon achievement of the maximum consolidated performance goal and the personal critical success factors.

*Performance Criteria.* In 2010, the Compensation Committee approved the following corporate consolidated operating income performance criteria for consideration of bonus awards to the named executive officers and other covered employees under the 2010 incentive plan:

| <u>Threshold<br/>Operating Income</u> | <u>Target<br/>Operating Income</u> | <u>Maximum<br/>Operating Income</u> |
|---------------------------------------|------------------------------------|-------------------------------------|
| \$31.031 million                      | \$38.788 million                   | \$46.942 million                    |

Where an employee is primarily involved in a particular business unit, the financial performance criteria under our incentive plan are heavily weighted toward the operational performance of the employee's business unit rather than consolidated company performance. All of our named executive officers have broader corporate responsibility; as a result, their performance goals are heavily weighted toward the consolidated performance of the company as a whole.

The "Non-Equity Incentive Plan Compensation" column of our 2010 Summary Compensation Table below reflects the payments that our named executive officers earned and received under our 2010 incentive plan, and the "Bonus" column of the same table reflects any discretionary bonus payments received by our named executive officers during 2010. During 2010, on a consolidated basis, we achieved consolidated operating income of \$52.8 million. Because on a consolidated basis we exceeded our financial objectives in 2010 under our 2010 incentive plan, the named executive officers and many other eligible executives and employees generally received a payout of bonus payments under the incentive plan. In addition, when determining bonus payments to be made for 2010, the Compensation Committee evaluated company performance during the year and specifically the achievement of certain business objectives that the Board considered to be critical to the company's success in 2010. Specifically, the Compensation Committee noted that in March 2010 the company successfully completed its joint venture transactions with BGP and related credit refinancing, which was considered strategically important for the company. In addition, in early 2010, the Committee awarded discretionary bonus payments to certain of our executive officers in recognition of their critical roles and efforts in achieving the timely completion of the transactions with BGP.

In addition to overall company performance, when considering the discretionary bonuses and the 2010 incentive plan bonus payments paid to our named executive officers, the Compensation Committee also considered the individual performances and accomplishments of each officer. For example, when considering the bonus payments paid to Mr. Peebler, among the factors the Committee took into consideration were Mr. Peebler's leadership in our company's successful negotiation and completion of our joint venture with BGP and our company's strong financial and operating performance during 2010. When considering the bonus payments for Mr. Hanson, among the factors the Committee took into consideration were Mr. Hanson's critical involvement in the completion of the BGP joint venture and Mr. Hanson's leadership in completing several key finance transactions during 2010, including the completion of a refinancing of most of the Company's debt in connection with the completion of the BGP joint venture. When considering the bonus payment for Mr. Bernitsas, among the factors the Committee took into consideration were the strong operating and financial performance of the data processing group during 2010. When considering the bonus payments for Mr. Roland, among the factors the Committee took into consideration were Mr. Roland's involvement in the completion of the BGP joint venture and Mr. Roland's leadership in securing several major litigation judgments that our company had pursued against certain of our competitors. When considering the bonus payment for Mr. Williamson, among the factors the Committee took into consideration were the strong operating and financial performance of the Integrated Seismic Solutions group during 2010.

In February 2011, the Compensation Committee approved our 2011 annual incentive plan. The general structure of our 2011 annual incentive plan is similar to that of our 2010 incentive plan. The particular performance goals designated under our 2011 plan are higher than those designated for our 2010 plan, but reflect our confidential strategic plans, and cannot be disclosed at this time because it would provide our competitors with confidential information regarding our market and segment outlook and strategies. We are currently unable to determine how difficult it will be for our company to meet the designated performance goals under our 2011 plan. Generally, the Committee attempts to establish the threshold, target and maximum levels such that the relative difficulty of achieving each level is approximately consistent from year to year.

#### **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, in most years long-term incentives comprise a large portion of the total compensation package for executive officers and key employees. As reflected in our 2010 Summary Compensation Table below, the long-term incentives received by each of our named executive officers as a percentage of their respective total compensation during 2010 were as follows: Mr. Peebler — 50%; Mr. Hanson — 4%; Mr. Bernitsas — 47%; Mr. Roland — 23% and Mr. Williamson — 44%.

For 2010, there were three forms of long-term incentives utilized for executive officers and key employees: stock options, restricted stock, and restricted stock units. For 2011, we have again recommended that stock options, restricted stock and restricted stock units be the only forms of long-term equity-based incentives to be utilized for executive officers and key employees. Our long-term incentive plans have provided the principal method for our executive officers to acquire equity or equity-linked interests in our company.

Of the total stock option or restricted stock employee awards made by ION during 2010, 61% were in the form of stock options and 39% were in the form of restricted stock or restricted stock units.

*Stock Options.* Under our equity plans, stock options may be granted having exercise prices equal to either the closing price of our stock on the date before the date of grant or the average of the high and low sale prices of our stock on the date of grant, depending on the terms of the particular stock option plan that governs the award. 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 stockholders. Our stock options generally vest ratably over four years, based on continued employment. Prior to the exercise of an option, the holder has no rights as a stockholder 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.

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 stockholder value. Stock options also allow our executive officers 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 stockholder 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. In 2010, a total of 95 employees received option awards, covering 1,214,900 shares of common stock. In 2010, the named executive officers received option awards for a total of 250,000 shares, or approximately 21% of the total options awarded in 2010.

*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 stockholder value. Vesting of restricted stock and restricted stock units typically occurs ratably over three years, based solely on continued employment of the recipient-employee. In 2010, 114 employees received restricted stock or restricted stock unit awards, covering an aggregate of 762,680 shares of restricted stock and shares underlying restricted stock units. The named executive officers received awards totaling 348,730 shares of restricted stock in 2010, or approximately 46% of the total shares of restricted stock awarded in 2010.

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 certain foreign employees for the foreseeable future.

*Cash-Settled Stock Appreciation Rights.* In 2008, we awarded cash-settled stock appreciation rights to Mr. Hanson as a special grant in lieu of grants of stock options to provide further emphasis on our long-term performance and to further align his compensation more directly with stockholder value. Full vesting of all of the stock appreciation rights awarded to Mr. Hanson occurs after three years, based solely on his continued employment. No stock appreciation rights were awarded in 2009 or 2010.

The Compensation Committee intends to review both the annual incentive compensation program and the long-term incentive program annually to ensure that their key elements continue to meet the objectives described above.

*Approval and Granting Process.* As described above, the Compensation Committee reviews and approves all stock option, restricted stock, restricted stock unit and stock appreciation right awards made to executive officers, regardless of amount. With respect to equity compensation awarded to employees other than executive officers, the Committee reviews and approves all grants of restricted stock, stock options and restricted stock units above 5,000 shares, generally based upon the recommendation of our Chief Executive Officer. Committee approval is required for any grant to be made to an executive officer in any amount. The Committee has granted to our Chief Executive Officer the authority to approve grants to any employee other than an executive officer 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 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 restricted stock, restricted stock units, stock options and stock appreciation rights 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 that would normally be anticipated to contain earnings announcements or other announcements of material events. 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.

With the exception of significant promotions, new hires or unusual circumstances, we generally make most awards of equity compensation on December 1 of each year. This date was selected because (i) it enables us to consider individual performance eleven months into the year, (ii) it simplifies the annual budget process by having the expense resulting from the equity award occur late in the year, (iii) the date is approximately three months before the date that we normally pay any annual incentive bonuses and (iv) generally speaking, December 1 is not close to any dates that would normally be anticipated to contain earnings announcements or other announcements of material events. During 2010, however, certain of our named executive officers who are in charge of our principal business units received special grants of stock options on March 1, 2010 to (i) further increase the percentage of their compensation that emphasizes long-term performance and is directly tied to creation of stockholder value and (ii) promote retention.

#### **Clawback Policy**

We have implemented a Compensation Recoupment Policy (commonly referred to as a "clawback" policy). The policy provides that, in the event of a restatement of our financial results due to material noncompliance with applicable financial reporting requirements, the Board may, 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 incentive awards, paid to current or former executive officers 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**

When analyzing the total compensation received by our Chief Executive Officer and other executives, the Compensation Committee also considers whether the executives should be provided additional compensation in the form of perquisites through the availability of benefits that are convenient for the executives to use when faced with the demands of their positions. Our executives have concluded that most perquisites traditionally offered to executives of similarly-sized companies are unnecessary for our company. As a result, perquisites and any other similar personal benefits offered to executive officers are substantially the same as those offered to our general salaried employee population. These benefits include access to medical and dental insurance, life insurance, disability insurance, vision plan, charitable gift matching (up to designated limits), 401(k) plan, flexible spending accounts for healthcare and dependent care and other customary employee benefits. We also provide all employees with a company match of certain levels of 401(k) contributions; however, as part of our cost-cutting measures taken as a result of the economic recession and decline in oil and gas prices, in April 2009 we temporarily discontinued the company match for all employees, including executive officers, for a period of approximately six months. Business-related relocation benefits are generally reimbursed but are individually negotiated when they occur. 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 Committee believes that our company's performance-based bonus and equity programs create incentives for employees to create long-term stockholder value. The Committee has discussed the concept of risk as it relates to the company's compensation programs, and the Committee has concluded that the company's 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 Committee believes that the variable elements of compensation are a sufficient percentage of overall compensation to motivate executives to produce superior short- and long-term corporate results, while the fixed element is also sufficiently high 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 Committee believes drive long-term stockholder value and ensure the continued viability of the company. Moreover, the 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 named executive officer other than our Chief Executive Officer is not expected to exceed 100% 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 150% 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.
- 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 generally become exercisable over a four-year period 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 generally becomes exercisable over a three-year period, again encouraging executives to look to long-term appreciation in equity values.
- Senior executives, including our named executive officers, 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 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 company stock.
- We do not permit any of our executive officers or directors to enter into any derivative or hedging transactions on 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.
- We have implemented 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 bonuses and long term incentive awards, paid to current or former executive officers

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.

### **Indemnification of Directors and Executive Officers**

Our Bylaws provide certain rights of indemnification to our directors and employees (including our executive officers) 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 of Directors:

In 2002, we also entered into indemnity agreements with certain of our outside directors that provide for us to indemnify the director in connection with any proceeding in which the director is involved by reason of the fact that the director is or was a director of the company. In order to be indemnified under these agreements, the director must have acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the company and, in the case of a criminal proceeding, had no reasonable cause to believe that his or her conduct was unlawful.

As discussed below, we have also entered into employment agreements with certain of our executive officers that provide for us to indemnify the executive to the fullest extent permitted by our Certificate of Incorporation and 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 executive officers) enhances our ability to deliver superior stockholder returns by increasing the alignment between the interests of our employees and our stockholders. Accordingly, the Board has adopted stock ownership requirements applicable to each of our senior executives, including our named executive officers. 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 with 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

In recommending these requirements to the Board for adoption, the Governance Committee considered our historical grant practices, historical retention practices for senior executives, and value of current holdings by our senior executives, and concluded that this policy would meet our desired objectives. As of the date of this proxy statement, all of our senior executives were in compliance with the stock ownership requirements.

We do not permit any of our executive officers 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 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. 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 and our four other

most highly compensated executive officers — unless that compensation qualifies as “performance-based” compensation. Overall, the Committee seeks to balance its objective of ensuring an effective compensation package for the executive officers 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.

In making its compensation decisions, the Committee has considered the limit of deductibility within the requirements of Internal Revenue Code Section 162(m) and its related Treasury regulations. As a result, the Committee has designed much of the total compensation packages for the executive officers to qualify for the exemption of “performance-based” compensation from the deductibility limit. However, the 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 Committee considers the tax consequences and determines that those elements are in our best interests. To maintain flexibility in compensating executive officers in a manner designed to promote varying corporate goals, we have not adopted a policy that all compensation must be deductible.

Certain payments to our named executive officers under our 2010 annual incentive plan may not qualify as performance-based compensation under Section 162(m) because the awards are calculated and paid in a manner that may not meet the requirements under Section 162(m) and the related Treasury regulations. Given the rapid changes in our business during 2010 and those that we foresee for the remainder of 2011, we believe that we are better served in implementing a plan that provides for adjustments and discretionary elements for our senior executives’ incentive compensation for 2011, rather than ensuring that we implement all of the requirements and limitations under Section 162(m) into these incentive plans.

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 the executive officer’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 stock options exercised. We do not pay or reimburse any executive officer 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.

## COMPENSATION COMMITTEE REPORT

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis included in this proxy statement with management of ION. Based on such review and discussions, the Compensation Committee has recommended to the Board of Directors 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, 2010.

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



## SUMMARY COMPENSATION TABLE

The following table summarizes the compensation paid to or earned by our named executive officers, which are our Chief Executive Officer, Chief Financial Officer and three other most highly compensated executive officers, at December 31, 2010:

| Name and<br>Principal Position                                       | Year | Salary (\$) | Bonus<br>(\$) | Stock<br>Awards<br>(\$) | Option<br>Awards<br>(\$) | Non-Equity<br>Incentive Plan<br>Compensation<br>(\$) | All Other<br>Compensation<br>(\$) | Total (\$) |
|--|------|-------------|---------------|-------------------------|--------------------------|--|-----------------------------------|------------|
| Robert P. Peebler . . . . .  | 2010 | 575,000     | 225,000       | 1,684,945               | —                        | 862,500  | —                                 | 3,347,445  |
| Chief Executive<br>Officer and Director                              | 2009 | 559,961     | —             | 582,974                 | —                        | 75,000   | 3,317                             | 1,221,252  |
|  | 2008 | 536,539     | —             | 417,931                 | 349,200                  | 110,000  | 3,207                             | 1,416,877  |
| R. Brian Hanson . . . . .  | 2010 | 327,000     | 150,000       | 35,376                  | —                        | 327,000  | 6,200                             | 845,576    |
| Executive Vice<br>President and Chief<br>Financial Officer           | 2009 | 318,447     | —             | 408,000                 | —                        | 40,000   | 2,601                             | 769,048    |
|  | 2008 | 306,231     | —             | 45,000                  | 135,800                  | 80,000   | 7,750                             | 574,781    |
| Nikolaos Bernitsas . . . . .   | 2010 | 272,140     | —             | 71,900                  | 376,750                  | 220,000  | 3,864                             | 944,654    |
| Senior Vice President,<br>GXT Imaging Solutions                      |      |             |               |                         |                          |  |                                   |            |
| David L. Roland . . . . .  | 2010 | 270,000     | 125,000       | 71,900                  | 106,000                  | 185,000  | 5,919                             | 763,819    |
| Senior Vice President,<br>General Counsel and<br>Corporate Secretary | 2009 | 265,847     | —             | 163,200                 | 87,475                   | 30,000   | 2,492                             | 549,014    |
| Ken Williamson . . . . .   | 2010 | 272,712     | —             | 71,900                  | 355,550                  | 272,712  | 5,978                             | 978,852    |
| Senior Vice President,<br>Integrated Seismic Solutions               |      |             |               |                         |                          |  |                                   |            |

### *Discussion of Summary Compensation Table*

Stock Awards Column. 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 2000 Restricted Stock Plan, 2004 Long-Term Incentive Plan, and April 2005 Inducement Equity Program. 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. In addition to the grants and awards in 2010 described in the “2010 Grants of Plan-Based Awards” table below:

- Pursuant to his employment agreement, Mr. Peebler received:
  - an award of 31,447 shares of restricted stock on March 1, 2008, which is equal to \$500,000 (the amount of cash incentive plan compensation that Mr. Peebler earned for fiscal 2007) divided by \$15.90, which was the average of the closing sales price per share on the NYSE of our shares of common stock for the last ten business days of 2007. These shares of restricted stock vested in full on March 1, 2010.
  - an award of 36,424 shares of restricted stock on March 1, 2009, which is equal to \$110,000 (the amount of cash incentive plan compensation that Mr. Peebler earned for fiscal 2008) divided by \$3.02, which was the average of the closing sales price per share on the NYSE of our shares of common stock for the last ten business days of 2008. These shares of restricted stock vested in full on March 1, 2011. See “— Employment Agreements — Robert P. Peebler” below.
- In addition, on December 1, 2009, Mr. Peebler received an award of 100,000 shares of restricted stock.
- Mr. Hanson received an award of 15,000 shares of restricted stock in December 2008 and an award of 75,000 shares of restricted stock in December 2009.
- Mr. Roland received an award of 30,000 shares of restricted stock in December 2009.

*Option Awards Column.* All of the amounts shown in the "Option Awards" column reflect stock options and cash-settled stock appreciation rights ("SARs") granted under our 2000 Long-Term Incentive Plan, 2003 Stock Option Plan, 2004 Long-Term Incentive Plan and April 2005 Inducement Equity Program and our Stock Appreciation Rights Plan, respectively. In each case, unless stated otherwise below, the options vest 25% each year over a four-year period and the SARs will vest in full on December 1, 2011. The values contained in the Summary Compensation Table are based on the grant date fair value of all awards (excluding any impact of assumed forfeiture rates). For a discussion of valuation assumptions, see Note 15, *Stockholders' 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, 2010. All of the exercise prices for the options and SARs 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 2010 described in the "2010 Grants of Plan-Based Awards" table below:

- In December 2008, Mr. Peebler received an award of options to purchase 180,000 shares of our common stock for an exercise price of \$3.00 per share.
- In December 2008, Mr. Hanson received an award of options to purchase 70,000 shares of our common stock for an exercise price of \$3.00 per share and 140,000 cash-settled SARs having an exercise price of \$3.00 per SAR.
- In December 2009, Mr. Roland received an award of options to purchase 25,000 shares of our common stock for an exercise price of \$5.44 per share.

*Other Columns.* All payments of non-equity incentive plan compensation reported for 2010 were made in February 2011 with regard to the 2010 fiscal year and were earned and paid pursuant to our 2010 incentive plan. On March 31, 2010, each of Messrs. Peebler, Hanson and Roland also received discretionary bonus awards related to our successful and timely completion of various transactions related to our land seismic equipment joint venture with BGP. In making the discretionary bonus awards, among the factors considered by the Compensation Committee was Mr. Peebler's leadership during the negotiation and completion of the joint venture transactions, Mr. Hanson's critical involvement in the completion of the transactions and the related refinancing of most of our debt, and Mr. Roland's contributions to the completion of the transactions. See "*Compensation Discussion and Analysis — Elements of Compensation — Annual Incentive Compensation*" above.

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. ION provides 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.

## 2010 GRANTS OF PLAN-BASED AWARDS

| Name                     | Grant Date | Estimated Future Payouts Under Non-Equity Incentive Plan Awards(1)(2) |             |              | All Other Stock Awards: Number of Shares of Stock or Units (#)(3) | All Other Option Awards: Number of Securities Underlying Options (#)(4) | Exercise or Base Price of Option Awards (\$/Sh) | Grant Date Fair Value of Stock and Option Awards \$(5) |
|--------------------------|------------|---|-------------|--------------|---|---|---|--|
|                          |            | Threshold (\$)  | Target (\$) | Maximum (\$) |   |   |   |  |
| Robert P. Peebler(6) . . | —          | —   | 431,250     | 862,500      | —   | —   | —   |  |
|                          | 3/1/10     | —   | —           | —            | 12,215  | —   | 55,945  |  |
|                          | 6/1/10     | —   | —           | —            | 300,000   | —   | 1,629,000                                       |  |
| R. Brian Hanson(7) . .   | —          | 40,875  | 163,500     | 327,000      | —   | —   | —   |  |
|                          | 6/1/10     | —   | —           | —            | 6,515   | —   | 35,376  |  |
| Nikolaos Bernitsas . . . | —          | 34,018  | 136,070     | 272,140      | —   | —   | —   |  |
|                          | 3/1/10     | —   | —           | —            | —   | 75,000  | 4.58  |  |
|                          | 12/1/10    | —   | —           | —            | 10,000  | 40,000  | 7.19  |  |
| David L. Roland . . . .  | —          | 33,750  | 135,000     | 270,000      | —   | —   | —   |  |
|                          | 12/1/10    | —   | —           | —            | 10,000  | 25,000  | 7.19  |  |
| Ken Williamson . . . . . | —          | 34,089  | 136,356     | 272,712      | —   | —   | —   |  |
|                          | 3/1/10     | —   | —           | —            | —   | 75,000  | 4.58  |  |
|                          | 12/1/10    | —   | —           | —            | 10,000  | 35,000  | 7.19  |  |

(1) Reflects the estimated threshold, target and maximum award amounts for grants under our 2010 incentive plan to our named executive officers. Under the plan, every participating executive other than our Chief Executive Officer had the opportunity to earn a maximum of 100% of his or her base salary depending on performance of the company against the designated performance goal, and performance of the executive against personal performance criteria. Under separate terms approved by the Compensation Committee and contained in his employment agreement, Mr. Peebler, as our Chief Executive Officer, participated in the plan with the potential to earn a target incentive payment of 75% of his base salary, depending on achievement of the company's target consolidated performance goal and pre-designated personal critical success factors, and a maximum of 150% of his base salary upon achievement of the maximum consolidated performance goal and the personal critical success factors. Mr. Peebler'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 — Annual Incentive Compensation" above. For actual payout amounts to our named executive officers under our 2010 incentive plan, see the "Non-Equity Incentive Plan Compensation" column in the "Summary Compensation Table" above.

(2) Our company does not offer or sponsor any "equity incentive plans" (as that term is defined in Item 402(a) of Regulation S-K) for employees.

(3) All stock awards reflect the number of shares of restricted stock granted under our 2004 Long-Term Incentive Plan. 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.

(4) All amounts reflect awards of stock options granted under our 2004 Long-Term Incentive Plan. In each case, unless stated otherwise below, the options vest 25% each year over a four-year period. All of the exercise prices for the options reflected in the above chart equal or exceed the fair market value per share of ION common stock on the date of grant (on February 26, 2010, the last completed trading day prior to the March 1, 2010 grant date, the closing price per share on the NYSE was \$4.58, and on November 30, 2010, the last completed trading day prior to the December 1, 2010 grant date, the closing price per share on the NYSE was \$7.19).

- (5) 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 15, *Stockholders' 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, 2010.
- (6) Pursuant to his employment agreement, on March 1, 2010, Mr. Peebler received an award of 12,215 shares of restricted stock, which is equal to \$75,000 (the amount of cash incentive plan compensation that Mr. Peebler earned for fiscal 2009) divided by \$6.14, which was the average of the closing sales price per share on the NYSE of our shares of common stock for the last ten business days of 2009. The shares of restricted stock will vest on March 1, 2012.
- Pursuant to his employment agreement, on June 1, 2010, Mr. Peebler also received an award of 300,000 shares of restricted stock. See “— *Employment Agreements — Robert P. Peebler*” below, for a description of the grant and the cliff vesting schedule for the shares.
- (7) Pursuant to his employment agreement, on June 1, 2010, Mr. Hanson received an award of 6,515 shares of restricted stock, which is equal to \$40,000 (the amount of cash incentive plan compensation that Mr. Hanson earned for fiscal 2009) divided by \$6.14, which was the average of the closing sales price per share on the NYSE of our shares of common stock for the last ten business days of 2009. The shares of restricted stock will vest on June 1, 2013. See “— *Employment Agreements — R. Brian Hanson*” below.

### **Employment Agreements**

We enter into employment agreements with senior officers, including some of the named executive officers, when the Compensation Committee determines 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 the Committee determines 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. As of December 31, 2010, the only executives with employment agreements were Mr. Peebler, Mr. Hanson and Mr. Roland.

The following discussion describes the material terms of the employment agreements:

#### **Robert P. Peebler**

Our employment agreement with Mr. Peebler, dated March 31, 2003, provided that Mr. Peebler would serve as President and Chief Executive Officer for a five-year term, unless sooner terminated. We amended Mr. Peebler's employment agreement in September 2006, February 2007, August 2007, January 2009 and June 2010, to extend the term of the agreement (most recently) to December 31, 2012, and to make certain other changes. This description reflects Mr. Peebler's employment agreement as so amended, except where the context requires otherwise.

Under the agreement, Mr. Peebler is entitled to an annual base salary of at least \$500,000, and to participate in all of our employee benefit plans available to senior executives at a level commensurate with his position. Mr. Peebler's annual base salary is currently \$625,000.

Mr. Peebler's agreement currently provides that he will be eligible to participate in our annual incentive 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. His annual bonus will be earned upon achievement of our consolidated operating income performance targets applicable to the senior leadership bonus plan for the relevant year, and Mr. Peebler's critical success factors as determined in advance by the Compensation Committee.

Under his original employment agreement, Mr. Peebler received a grant in 2003 of an option to purchase 1,325,000 shares of our common stock at \$6.00 per share, which exercise price exceeded the market price of our shares on the date of grant by 60% (at March 31, 2003, the date of his grant, the closing sales price per

share of our common stock on the NYSE was \$3.60). Mr. Peebler's 2006 amendment to his employment agreement provided that he was entitled to receive (a) in 2007, an award of shares of restricted common stock based on the amount of the annual incentive plan bonus earned by him for 2006, vesting on the date that is the second anniversary of the date of the award; (b) in 2007, an award of shares of restricted stock equivalent in value to his annual base salary, vesting on the date that is the third anniversary of the date of the award; and (c) in years following 2007 through the end of the term of his agreement, an award of shares of restricted stock based on the amount of the annual incentive plan bonus, if any, earned by Mr. Peebler for the preceding year, vesting on the date that is the second anniversary of the date of the award, and additional stock options as may be determined by the Compensation Committee.

In June 2010, Mr. Peebler's employment agreement was amended to, among other things, terminate the above annual grant award provisions in the agreement and instead provide for a one-time grant to Mr. Peebler on June 1, 2010, of 300,000 shares of our restricted stock. The 300,000 shares of restricted stock will cliff vest on the date that is the earliest of:

- i. June 1, 2013;
- ii. The date that a "Change in Control" occurs (as defined in his employment agreement);
- iii. The date of Mr. Peebler's termination of employment due to his "Disability" (as defined in his employment agreement) or death;
- iv. The date of Mr. Peebler's "Retirement" (as defined in our 2004 Long-Term Incentive Plan);
- v. The date of Mr. Peebler's voluntary termination of employment from ION at any time after his successor is appointed; or
- vi. The date that Mr. Peebler's employment is terminated (a) by us for no reason or for any reason other than "Cause," Mr. Peebler's death or Disability, or the expiration of the term of the employment agreement, or (b) by Mr. Peebler for "Good Reason" (as defined in his employment agreement).

The shares of restricted stock will be subject to restrictions on disposition and, during the period that the shares of restricted stock are unvested, Mr. Peebler will be entitled to the same voting rights as all other holders of common stock.

We may at any time terminate our employment agreement with Mr. Peebler for "Cause" if Mr. Peebler (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. Peebler suffers permanent and total disability for a period of at least 180 consecutive days, or if Mr. Peebler dies. Mr. Peebler may terminate his employment agreement for "Good Reason" if we breach any material provision of the agreement, we assign to Mr. Peebler any duties materially inconsistent with his position, we remove him from his current office, materially reduce his duties, functions, responsibilities or 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 30 miles.

In his agreement, Mr. Peebler 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. We also agreed to indemnify Mr. Peebler to the fullest extent permitted by our Certificate of Incorporation and Bylaws, and to provide him coverage under our directors' and officers' liability insurance policies to the same extent as our other executives.

Mr. Peebler's agreement further provides that, upon his termination of employment due to (i) his "Retirement" (as that term is defined in his agreement) or (ii) his voluntary termination of employment from the Company at any time after his successor is appointed, Mr. Peebler will serve as a non-employee consultant to the Board of Directors of the Company for a term of five years for a consulting fee of \$150,000 per year.

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

#### **R. Brian Hanson**

Our employment agreement with Mr. Hanson became effective in May 2006. We amended Mr. Hanson's employment agreement in August 2007 and in December 2008. This description reflects Mr. Hanson's employment agreement as so amended.

The agreement provides for Mr. Hanson to serve as our Executive Vice President and Chief Financial Officer for an initial term of three years, with automatic two-year renewals thereafter. Any change of control of our company will cause the remaining term of Mr. Hanson's employment agreement to automatically adjust to a term of two 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 \$275,000 per year and be eligible to receive an annual performance bonus under our incentive compensation plan, with a target plan incentive amount equal to 50% of his annual base salary and an opportunity to earn up to 100% of his annual base salary. Mr. Hanson's annual base salary is currently \$353,000.

Under the agreement, in May 2006 Mr. Hanson was granted 75,000 shares of restricted stock and options to purchase 75,000 shares of our common stock. The agreement also provided that Mr. Hanson is entitled to receive (a) in 2010, an award of shares of restricted stock based on the amount of the annual incentive plan bonus earned by him for 2009; and (b) in years following 2010 through the end of the term of his agreement, an award of shares of restricted stock based on the amount of the annual incentive plan bonus, if any, earned by Mr. Hanson with respect to the preceding year. The shares of restricted stock will be subject to restrictions on disposition and will vest on the date that is the third anniversary date of the date of the award. During the period that the shares of restricted stock are unvested, Mr. Hanson will be entitled to the same voting rights as all other holders of common stock. In the agreement, we also agreed to indemnify Mr. Hanson to the fullest extent permitted by our Certificate of Incorporation and Bylaws, and to provide him coverage under our directors' and officers' liability insurance policies to the same extent as other company executives.

For a discussion of the provisions of Mr. Hanson's employment agreement regarding compensation to Mr. Hanson in the event of our change of control 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.

#### **David L. Roland**

Our employment agreement with Mr. Roland provides for Mr. Roland to serve as our Vice President, General Counsel and Corporate Secretary for an initial term of two years, with automatic one-year renewals thereafter. He will also be eligible to receive an annual performance bonus under our incentive compensation plan, with his target incentive compensation amount to be set at 50% of his annual base salary, and an opportunity under the plan to earn incentive compensation in an amount of up to 100% of his annual base salary. In the agreement, we also agreed to indemnify Mr. Roland to the fullest extent permitted by our Certificate of Incorporation and Bylaws, and to provide him coverage under our directors' and officers' liability insurance policies to the same extent as other company executives.

For a discussion of the provisions of Mr. Roland's employment agreement regarding compensation to him in the event of his termination without cause or for good reason, see "*Potential Payments Upon Termination or Change of Control — David L. Roland*" below.

## OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

The following table sets forth information concerning unexercised stock options (including SARs) and shares of restricted stock held by our named executive officers at December 31, 2010:

| Name                      | Option Awards(1)  |   |   |                            |                        | Stock Awards(2)   |   |   |  |
|---------------------------|---|---|---|----------------------------|------------------------|---|---|---|--|
|                           | Number of Securities Underlying Unexercised Options (#) Exercisable | Number of Securities Underlying Unexercised Options (#) Unexercisable | Equity Incentive Plan Awards: Number of Securities Underlying Unexercised 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 (\$)(3) | Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#) | Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested (\$) |
| Robert P. Peebler . . . . | 1,325,000   | —   | —   | 6.00                       | 3/31/2013              | 415,305   | 3,521,786   | —   | —  |
|                           | 90,000  | 90,000  |   | 3.00                       | 12/01/2018             |   |   |   |  |
| R. Brian Hanson . . . .   | 75,000  | —   | —   | 8.73                       | 5/22/2016              | 61,515  | 521,647   | —   | —  |
|                           | 20,000  | —   |   | 9.97                       | 9/01/2016              |   |   |   |  |
|                           | 45,000  | 15,000  |   | 15.43                      | 12/01/2017             |   |   |   |  |
|                           | 35,000  | 35,000  |   | 3.00                       | 12/01/2018             |   |   |   |  |
|                           | —   | 140,000(4)  |   | 3.00                       | 12/01/2018             |   |   |   |  |
| Nikolaos Bernitsas . . .  | 15,037  | —   | —   | 2.49                       | 4/30/2012              | 15,333  | 130,024   | —   | —  |
|                           | 30,000  | —   |   | 7.09                       | 6/14/2014              |   |   |   |  |
|                           | 35,000  | —   |   | 7.31                       | 8/02/2015              |   |   |   |  |
|                           | 30,000  | —   |   | 9.97                       | 9/01/2016              |   |   |   |  |
|                           | 15,000  | 5,000   |   | 15.43                      | 12/01/2017             |   |   |   |  |
|                           | 17,500  | 17,500  |   | 3.00                       | 12/01/2018             |   |   |   |  |
|                           | 6,250   | 18,750  |   | 5.44                       | 12/01/2019             |   |   |   |  |
|                           | —   | 75,000  |   | 4.58                       | 3/01/2020              |   |   |   |  |
|                           | —   | 40,000  |   | 7.19                       | 12/01/2020             |   |   |   |  |
| David L. Roland . . . .   | 15,000  | —   | —   | 9.84                       | 09/01/2014             | 33,333  | 282,664   | —   | —  |
|                           | 25,000  | —   |   | 7.31                       | 08/02/2015             |   |   |   |  |
|                           | 30,000  | —   |   | 9.97                       | 09/01/2016             |   |   |   |  |
|                           | 22,500  | 7,500   |   | 15.43                      | 12/01/2017             |   |   |   |  |
|                           | 7,500   | 15,000  |   | 3.00                       | 12/01/2018             |   |   |   |  |
|                           | 6,250   | 18,750  |   | 5.44                       | 12/01/2019             |   |   |   |  |
|                           | —   | 25,000  |   | 7.19                       | 12/01/2020             |   |   |   |  |
| Ken Williamson . . . . .  | 70,000  | —   | —   | 10.85                      | 12/01/2016             | 15,333  | 130,024   | —   | —  |
|                           | 12,000  | 4,000   |   | 15.43                      | 12/01/2017             |   |   |   |  |
|                           | 17,500  | 17,500  |   | 3.00                       | 12/01/2018             |   |   |   |  |
|                           | 12,500  | 37,500  |   | 2.83                       | 6/01/2019              |   |   |   |  |
|                           | 5,500   | 16,500  |   | 5.44                       | 12/01/2019             |   |   |   |  |
|                           | —   | 75,000  |   | 4.58                       | 3/01/2020              |   |   |   |  |
|                           | —   | 35,000  |   | 7.19                       | 12/01/2020             |   |   |   |  |

(1) All stock option information in this table relates to nonqualified stock options granted under our various stock plans and employment inducement programs. All of the options in this table, except for the options to purchase 1,325,000 shares held by Mr. Peebler, vest 25% each year over a four-year period. Under the terms of his employment agreement, on March 31, 2003, Mr. Peebler received a one-time grant of options to purchase 1,325,000 shares of our common stock at \$6.00 per share, which options vested in equal amounts monthly over a 3-year period commencing March 31, 2004. On March 31, 2003, the closing sale price per share of our common stock on the NYSE was \$3.60. See “— Employment Agreements — Robert P. Peebler” above.

(2) The amounts shown represent shares of restricted stock granted under our 2000 Restricted Stock Plan or 2004 Long-Term Incentive Plan. While unvested, the holder is entitled to the same voting rights as all other holders of common stock. Except for certain shares of restricted stock held by Mr. Peebler, in each case the grants of shares of restricted stock vest in one-third increments each year, over a three-year

period. On March 1, 2007, Mr. Peebler received an award of 37,425 shares of restricted stock, all of which shares vested on March 1, 2010. On March 1, 2008, Mr. Peebler received an award of 31,447 shares of restricted stock, all of which shares vested on March 1, 2010. On March 1, 2009, Mr. Peebler received an award of 36,424 shares of restricted stock, all of which shares vested on March 1, 2011. On March 1, 2010, Mr. Peebler received an award of 12,215 shares of restricted stock, all of which shares will vest on March 1, 2012. On June 1, 2010, Mr. Peebler received an award of 300,000 shares of restricted stock, all of which shares will vest on June 1, 2013 or upon the occurrence of certain other designated events. See “— *Employment Agreements — Robert P. Peebler*” above.

- (3) 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 \$8.48 (the closing price per share of our common stock on the NYSE on December 31, 2010).
- (4) The amounts shown reflect awards of cash-settled SARs granted to Mr. Hanson on December 1, 2008 under our Stock Appreciation Rights Plan. Mr. Hanson’s SARs will vest in full on December 1, 2011. See “— *Summary Compensation Table — Discussion of Summary Compensation Table*” above.

### 2010 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, 2010:

| Name                        | Option Awards                             |                                 | Stock Awards                             |                                 |
|-----------------------------|---|---------------------------------|--|---------------------------------|
|                             | Number of Shares Acquired on Exercise (#) | Value Realized on Exercise (\$) | Number of Shares Acquired on Vesting (#) | Value Realized on Vesting \$(1) |
| Robert P. Peebler(2) .....  | —   | —                               | 102,206                                  | 604,519                         |
| R. Brian Hanson(3) .....    | —   | —                               | 35,000                                   | 268,100                         |
| Nikolaos Bernitsas(4) ..... | —   | —                               | 4,666                                    | 35,742                          |
| David L. Roland(5) .....    | 7,500                                     | 31,500                          | 16,666                                   | 127,662                         |
| Ken Williamson(6) .....     | —   | —                               | 4,333                                    | 33,191                          |

- (1) The values realized upon vesting of stock awards contained in the table are based on the market value of ION common stock on the date of vesting.
- (2) The value realized by Mr. Peebler on the vesting of his restricted stock awards was calculated by multiplying (a) 68,872 shares by \$5.07 (the closing price per share of our common stock on the NYSE on his March 1, 2010 vesting date) and (b) 33,334 shares by \$7.66 (the closing price per share of our common stock on the NYSE on his December 1, 2010 vesting date).
- (3) The value realized by Mr. Hanson on the vesting of his restricted stock awards was calculated by multiplying 35,000 shares by \$7.66 (the closing price per share of our common stock on the NYSE on his December 1, 2010 vesting date).
- (4) The value realized by Mr. Bernitsas on the vesting of his restricted stock awards was calculated by multiplying 4,666 shares by \$7.66 (the closing price per share of our common stock on the NYSE on his December 1, 2010 vesting date).
- (5) The value realized by Mr. Roland on the vesting of his restricted stock awards was calculated by multiplying 16,666 shares by \$7.66 (the closing price per share of our common stock on the NYSE on his December 1, 2010 vesting date).
- (6) The value realized by Mr. Williamson on the vesting of his restricted stock awards was calculated by multiplying 4,333 shares by \$7.66 (the closing price per share of our common stock on the NYSE on his December 1, 2010 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, 2010, 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 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 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 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, 2010. 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, 2010, benefits paid to the named executive officer in fiscal 2010 and stock and option holdings of the named executive officer as of December 31, 2010. The summaries assume a price per share of ION common stock of \$8.48 per share, which was the closing price per share on December 31, 2010, 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 company's stock price, unforeseen future changes in our company's benefits and compensation methodology and the age of the executive.

### **Robert P. Peebler**

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

- we terminate his employment other than for cause, death or disability;
- Mr. Peebler resigns for "good reason"; or
- Mr. Peebler resigns after remaining with us or with our successor for a period of 18 months following a "change of control" involving our company.

Under Mr. Peebler's employment agreement, a "change of control" occurs upon any of the following:

(1) the acquisition by a person or group of beneficial ownership of 51% or more of the outstanding shares of our 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 "business combination" (as defined in sub-paragraph (3) below);

(2) changes in directors on ION's Board 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 two-thirds of the directors then constituting the entire Board (except in the case of election contests);

(3) a "business combination" — that is, a merger or consolidation involving ION or a sale of all or substantially all of ION's assets — unless owners of ION common stock immediately following such business combination together own more than 60% of the total outstanding stock or voting power of the entity resulting from the business combination; or

(4) ION's stockholders approve the liquidation or dissolution of ION.

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

- a lump sum cash amount equal to 0.99 times his annual base salary;
- over a two-year period, a cash amount equal to two times his annual base salary; and
- all incentive plan bonuses then due to him under the terms of the relevant incentive compensation plan in effect for any previous year and a prorated portion of the target incentive plan bonus that he would have been eligible to receive under any incentive compensation plan in effect with respect to the current year.

We believe the 18-month change-of-control benefit referenced above maximizes stockholder value because it motivates Mr. Peebler 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 unique and high levels of experience and expertise in the seismic industry, we believe Mr. Peebler's severance structure is in our best interest because it ensures that for a two-year period after leaving our employment, Mr. Peebler will not be in a position to compete with us or otherwise adversely affect our business. Mr. Peebler's severance provisions are more generous than those of the other named executive officers and reflect the greater interest we have in protecting against any future competition from Mr. Peebler following his employment with us, and also the greater opportunity costs that he would bear if we decided to change our chief executive officer.

*Change of Control Under Equity Compensation Plans.* Mr. Peebler and our other named executive officers currently hold outstanding awards under one or more of the following four equity compensation plans: our Amended and Restated 2004 Long-Term Incentive Plan, our 2003 Employee Stock Option Plan, our 2000 Long-Term Incentive Plan and our Stock Appreciation Rights 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"):

(1) the acquisition by a person or group of beneficial ownership of 40% (or 51% under the 2003 Employee Stock Option Plan) 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;

(2) 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 (two-thirds of the

directors under the 2003 Employee Stock Option Plan) then constituting the entire board of directors (except in the case of election contests);

(3) approval by our stockholders 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 (60% under the 2003 Employee Stock Option Plan) 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 the our assets (in the case of the Amended and Restated 2004 Long-Term Incentive Plan, the 2000 Long-Term Incentive Plan and the Stock Appreciation Rights Plan), or our stockholders approve our liquidation or dissolution (in the case of the 2003 Employee Stock Option Plan).

Upon any such "Plan Change of Control," all of Mr. Peebler's stock options granted to him under the 2003 Employee Stock Option Plan and the Amended and Restated 2004 Long-Term Incentive Plan will become fully exercisable, and all restricted stock granted to him under the Amended and Restated 2004 Long-Term Incentive Plan will automatically accelerate and become fully vested. Upon any of the above events, we would not be required to provide any medical continuation or death or disability benefits for Mr. Peebler that are not also available to our other employees as required by law or the applicable benefit plan.

*Death or Disability.* Upon his death or disability, any options or restricted stock Mr. Peebler holds under our 2004 Long-Term Incentive Plan would automatically accelerate and become fully vested. As of December 31, 2010, Mr. Peebler held 415,305 shares of unvested restricted stock granted under our 2004 Long-Term Incentive Plan.

*Termination by Us for Cause or by Mr. Peebler Other Than for Good Reason.* Upon his termination by us for Cause or his resignation other than for Good Reason, Mr. Peebler is not entitled to any payment or benefit other than the payment of unpaid salary and accrued and unused vacation pay.

Mr. Peebler's vested stock options will remain exercisable after his termination of employment, death, disability or retirement for periods of between 180 days and one year following such event, depending on the event and the terms of the applicable stock plan and grant agreement.

In addition, any voluntary termination of employment by Mr. Peebler after December 31, 2010 will be treated for all purposes under our 2004 Long-Term Incentive Plan as a termination due to his retirement, thereby causing all of his unvested stock options and restricted stock granted under that plan to automatically accelerate and become fully vested.

If 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, we have agreed to pay to Mr. Peebler an additional amount to adjust for the incremental tax costs of those payments to him.

Assuming Mr. Peebler's employment was terminated under each of these circumstances or a change of control occurred on December 31, 2010, his payments and benefits would have an estimated value as follows (less applicable withholding taxes):

| <u>Scenario</u>   | <u>Cash Severance (\$)(1)</u> | <u>Bonus (\$)(2)</u> | <u>Tax Gross-Ups (\$)</u> | <u>Value of Accelerated Equity Awards (\$)(3)</u> |
|---|-------------------------------|----------------------|---------------------------|---|
| Without Cause or For Good Reason . . . .                | 1,868,750                     | 468,750              | —                         | —   |
| Resign 18 months after change of control . . . . .      | 1,868,750                     | 468,750              | 917,416                   | —   |
| Change of Control (regardless of termination) . . . . . | —                             | —                    | —                         | 4,014,986   |
| Death or Disability . . . . .                           | —                             | —                    | —                         | 4,014,986   |
| Voluntary Termination . . . . .                         | —                             | —                    | —                         | 4,014,986   |

- (1) \$618,750 would be payable immediately and \$1,250,000 would be payable over a two-year period. In addition to the listed amounts, if Mr. Peebler resigns or his employment is terminated for any reason, he would be entitled to be paid for his unused vacation days. Mr. Peebler is currently entitled to 20 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 an estimate of the target bonus payment Mr. Peebler would be entitled to receive pursuant to our 2010 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) As of December 31, 2010, Mr. Peebler held 415,305 shares of unvested restricted stock and unvested options to purchase 90,000 shares of our common stock. The value of accelerated unvested options was calculated by multiplying 90,000 shares underlying Mr. Peebler's unvested options by \$8.48 (the closing price per share on December 31, 2010) and then deducting the \$3.00 exercise price for those shares. The value of accelerated unvested restricted stock was calculated by multiplying 415,305 shares by \$8.48.

#### **R. Brian Hanson**

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

- we terminate his employment other than for cause, death or disability;
- Mr. Hanson resigns for "good reason"; or
- Mr. Hanson resigns after remaining with us or with our successor for a period of 12 months following a change of control involving our company.

Under Mr. Hanson's employment agreement, a "change in control" occurs upon any of the following:

- (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);
- (2) 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 a majority of the directors then constituting the entire board of directors (except in the case of election contests);
- (3) approval by our stockholders 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 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, 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;
- all incentive plan bonuses then due to him under the terms of the relevant incentive compensation plan in effect for any previous year and a prorated portion of the target incentive plan bonus that he would

have been eligible to receive under any incentive compensation plan in effect with respect to the current year; and

- continuation of insurance coverage for Mr. Hanson as of the date of his termination for a period of one year at the same cost to him as prior to the termination. See “— *Employment Agreements — R. Brian Hanson*” above.

We believe Mr. Hanson’s 12-month change-of-control benefit referenced above maximizes stockholder 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.

Upon a “Plan Change of Control” (see “— *Robert P. Peebler — Change of Control Under Equity Compensation Plans*” above), all of Mr. Hanson’s stock options granted to him under the Amended and Restated 2004 Long-Term Incentive Plan will become fully exercisable, all restricted stock awards granted to him under the Amended and Restated 2004 Long-Term Incentive Plan will automatically accelerate and become fully vested and all SARs granted to him under the Stock Appreciation Rights Plan will become fully vested and immediately exercisable. In addition, any change of control of our company will cause the remaining term of Mr. Hanson’s employment agreement to automatically adjust to two years, commencing on the effective date of the change of control.

*Death, Disability or Retirement.* Upon his death, disability or retirement, all options, restricted stock and SARs that Mr. Hanson holds would automatically accelerate and become fully vested.

*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 “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 accrued and unused vacation pay.

Mr. Hanson’s vested stock options and SARs will remain exercisable after his termination of employment, death, disability or retirement for periods of between 180 days 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 unvested SARs will be immediately forfeited.

If 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, we have agreed to pay to Mr. Hanson an additional amount to adjust for the incremental tax costs of those payments to him.

Assuming Mr. Hanson’s employment was terminated under each of these circumstances or a change of control occurred on December 31, 2010, his payments and benefits would have an estimated value as follows (less applicable withholding taxes):

| <u>Scenario</u>  | <u>Cash Severance (\$)(1)</u> | <u>Bonus (\$)(2)</u> | <u>Insurance Continuation (\$)(3)</u> | <u>Tax Gross-Ups (\$)</u> | <u>Value of Accelerated Equity Awards (\$)(4)</u> |
|--|-------------------------------|----------------------|---------------------------------------|---------------------------|---|
| Without Cause or For Good Reason . . . . .   | 706,000                       | 176,500              | 8,508                                 | —                         | —   |
| Resign 12 months after change of control . . . . .   | 706,000                       | 176,500              | 8,508                                 | —                         | —   |
| Change of Control (regardless of termination) or Death, Disability or Retirement . . . . . | —                             | —                    | —                                     | —                         | 1,480,647   |
| Voluntary Termination . . . . .  | —                             | —                    | —                                     | —                         | —   |

(1) 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 would be entitled to be paid for his unused vacation days. Mr. Hanson is currently entitled to 20 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 an estimate of the target bonus payment Mr. Hanson would be entitled to receive pursuant to our 2010 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 in effect as of December 31, 2010, less the amount of premiums to be paid by Mr. Hanson for such coverage.
- (4) As of December 31, 2010, Mr. Hanson held 61,515 unvested shares of restricted stock, unvested stock options to purchase 50,000 shares of common stock and 140,000 unvested SARs. The value of accelerated unvested options was calculated by multiplying 35,000 shares underlying Mr. Hanson's unvested options by \$8.48 (the closing price per share on December 31, 2010) and then deducting the aggregate exercise price for those shares (equal to \$3.00 per share for those 35,000 options). Options having an exercise price greater than \$8.48 were calculated with a zero value. The value of accelerated unvested restricted stock was calculated by multiplying 61,515 shares by \$8.48. The value of accelerated unvested SARs was calculated by multiplying 140,000 shares by \$8.48 and then deducting the settlement price of \$3.00.

### Nikolaos Bernitsas

Mr. Bernitsas is not entitled to receive any contractual severance if we terminate his employment without cause. Upon a "Plan Change of Control" (see "*— Robert P. Peebler — Change of Control Under Equity Compensation Plans*" above), all of his unvested stock options granted to him under the Amended and Restated 2004 Long-Term Incentive Plan and the 2000 Long-Term Incentive Plan will become fully exercisable and all restricted stock awards granted to him under the Amended and Restated 2004 Long-Term Incentive Plan will automatically accelerate and become fully vested. Upon his retirement, death or disability, all unvested options and restricted stock he holds will automatically accelerate and become fully vested.

The vested stock options held by Mr. Bernitsas will remain exercisable after his termination of employment, death, disability or retirement for periods of between 180 days and one year following such event, depending on the event and the terms of the applicable stock plan and grant agreement. If Mr. Bernitsas is terminated for cause, all of his vested and unvested stock options and unvested restricted stock will be immediately forfeited.

Assuming his employment was terminated under each of these circumstances or a change of control occurred on December 31, 2010, his payments and benefits would have an estimated value as follows (less applicable withholding taxes):

| <u>Scenario</u>   | <u>Cash<br/>Severance \$(1)</u> | <u>Value of Accelerated<br/>Equity Awards \$(2)</u> |
|---|---------------------------------|---|
| Without Cause .....   | —                               | —   |
| Change of Control (regardless of termination) or Death, Disability<br>or Retirement ..... | —                               | 669,424   |
| Voluntary Termination .....   | —                               | —   |

- (1) If Mr. Bernitsas resigns or his employment is terminated for any reason, he would be entitled to be paid for his unused vacation days. Mr. Bernitsas is currently entitled 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) As of December 31, 2010, Mr. Bernitsas held 15,333 unvested shares of restricted stock and unvested options to purchase 156,250 shares of our common stock. The value of accelerated unvested options was calculated by multiplying 156,250 shares underlying Mr. Bernitsas' unvested options by \$8.48 (the closing price per share on December 31, 2010) and then deducting the aggregate exercise prices for those shares (equal to \$3.00 per share for 17,500 options, \$5.44 per share for 18,750, \$4.58 per share for 75,000 shares and \$7.19 per share for 40,000). Options having an exercise price greater than \$8.48 were calculated with a zero value. The value of his accelerated unvested restricted stock was calculated by multiplying 15,333 shares by \$8.48.

**David L. Roland**

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

- we terminate his employment other than for cause, death or disability; or
- Mr. Roland resigns for “good reason.”

In the above scenarios, Mr. Roland would be entitled to receive the following (less applicable withholding taxes):

- over a one-year period, a cash amount equal to his annual base salary;
- all incentive plan bonuses then due to him under the terms of the relevant incentive compensation plan in effect for any previous year and a prorated portion of the target incentive plan bonus that he would have been eligible to receive under any incentive compensation plan in effect with respect to the current year; and
- continuation of insurance coverage for Mr. Roland as of the date of his termination for a period of one year at the same cost to him as prior to the termination. See “— *Employment Agreements — David L. Roland*” above.

Upon a “Plan Change of Control” (see “— *Robert P. Peebler — Change of Control Under Equity Compensation Plans*” above), all of Mr. Roland’s unvested stock options granted to him under the Amended and Restated 2004 Long-Term Incentive Plan will become fully exercisable, and all restricted stock granted to him under the Amended and Restated 2004 Long-Term Incentive Plan will automatically accelerate and become fully vested. Mr. Roland’s employment agreement contains no change-of-control severance payment rights.

*Death, Disability or Retirement.* Upon his death, disability or retirement, all options and restricted stock that Mr. Roland holds would automatically accelerate and become fully vested.

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

Mr. Roland’s vested stock options will remain exercisable after his termination of employment, death, disability or retirement for periods of between 180 days and one year following such event, depending on the event and the terms of the applicable stock plan and grant agreement. If Mr. Roland is terminated for cause, all of his vested and unvested stock options and unvested restricted stock will be immediately forfeited.

Assuming Mr. Roland’s employment was terminated under each of these circumstances or a change of control occurred on December 31, 2010, his payments and benefits would have an estimated value as follows (less applicable withholding taxes):

| <u>Scenario</u>  | <u>Cash Severance (\$)(1)</u> | <u>Bonus (\$)(2)</u> | <u>Insurance Continuation \$(3)</u> | <u>Value of Accelerated Equity Awards \$(4)</u> |
|--|-------------------------------|----------------------|-------------------------------------|---|
| Without Cause or For Good Reason . . . . .   | 286,000                       | 143,000              | 12,452                              | —   |
| Change of Control (regardless of termination) or Death, Disability or Retirement . . . . . | —                             | —                    | —                                   | 517,714   |
| Voluntary Termination . . . . .  | —                             | —                    | —                                   | —   |

(1) Payable over a one-year period. In addition to the listed amounts, if Mr. Roland resigns or his employment is terminated for any reason, he would be entitled to be paid for his unused vacation days. Mr. Roland is currently entitled to 20 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 an estimate of the target bonus payment Mr. Roland would be entitled to receive pursuant to our 2010 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. Roland, maintaining his same levels of medical, dental and other insurance in effect as of December 31, 2010, less the amount of premiums to be paid by Mr. Roland for such coverage.
- (4) As of December 31, 2010, Mr. Roland held 33,333 unvested shares of restricted stock and unvested stock options to purchase 66,250 shares of common stock. The value of accelerated unvested options was calculated by multiplying 66,250 shares underlying Mr. Roland's unvested options by \$8.48 (the closing price per share on December 31, 2010) and then deducting the aggregate exercise prices for those shares (equal to \$3.00 per share for 15,000 options, \$5.44 per share for 18,750 options and \$7.19 per share for 25,000 options). Options having an exercise price greater than \$8.48 were calculated with a zero value. The value of accelerated unvested restricted stock was calculated by multiplying 33,333 shares by \$8.48.

### Ken Williamson

Mr. Williamson is not entitled to receive any contractual severance if we terminate his employment without cause. Upon a "Plan Change of Control" (see "*Robert P. Peebler — Change of Control Under Equity Compensation Plans*" above), all of his unvested stock options granted to him under the Amended and Restated 2004 Long-Term Incentive Plan and the 2000 Long-Term Incentive Plan will become fully exercisable and all restricted stock awards granted to him under the Amended and Restated 2004 Long-Term Incentive Plan will automatically accelerate and become fully vested. Upon his retirement, death or disability, all unvested options and restricted stock he holds will automatically accelerate and become fully vested.

The vested stock options held by Mr. Williamson will remain exercisable after his termination of employment, death, disability or retirement for periods of between 180 days 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 and unvested restricted stock will be immediately forfeited.

Assuming his employment was terminated under each of these circumstances or a change of control occurred on December 31, 2010, his payments and benefits would have an estimated value as follows (less applicable withholding taxes):

| <u>Scenario</u>  | <u>Cash Severance \$(1)</u> | <u>Value of Accelerated Equity Awards \$(2)</u> |
|--|-----------------------------|---|
| Without Cause .....  | —                           | —   |
| Change of Control (regardless of termination) or Death, Disability or Retirement ..... | —                           | 859,529   |
| Voluntary Termination .....  | —                           | —   |

- (1) If Mr. Williamson resigns or his employment is terminated for any reason, he would be entitled to be paid for his unused vacation days. Mr. Williamson is currently entitled to 20 vacation days per year. The above table assumes that there is no earned but unpaid base salary as of the time of termination.
- (2) As of December 31, 2010, Mr. Williamson held 15,333 unvested shares of restricted stock and unvested options to purchase 185,500 shares of our common stock. The value of accelerated unvested options was calculated by multiplying 185,500 shares underlying Mr. Williamson's unvested options by \$8.48 (the closing price per share on December 31, 2010) and then deducting the aggregate exercise prices for those shares (equal to \$3.00 per share for 17,500 options, \$2.83 per share for 37,500 options, \$5.44 per share for 16,500 options, \$4.58 per share for 75,000 options and \$7.19 per share for 35,000 options). Options having an exercise price greater than \$8.48 were calculated with a zero value. The value of his accelerated unvested restricted stock was calculated by multiplying 15,333 shares by \$8.48.



## 2010 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) in any non-qualified defined contribution plans or other deferred compensation plans maintained by us.

### DIRECTOR COMPENSATION

#### General

ION employees who are also directors do not receive any fee or remuneration for services as members of our Board of Directors. We currently have seven 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, the Chairman of the Audit Committee receives an annual retainer fee of \$12,500, the Chairman of the Compensation Committee receives an annual retainer fee of \$10,000, the Chairman of the Governance Committee receives an annual retainer fee of \$5,000, and each co-Chairman of the Finance Committee receives an annual retainer fee of \$5,000. Outside directors also receive, in cash, \$2,000 for each Board meeting 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 held via teleconference.

Each outside director also receives an initial grant of 8,000 vested shares of our common stock on the first quarterly grant date after joining the Board and follow-on grants of 12,000 vested shares of our stock each year.

In 1992, we adopted a Directors Retirement Plan, but discontinued the plan in 1996. Mr. Theodore Elliott, who retired from the Board in February 2011, was the only director entitled to receive any benefits under the plan. Pursuant to the terms of the plan, after his retirement we paid Mr. Elliott \$110,594.00 in a lump sum payment, which terminated our obligations under the plan.

The following table summarizes the compensation earned by ION's non-employee directors in 2010:

| Name(1)                           | Fees Earned<br>or Paid in<br>Cash (\$) | Stock<br>Awards<br>(\$)(2) | Non-Equity<br>Incentive<br>Plan<br>Compensation (\$) | Change in<br>Pension<br>Value and<br>Nonqualified<br>Deferred<br>Compensation<br>Earnings (\$) | All Other<br>Compensation (\$) | Total (\$) |
|-----------------------------------|--|----------------------------|--|--|--------------------------------|------------|
| James M. Lapeyre, Jr. ....        | 78,000                                 | 86,280                     | —  | —  | —                              | 164,280    |
| Bruce S. Appelbaum, PhD(3) ..     | 65,000                                 | 86,280                     | —  | —  | —                              | 151,280    |
| David H. Barr(4) .....            | 2,000                                  | —                          | —  | —  | —                              | 2,000      |
| Theodore H. Elliott, Jr.(5) ..... | 68,000                                 | 86,280                     | —  | —  | —                              | 154,280    |
| Hao Huimin(6) .....               | —                                      | —                          | —  | —  | —                              | —          |
| Michael C. Jennings(7) .....      | 2,000                                  | —                          | —  | —  | —                              | 2,000      |
| G. Thomas Marsh(8) .....          | 58,000                                 | 86,280                     | —  | —  | —                              | 144,280    |
| Franklin Myers .....              | 87,000                                 | 86,280                     | —  | —  | —                              | 173,280    |
| S. James Nelson, Jr. ....         | 86,500                                 | 86,280                     | —  | —  | —                              | 172,780    |
| John N. Seitz .....               | 73,000                                 | 86,280                     | —  | —  | —                              | 159,280    |
| Nicholas G. Vlahakis(9) .....     | 65,000                                 | 86,280                     | —  | —  | —                              | 151,280    |
| Guo Yueliang(10) .....            | 51,000                                 | 94,070                     | —  | —  | —                              | 145,070    |

(1) Robert P. Peebler, our Chief Executive Officer, is not included in this table because he is an employee of ION and therefore received no compensation for his services as a director. The compensation received by Mr. Peebler as an employee of ION is shown in the Summary Compensation Table above.

- (2) All of the amounts shown represent the value of common stock granted under our 2004 Long-Term Incentive Plan. On March 1, 2010, Mr. Guo was granted an award of 16,000 shares of ION common stock pursuant to our director compensation terms discussed above. With the exception of Mr. Guo, on December 1, 2010, each of our non-employee directors was granted an award of 12,000 shares of ION common stock. Because Mr. Guo had notified us that he was resigning from the Board on January 1, 2011, on December 1, 2010 he was granted a pro-rated amount of 1,000 shares of common stock. The values contained in the table are based on the grant-date fair value of awards of stock during the fiscal year.
- (3) Mr. Appelbaum resigned from the Board effective on December 2, 2010.
- (4) Mr. Barr was appointed to the Board effective on December 2, 2010.
- (5) Mr. Elliott resigned from the Board effective on February 14, 2011.
- (6) Mr. Hao was appointed to the Board effective on January 1, 2011.
- (7) Mr. Jennings was appointed to the Board effective on December 2, 2010.
- (8) Mr. Marsh resigned from the Board effective on December 2, 2010.
- (9) Mr. Vlahakis resigned from the Board effective on December 2, 2010.
- (10) Mr. Guo resigned from the Board effective on January 1, 2011. Mr. Hao was appointed to the Board to fill the vacancy created by Mr. Guo's resignation.

As of December 31, 2010, our non-employee directors held the following unvested and unexercised ION equity awards:

| <u>Name</u>                                     | <u>Unvested Stock Awards(#)</u> | <u>Unexercised Option Awards(#)</u> |
|---|---------------------------------|-------------------------------------|
| James M. Lapeyre, Jr. ....                      | —                               | 80,000                              |
| Bruce S. Appelbaum, PhD (former director) ..... | —                               | 37,500                              |
| David H. Barr .....                             | —                               | —                                   |
| Theodore H. Elliott, Jr.(former director) ..... | —                               | 60,000                              |
| Hao Huimin .....                                | —                               | —                                   |
| Michael C. Jennings .....                       | —                               | —                                   |
| G. Thomas Marsh (former director) .....         | —                               | —                                   |
| Franklin Myers .....                            | —                               | 55,000                              |
| S. James Nelson, Jr. ....                       | —                               | 70,000                              |
| John N. Seitz .....                             | —                               | 80,000                              |
| Nicholas G. Vlahakis (former director) .....    | —                               | —                                   |
| Guo Yueliang (former director) .....            | —                               | —                                   |

**Equity Compensation Plan Information**  
(as of December 31, 2010)

The following table provides certain information regarding our equity compensation plans under which equity securities are authorized for issuance:

| <u>Plan Category</u>   | <u>Number of Securities<br/>to be Issued<br/>Upon Exercise<br/>of Outstanding Options,<br/>Warrants and Rights<br/>(a)</u> | <u>Weighted-Average<br/>Exercise Price of<br/>Outstanding<br/>Options, Warrants<br/>and Rights<br/>(b)</u> | <u>Number of Securities<br/>Remaining Available for<br/>Future Issuance Under<br/>Equity Compensation<br/>Plans (Excluding<br/>Securities Reflected<br/>in Column (a))<br/>(c)</u> |
|--|--|--|--|
| <b>Equity Compensation Plans Approved by Stockholders</b>                  |  |  |  |
| Amended and Restated 1996 Non-Employee Director Stock Option Plan .....    | 232,500  | \$ 7.40  | 0  |
| 2000 Long-Term Incentive Plan .....  | 352,400  | \$ 7.28  | 0  |
| 2003 Stock Option Plan .....   | 1,387,500  | \$ 6.27  | 79,250   |
| 2004 Long-Term Incentive Plan .....  | 5,264,450  | \$ 7.68  | 1,614,450  |
| GX Technology Corporation Employee Stock Option Plan .....                 | <u>109,817</u>   | \$ 2.58  | <u>0</u>   |
| Subtotal .....   | 7,346,667  |  | 1,693,700  |
| <b>Equity Compensation Plans Not Approved by Stockholders</b>              |  |  |  |
| Non-Employee Directors' Retainer Plan ..                                   | —  | —  | 21,769   |
| ARAM Systems Employee Inducement Stock Option Program .....                | 156,000  | \$14.10  | 0  |
| Concept Systems Employment Inducement Stock Option Program . . .           | 31,250   | \$ 6.42  | 0  |
| GX Technology Corporation Employment Inducement Stock Option Program . . . | <u>152,875</u>   | \$ 7.09  | <u>0</u>   |
| Subtotal .....   | <u>340,125</u>   |  | <u>21,769</u>  |
| Total .....  | <u>7,686,792</u>   |  | <u>1,715,469</u>   |

Following are brief descriptions of the material terms of each equity compensation plan that was not approved by our stockholders:

*Non-Employee Directors' Retainer Plan.* In 2001, our Board adopted arrangements whereby our non-employee directors can elect to receive their annual retainer for service as a director and any retainer for serving as a committee chairman, in cash or in common stock. Any common stock issued pursuant to these arrangements is valued at the closing price of our common stock on the last trading day before their issuance. The Board reserved 100,000 of our treasury shares for issuance under these arrangements. The Board elected to forego this election right for 2009 and since then our non-employee directors have received their retainers only in cash.

*ION Geophysical Corporation — ARAM Systems Employee Inducement Stock Option Program.* In connection with our acquisition of all of the capital stock of ARAM Systems, Ltd and its affiliates in September 2008, we entered into employment inducement stock option agreements with 48 key employees of ARAM as material inducements to their joining ION. The terms of these stock options are for 10 years, and the options become exercisable in four equal installments each year with respect to 25% of the shares each on the first, second, third and fourth consecutive anniversary dates of the date of grant. The options may be sooner exercised upon the occurrence of a "change of control" of ION. The number of shares of common

stock covered by each option is subject to adjustment to prevent dilution resulting from stock dividends, stock splits, recapitalizations or similar transactions.

*ION Geophysical Corporation — Concept Systems Employment Inducement Stock Option Program.* In connection with our acquisition of the share capital of Concept Systems Holding Limited in February 2004, we entered into employment inducement stock option agreements with 12 key employees of Concept as material inducements to their joining ION. The terms of these stock options are for 10 years, and the options became exercisable in four equal installments each year with respect to 25% of the shares on the first, second, third and fourth consecutive anniversary dates of the date of grant. The number of shares of common stock covered by each option is subject to adjustment to prevent dilution resulting from stock dividends, stock splits, recapitalizations or similar transactions.

*ION Geophysical Corporation — GX Technology Corporation Employment Inducement Stock Option Program.* In connection with our acquisition of all of the capital stock of GX Technology Corporation in June 2004, we entered into employment inducement stock option agreements with 29 key employees of GXT as material inducements to their joining ION. The terms of these stock options are for 10 years, and the options became exercisable in four equal installments each year with respect to 25% of the shares each on the first, second, third and fourth consecutive anniversary dates of the date of grant. The number of shares of common stock covered by each option is subject to adjustment to prevent dilution resulting from stock dividends, stock splits, recapitalizations or similar transactions.

A description of our Stock Appreciation Rights Plan has not been provided in this sub-section because awards of SARs under that plan may be settled only in cash.

## **ITEM 2 — PROPOSAL TO AMEND THE 2004 LONG-TERM INCENTIVE PLAN**

### **Proposed Amendments**

On May 3, 2004, our Board of Directors adopted the 2004 Long-Term Incentive Plan (the “2004 Plan”), and the 2004 Plan was approved by our stockholders at our 2004 Annual Meeting. At our 2007 Annual Meeting, held on May 21, 2007, our stockholders approved an amendment to the 2004 Plan to increase the total number of shares of our common stock available for issuance under the 2004 Plan from 4,300,000 to 6,700,000 shares. At our 2008 Annual Meeting, held on May 27, 2008, our stockholders approved an amendment to increase the total number of shares of our common stock available for issuance under the 2004 Plan from 6,700,000 to 7,700,000 shares. At our 2010 Annual Meeting, our stockholders approved an amendment to increase the total number of shares of our common stock available for issuance under the 2004 Plan from 7,700,000 to 10,200,000 shares.

On February 11, 2011, our Board of Directors approved, subject to stockholder approval, further amendments to the 2004 Plan for two purposes:

(a) The 2004 Plan would be amended to add provisions necessary to more fully enforce our Compensation Recoupment Policy (commonly referred to as a “clawback” policy), adopted in February 2011. This policy provides that, in the event of a restatement of our financial results due to material noncompliance with applicable financial reporting requirements, the Board may, subject to applicable laws and the terms and conditions of our applicable stock plans, programs or arrangements, seek reimbursement of an amount equal to the incremental portion of performance-based compensation, including performance-based bonuses and long term incentive awards, paid to current or former executive officers at any time within three years before the restatement date, in excess of the compensation that would have been paid based on the financial results as restated. We believe that in order to more effectively enable us to enforce the policy in accordance with its terms, it is necessary to amend the 2004 Plan to provide that, after the date the 2011 amendments are approved by our stockholders, performance-based awards granted under the 2004 Plan to a person who is subject to the policy would be reduced or subject to recoupment pursuant to the policy.

(b) The 2004 Plan would be amended to increase by 5,000,000 the total number of shares of our common stock available for issuance under the 2004 Plan. Our Board of Directors believes it is desirable to increase the number of shares available for issuance under the 2004 Plan in order to (i) continue to promote stockholder value by providing appropriate incentives to key employees and certain other individuals who perform services for our company and (ii) continue awarding our non-employee directors with stock options, restricted stock and other forms of equity compensation as a means to retain capable directors and attract and recruit qualified new directors in a manner that promotes ownership of a proprietary interest in our company. As of March 1, 2011, without giving effect to the proposed 2011 amendments, there were 5,868,066 shares issued or committed for issuance under outstanding options or other awards under the 2004 Plan and 1,487,588 shares available for future grant and issuance to our employees and non-employee directors.

### **Description of the 2004 Plan**

The material features of the 2004 Plan are described below. The complete text of the 2004 Plan, including the proposed amendments, is included as **Appendix A** to this proxy statement. The following summary is qualified by reference to such copy of the amended 2004 Plan that is attached as **Appendix A**.

*General.* The 2004 Plan is not subject to the provisions of the Employee Retirement Income Security Act of 1974, as amended (ERISA), and is not a “qualified plan” within the meaning of section 401 of the Internal Revenue Code. The primary objective of the 2004 Plan is to promote the long-term financial success of our company and to increase stockholder value by: (a) encouraging the commitment of directors and selected key employees and consultants, (b) motivating superior performance of key employees and consultants by means of long-term performance related incentives, (c) encouraging and providing directors and selected key employees and consultants with a program for obtaining ownership interests in our company that link and align their personal interests to those of our stockholders, (d) attracting and retaining directors and selected key employees and consultants by providing competitive incentive compensation opportunities, and (e) enabling directors and selected key employees and consultants to share in the long-term growth and success of our company.

The 2004 Plan is administered by the Compensation Committee. The 2004 Plan provides for the granting of stock options, stock appreciation rights, performance share awards, restricted stock, restricted stock units and other equity-based awards that provide similar benefits. Certain awards under the 2004 Plan may be paid in cash or common stock, as determined by the Committee. The Committee has discretion to select the participants who will receive awards and to determine the type, size and terms of each award. Eligible participants under the plan include our non-employee directors, key employees and independent consultants. The Committee will also make all other determinations that it decides are necessary or desirable in the interpretation and administration of the Plan. At the present time, all members of our Board of Directors other than Robert P. Peebler are considered non-employee directors for purposes of the 2004 Plan.

For information concerning stock options granted during 2010 under the 2004 Plan to our named executive officers, see “*Executive Compensation — 2010 Grants of Plan-Based Awards.*”

*Shares Subject to the 2004 Plan.* If our stockholders approve the amendments to the 2004 Plan, the total number of shares of common stock authorized under the 2004 Plan will be increased to 15,200,000 shares of common stock. The number of shares of common stock available under the 2004 Plan and outstanding awards under the plan are subject to adjustment to prevent the dilution of rights of plan participants resulting from stock dividends, stock splits, recapitalizations or similar transactions. In addition to the shares reserved under the 2004 Plan, the plan also provides that there will be available for issuance under the 2004 Plan an additional 36,333 shares, which represents the number of shares that were reserved under the now-expired ION Geophysical Corporation Amended and Restated 1996 Non-Employee Director Stock Option Plan (but not covered by exercised or outstanding options thereunder) and were assumed under the terms of the 2004 Plan.

*Awards under the 2004 Plan.* Under the 2004 Plan, the Compensation Committee may grant awards in the form of Incentive Stock Options (ISOs), as defined in section 422 of the Internal Revenue Code,

“nonstatutory” stock options (NSOs), stock appreciation rights (SARs), performance shares, and other stock-based awards. ISOs and NSOs together are referred to as “options” for purposes of this description of the 2004 Plan. The terms of each award are reflected in an incentive agreement between our company and the participant.

*Options.* Generally, options must be exercised within 10 years of the grant date, except with respect to ISO grants to a 10% or greater stockholder, which are required to be exercised within five years. The exercise price of each option may not be less than 100% of the fair market value of a share of common stock on the date of grant, or 110% in the case of an ISO grant to a 10% or greater stockholder. To the extent the aggregate fair market value of shares of common stock for which ISOs are exercisable for the first time by any employee during any calendar year exceeds \$100,000, those options must be treated as NSOs. The exercise price of each option is payable in cash or, in the Compensation Committee’s discretion, by the delivery of shares of common stock owned by the optionee, or by any combination of these methods. No option issued under the 2004 Plan may be repriced, replaced or regranted through cancellation or by lowering the option price of a previously granted option.

*SARs.* Upon the exercise of a SAR, the holder will receive cash, common stock, or a combination thereof, the aggregate value of which equals the amount by which the fair market value per share of the common stock on the exercise date exceeds the exercise price of the SAR, multiplied by the number of shares underlying the exercised portion of the SAR. A SAR may be granted in tandem with or independently of an NSO. SARs are subject to such conditions and are exercisable at such times as determined by the Compensation Committee, but the exercise price per share must be at least the fair market value of a share of common stock on the date of grant.

*Performance Shares.* Performance Shares are awards of common stock contingent upon whether, and the degree to which, performance objectives selected by the Compensation Committee are achieved during a specified period, subject to adjustment by the Committee. The Committee establishes performance objectives that may be based upon company, business segment, participant or other performance objectives as well as the period during which such performance objectives are to be achieved. Examples of performance criteria include, but are not limited to, pre-tax or after-tax profit levels, including: earnings per share, earnings before interest and taxes, earnings before interest, taxes, depreciation and amortization, net operating profits after tax, and net income; total stockholder return; return on assets, equity, capital or investment; cash flow and cash flow return on investment; economic value added and economic profit; growth in earnings per share; levels of operating expense and maintenance expense or measures of customer satisfaction and customer service as determined from time to time, including the relative improvement therein. The Committee may make such adjustments in the computation of any performance measure, provided that any such modification does not prevent an award from qualifying for the “Performance-Based Exception” under section 162(m) of the Internal Revenue Code, which is described below. Performance shares may be awarded alone or in conjunction with other awards. Payment of performance shares may be made only in shares of common stock.

*Restricted Stock/Restricted Stock Units.* Included in this category of awards are non-performance-based grants of shares of restricted stock and restricted stock units that vest over a period of time based on the participant’s continuing employment with ION or its subsidiaries. Unless the Compensation Committee determines otherwise at the date of grant, shares of restricted stock will carry full voting rights and other rights as a stockholder. Unrestricted shares of common stock will be delivered to the participant when the restrictions lapse. The Committee may also grant restricted stock units under the 2004 Plan, which entitles the participant to the issuance of shares of our common stock when the restrictions on the units awarded lapse.

*Other Stock-Based Awards.* Other stock-based awards are denominated or payable in, valued in whole or in part by reference to, or otherwise related to, shares of common stock. Other types of stock-based awards include, without limitation, deferred stock, purchase rights, shares of common stock awarded which are not subject to any restrictions or conditions, convertible or exchangeable debentures, other rights convertible into shares, incentive awards valued by reference to the value of securities of or the performance of a specified subsidiary, division or department, and settlement in cancellation of rights of any person with a vested interest in any other plan, fund, program or arrangement that is or was sponsored, maintained or participated in by our

company or any parent or subsidiary. Subject to the terms of the 2004 Plan, the Compensation Committee may determine the terms and conditions of any stock-based awards, and those terms are to be set forth in the incentive agreement with the participant.

*Supplemental Payments.* The Compensation Committee, either at the time of grant or at the time of exercise of an NSO or SAR or the time of vesting of performance shares, may provide for a supplemental payment by our company to the participant in an amount specified by the Committee. The supplemental payment amount shall not exceed the amount necessary to pay the federal and state income tax payable with respect to the exercise of the NSO or SAR, the vesting of the performance shares and the receipt of a supplemental payment in connection therewith, assuming the participant is taxed at either the maximum effective income tax rate applicable to such awards or at a lower tax rate, as deemed appropriate by the Committee. The Committee shall have the discretion to grant supplemental payments that are payable in common stock or cash, determined by the Committee at the time of the payment.

*Termination of Employment and Change in Control.* Except as otherwise provided in the applicable incentive grant agreement, if a participant's employment or other service is terminated other than due to his death, disability, retirement or for cause, any non-vested portion of stock options or other applicable awards will terminate and no further vesting will occur. In such event, then exercisable options and awards will remain exercisable until the earlier of the expiration date set forth in the incentive grant agreement or 180 days after the date of termination of employment, except with respect to ISOs, in which case the period is three months. If termination of employment is due to disability, death or retirement, (a) any restrictions on stock-based awards will be deemed satisfied and all outstanding options will accelerate and become immediately exercisable and (b) a participant's then-exercisable options will remain exercisable until the earlier of the expiration date of such options or one year following termination (except for ISOs, which will remain exercisable for only three months following termination). Upon termination for cause, all vested and non-vested options and unvested restricted stock will expire at the date of termination. Upon a change in control, any restrictions on stock-based awards will be deemed satisfied, all outstanding options and SARs will accelerate and become immediately exercisable and all the performance shares and any other stock-based awards will become fully vested and deemed earned in full.

*Clawback.* Performance-based awards granted under the 2004 Plan to a person who is subject to our Compensation Recoupment Policy may be reduced or subject to recoupment pursuant to the terms and conditions of such policy.

*Performance-Based Exception.* Under section 162(m) of the Internal Revenue Code, we may deduct, for federal income-tax purposes, compensation paid to our chief executive officer and four other most highly compensated executive officers only to the extent that such compensation does not exceed \$1,000,000 for any such individual during any year, excluding compensation that qualifies as "performance-based compensation." The 2004 Plan includes features necessary for certain awards under the plan to qualify as "performance-based compensation." To qualify, stock options granted under the 2004 Plan to covered individuals must have an exercise price per share that is not less than the fair market value of a share of the common stock on the date of grant. Performance shares may qualify for the exemption only if (i) the Compensation Committee establishes in writing objective performance goals for such awards no later than 90 days after the commencement of the performance period and (ii) no payments are made to participants pursuant to the awards until the Committee certifies in writing that the applicable performance goals have been met.

*Federal Income Tax Consequences.* The federal income tax discussion set forth below is intended for general information only. State and local income tax consequences are not discussed, and may vary from locality to locality.

*NSOs.* Under present regulations, an optionee who is granted an NSO will not realize taxable income at the time the stock option is granted. In general, an optionee will be subject to tax for the year of exercise on an amount of ordinary income equal to the excess of the fair market value of the shares on the date of exercise over the option price, and ION will receive a corresponding deduction. Income tax withholding requirements apply upon exercise. The optionee's basis in the shares so acquired will equal the exercise price plus the amount of ordinary income upon which he is taxed. Upon subsequent disposition of the shares, the optionee

will realize long- or short-term capital gain or loss, depending upon the length of time the shares are held after the option is exercised.

ISOs. An optionee is not taxed at the time an ISO is granted. The tax consequences upon exercise and later disposition depend upon whether the optionee was an employee of ION or a subsidiary at all times from the date of grant until three months preceding exercise, or one year in the case of death or disability, and on whether the optionee holds the shares for more than one year after exercise and two years after the date of grant of the option. If the optionee satisfies both the employment rule and the holding rule, for regular tax purposes the optionee will not realize income upon exercise of the option and we will not be allowed an income tax deduction at any time. The difference between the exercise price and the amount realized upon disposition of the shares by the optionee will constitute a long-term capital gain or a long-term capital loss, as the case may be. Neither the employment rule nor the holding rule will apply to the exercise of an option by the estate of an optionee, provided that the optionee satisfied the employment rule as of the date of such optionee's death. If the optionee meets the employment rule but fails to observe the holding rule, upon the sale of the shares acquired upon exercise (a "disqualifying disposition"), the optionee generally recognizes as ordinary income, in the year of the disqualifying disposition, the excess of the fair market value of the shares at the date of exercise over the exercise price. Any excess of the sales price over the fair market value at the date of exercise will be recognized by the optionee as long-term or short-term capital gain, depending on the length of time the stock was held after the option was exercised. If, however, the sales price is less than the fair market value at the date of exercise, then the ordinary income recognized by the optionee is generally limited to the excess of the sales price over the exercise price. In both situations, our tax deduction is limited to the amount of ordinary income recognized by the optionee. Different consequences apply for an optionee subject to the alternative minimum tax.

SARs. Generally, the recipient of a stand-alone SAR will not recognize taxable income at the time the stand-alone SAR is granted. If an employee receives the appreciation inherent in the SARs in cash, the cash will be taxed as ordinary income to the employee at the time it is received. If an employee receives the appreciation inherent in the SARs in stock, the spread between the then-current market value and the base price will be taxed as ordinary income to the employee at the time it is received. In general, there will be no federal income tax deduction allowed to us upon the grant or termination of SARs. However, upon the exercise and settlement of a SAR, we will be entitled to a deduction equal to the amount of ordinary income the recipient is required to recognize as a result of the settlement.

Performance Shares. A participant is not taxed upon the grant of performance shares. Upon receipt of the underlying shares or cash, he will be taxed at ordinary income tax rates on the amount of cash received or the current fair market value of stock received, and we will be entitled to a corresponding tax deduction. The participant's basis in any shares acquired pursuant to the settlement of performance shares will be equal to the amount of ordinary income on which he was taxed and, upon subsequent disposition, any gain or loss will be capital gain or loss.

Other Stock-Based Awards. The current United States federal income tax consequences of the other stock-based awards authorized under the 2004 Plan are generally as follows: (i) restricted stock is generally subject to ordinary income tax at the time the restrictions lapse unless the recipient elects to accelerate recognition as of the date of grant; (ii) restricted stock unit awards are generally subject to ordinary income tax at the time of payment or issuance of unrestricted shares; and (iii) unrestricted stock awards are generally subject to ordinary income tax at the time of grant. In each of the foregoing instances, we will generally be entitled to a corresponding federal income tax deduction at the same time the participant recognizes ordinary income.

Withholding. We have the right to reduce the number of shares of common stock deliverable pursuant to the 2004 Plan by an amount that would have a fair market value equal to the amount of all federal, state or local taxes to be withheld, based on the tax rates then in effect or the tax rates that we reasonably believe will be in effect for the applicable tax year, or to deduct the amount of such taxes from any cash payment to be made to the participant, pursuant to the 2004 Plan or otherwise.



*New Plan Benefits.* It is not possible to predict the individuals who will receive future awards under the 2004 Plan or the number of shares of common stock covered by any future award because such awards are wholly within the discretion of the Compensation Committee. However, please refer to the description of grants made to our named executive officers in the last fiscal year described in the “2010 Grants of Plan-Based Awards” table above. Grants made to our non-employee directors in the last fiscal year are described in “Director Compensation” above. On March 31, 2011, the closing price of a share of our common stock on the NYSE composite tape transactions was \$12.69.

*Termination or Amendment of the 2004 Plan.* The Board may amend, alter or discontinue the 2004 Plan at any time. Subject to certain stockholder approval requirements, the Board or the Compensation Committee may amend the terms of any award previously granted; however, no amendment or discontinuance may impair the existing rights of any participant without the participant’s consent. The Board may not amend the 2004 Plan without stockholder approval if the amendment would materially increase the benefits received by participants, materially increase the maximum number of shares that may be issued under the plan or materially modify the plan’s eligibility requirements, or require stockholder approval under applicable tax or regulatory requirements. The 2004 Plan also provides that stock options granted under the plan will not be (i) repriced by lowering the exercise price after grant or (ii) replaced through cancellation and regrant. In addition, we will seek the approval of our stockholders for any amendment if approval is necessary to comply with the Internal Revenue Code, federal or state securities laws or any other applicable rules or regulations. Unless sooner terminated, the 2004 Plan will expire on May 3, 2014, and no awards may be granted under the 2004 Plan after that date.

### **Stockholder Approval**

The proposal to amend the 2004 Plan requires the approval of a majority of the votes cast at our 2011 Annual Meeting, so long as the total votes cast on the proposal exceeds 50% of the total number of shares of common stock outstanding.

**The Board of Directors recommends that stockholders vote “FOR” the proposal to amend the 2004 Long-Term Incentive Plan.**

### **ITEM 3 — ADVISORY (NON-BINDING) VOTE APPROVING EXECUTIVE COMPENSATION**

We are asking our stockholders 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, beginning on page 25. We are providing this vote as required by Section 14A of the Exchange Act. 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.

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 stockholders’ interests to support long-term value creation. As described 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 stock ownership guidelines that are designed to support our long-term business strategies and drive creation of stockholder value. 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 stockholder 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 have routinely sought approval from our stockholders regarding portions of our compensation program that we have used to motivate, retain, and reward our executives. Since 2000, our stockholders have voted on our equity compensation plans a total of nine times. Those incentive plans, including the 2004 Long-Term Incentive Plan and its predecessors, 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 stockholder input, including a number of enhancements mentioned in this proxy statement.

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

RESOLVED, that the stockholders approve the compensation of the Company's named executive officers, as disclosed pursuant to Item 402 of Regulation S-K, including the Compensation Discussion and Analysis and the accompanying compensation tables and related footnotes and narrative disclosure contained in the Company's Proxy Statement for the 2011 Annual Meeting of Stockholders.

We encourage our stockholders to closely review 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 of Directors to reach its decisions on the compensation of our named executive officers for 2010. 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 of Directors recommends that stockholders vote "FOR" the advisory (non-binding) vote to approve the compensation of our named executive officers, as described in this proxy statement.**

#### **ITEM 4 — ADVISORY (NON-BINDING) VOTE ON THE FREQUENCY OF ADVISORY VOTES ON EXECUTIVE COMPENSATION**

In addition to the advisory approval of our executive compensation program, we are also seeking a non-binding determination from our stockholders as to the frequency with which stockholders would have an opportunity to provide an advisory approval of our executive compensation program in the future. We are providing stockholders the option of selecting a frequency of one, two or three years, or abstaining from voting altogether. For the reasons described below, we recommend that our stockholders select a frequency of three years, or a triennial vote. Pursuant to Section 14A of the Exchange Act, we are required to hold at least once every six years an advisory stockholder vote to determine the frequency of the advisory stockholder vote on executive compensation.

Please note that the advisory vote by the stockholders on frequency is distinct from the advisory vote on the compensation of our named executive officers as described in this proxy statement. This proposal deals with the issue of how frequently an advisory vote on compensation should be presented to our stockholders in the future.

Our executive compensation program is designed to support long-term value creation, and a triennial vote will allow stockholders to better judge our executive compensation program in relation to our long-term performance. As described in the Compensation Discussion and Analysis section above, one of the core principles of our executive compensation program is to ensure management's interests are aligned with our stockholders' interests to support long-term value creation. Accordingly, we grant equity awards with multi-year service periods to encourage our named executive officers to focus on long-term performance, and recommend a triennial vote that would allow our executive compensation programs to be evaluated over a similar time-frame and in relation to our long-term performance.

A triennial vote will provide us with the time to thoughtfully respond to stockholders' sentiments and implement any necessary changes. We carefully review changes to our program to maintain the consistency and credibility of the program, which is important in motivating and retaining our employees. We therefore believe that a triennial vote is an appropriate frequency to provide our management and Compensation Committee sufficient time to thoughtfully consider stockholders' input and to implement any appropriate changes to our executive compensation program, in light of the timing that would be required to implement any decisions related to such changes.

As described above, we have routinely sought approval from our stockholders regarding our compensation program that we use to motivate, retain, and reward our executives. Since 2000, our stockholders have voted on our equity compensation plans a total of nine times. We will continue to engage with our stockholders regarding our executive compensation program during the period between stockholder votes. Engagement with our stockholders is a key component of our corporate governance. We seek and are open to input from our stockholders regarding Board and governance matters, as well as our executive compensation program, and believe we have been appropriately responsive to our stockholders. We believe this outreach to stockholders, and our stockholders' ability to contact us at any time to express specific views on executive compensation, hold us accountable to stockholders and reduce the need for and value of more frequent advisory votes on executive compensation.

We therefore request that our stockholders select "Every Three Years" when voting on the frequency of advisory votes on executive compensation. However, notwithstanding the Board's recommendation and the fact that that this is a non-binding advisory vote only, the Board intends to review and consider the results of the vote and, consistent with our past record of stockholder engagement, accept the results of the stockholder vote on the proposal and hold the next advisory vote on executive compensation within the timeframe approved by the stockholders at our 2011 Annual Meeting.

**The Board of Directors recommends that stockholders select "EVERY THREE YEARS" on the proposal recommending the frequency of advisory votes on executive compensation.**

#### **ITEM 5 — RATIFICATION OF APPOINTMENT OF INDEPENDENT AUDITORS**

We have appointed Ernst & Young LLP as our independent registered public accounting firm (independent auditors) for the fiscal year ending December 31, 2011. Services provided by Ernst & Young LLP to our company in 2010 included the examination of our consolidated financial statements, review of our quarterly financial statements, statutory audits of our foreign subsidiaries, internal control audit services, review of our registration statements filed under the Securities Act of 1933, as amended (the "Securities Act"), during 2010 and consultations on various tax and accounting matters.

**The Board of Directors recommends that stockholders vote "FOR" ratification of the appointment of Ernst & Young LLP as our independent auditors for 2011.**

In the event stockholders 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.

## 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 issuing a report thereon. The Board of Directors 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 2010, and early in 2011 in preparation for the filing with the SEC of ION's Annual Report on Form 10-K for the year ended December 31, 2010, 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 Statement on Auditing Standards No. 114, "Communication with Audit Committees;"
- 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 of Directors the inclusion of the audited financial statements of ION and its subsidiaries in the 2010 Form 10-K;
- recommended the selection of Ernst & Young LLP as ION's independent registered public accounting firm for the fiscal year ending December 31, 2011; 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 is the principal liaison between the Board of Directors and ION’s independent registered public accounting firm. The functions of the Audit Committee are not intended to duplicate or to certify the activities of management and the independent registered public accounting firm and are in no way designed to supersede or alter the traditional responsibilities of ION’s management and its independent registered public accountants. It is not the duty of the Audit Committee to plan or conduct audits or to determine that ION’s financial statements are complete and accurate and in accordance with generally accepted accounting principles. Management is responsible for ION’s financial reporting process, including its system of internal control over financial reporting, and for 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 expressing an opinion on those financial statements and on the effectiveness of ION’s internal control over financial reporting. The Audit Committee has relied, without independent verification, on management’s representation that the financial statements have been prepared with integrity and objectivity and in conformity with accounting principles generally accepted in the United States, that ION’s internal control over financial reporting was effective as of December 31, 2010, and on the representations of the independent registered public accounting firm in their report on ION’s financial statements.

The Audit Committee met eight times during 2010. The Committee schedules its meetings with a view to ensuring that it devotes appropriate attention to all of its tasks. The 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 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  
Michael C. Jennings  
James M. Lapeyre, Jr.

## PRINCIPAL AUDITOR FEES AND SERVICES

In connection with the audit of the 2010 financial statements, we entered into an engagement agreement with Ernst & Young LLP that sets forth the terms by which Ernst & Young LLP would perform audit services for our company. The following two tables show the fees billed to us or accrued by us for the audit and other services provided by Ernst & Young LLP, for 2010 and 2009:

|                          | 2010        | 2009        |
|--------------------------|-------------|-------------|
| Audit Fees(a) .....      | \$2,142,000 | \$2,830,000 |
| Audit-Related Fees ..... | —           | —           |
| Tax Fees(b) .....        | —           | 12,000      |
| All Other Fees(c) .....  | 32,000      | 296,000     |
| Total .....              | \$2,174,000 | \$3,138,000 |

- (a) 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.
- (b) Tax fees are primarily for local country tax advisory services, including advice on the tax effect of structuring and operational matters.
- (c) All other fees for 2009 primarily relate to due diligence work during 2009 regarding our joint venture with BGP, which was completed in March 2010. Also included for 2009 and 2010 are licensing fees related to accounting research software.

Our Audit Committee Charter provides that all audit services and non-audit services must be approved by the Committee or a member of the Committee. The Audit Committee has delegated to the Chairman of the Audit 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 Ernst & Young LLP was compatible with the maintenance of such firm's independence in the conduct of its auditing functions.

**Other Matters**

A representative of Ernst & Young LLP will be present 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 mailed and delivered to stockholders by its authority.



David L. Roland  
*Senior Vice President, General Counsel  
and Corporate Secretary*

Houston, Texas  
April 21, 2011

**The 2010 Annual Report to Stockholders includes our financial statements for the fiscal year ended December 31, 2010. We have mailed the 2010 Annual Report to Stockholders with this proxy statement to all of our stockholders of record. The 2010 Annual Report to Stockholders does not form any part of the material for the solicitation of proxies.**

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**SIXTH AMENDED AND RESTATED  
2004 LONG-TERM INCENTIVE PLAN**

SECTION 1

GENERAL PROVISIONS RELATING  
TO PLAN GOVERNANCE, COVERAGE AND BENEFITS

1.1 *Purpose*

The purpose of the Plan is to foster and promote the long-term financial success of ION Geophysical Corporation (the “**Company**”) and its Subsidiaries and to increase stockholder value by: (a) encouraging the commitment of Directors and selected key Employees and Consultants, (b) motivating superior performance of Directors and key Employees and Consultants by means of long-term performance related incentives, (c) encouraging and providing Directors and selected key Employees and Consultants with a program for obtaining ownership interests in the Company that link and align their personal interests to those of the Company’s stockholders, (d) attracting and retaining Directors and selected key Employees and Consultants by providing competitive incentive compensation opportunities, and (e) enabling Directors and selected key Employees and Consultants to share in the long-term growth and success of the Company. For administrative purposes, and subject to Section 8.13, this Plan incorporates the ION Geophysical Corporation Amended and Restated 1996 Non-Employee Director Stock Option Plan (the “**Director Plan**”).

The Plan provides for payment of various forms of incentive compensation. Except as provided in Section 8.14, it is not intended to be a plan that is subject to the Employee Retirement Income Security Act of 1974, as amended (“**ERISA**”), and, as such, the Plan will be interpreted, construed and administered consistent with its status as a plan that is not subject to ERISA.

This sixth amendment and restatement of the Plan will become effective as of May 27, 2011 (with the Plan having an original effective date of May 3, 2004 (the “**Effective Date**”). The Plan will commence on the Effective Date, and will remain in effect, subject to the right of the Board to amend or terminate the Plan at any time pursuant to Section 8.6, until all Shares subject to the Plan have been purchased or acquired according to its provisions. However, in no event may any Incentive Award be granted under the Plan after ten (10) years from the Effective Date.

1.2 *Definitions*

The following terms shall have the meanings set forth below:

(a) *Appreciation*. The difference between the Fair Market Value of a share of Common Stock on the date of exercise of a Tandem SAR and the option exercise price per share of the Nonstatutory Stock Option to which the Tandem SAR relates.

(b) *Authorized Officer*. The Chairman of the Board, the CEO or any other senior officer of the Company to whom either of them delegate the authority to execute any Incentive Agreement for and on behalf of the Company. No officer or director shall be an Authorized Officer with respect to any Incentive Agreement for himself.

(c) *Board*. The Board of Directors of the Company.

(d) *Cause*. Except as otherwise provided by the Committee or as otherwise provided in a Grantee’s employment agreement, when used in connection with the termination of a Grantee’s Employment or service, shall mean the termination of the Grantee’s Employment or Grantee’s services as a Director or Consultant by the Company or any Subsidiary by reason of (i) the conviction of the Grantee by a court of competent jurisdiction as to which no further appeal can be taken of a crime involving moral turpitude or a felony; (ii) the proven commission by the Grantee of a material act of fraud upon the Company or any Subsidiary, or any customer or supplier thereof; (iii) the willful and proven misappropriation of any funds

or property of the Company or any Subsidiary, or any customer or supplier thereof; (iv) the willful, continued and unreasonable failure by the Grantee to perform the material duties assigned to him which is not cured to the reasonable satisfaction of the Company within 30 days after written notice of such failure is provided to Grantee by the Board or by a designated officer of the Company or a Subsidiary; (v) the knowing engagement by the Grantee in any direct and material conflict of interest with the Company or any Subsidiary without compliance with the Company's or Subsidiary's conflict of interest policy, if any, then in effect; or (vi) the knowing engagement by the Grantee, without the written approval of the Board, in any material activity which competes with the business of the Company or any Subsidiary or which would result in a material injury to the business, reputation or goodwill of the Company or any Subsidiary; or (vii) the material breach by a Consultant of such Grantee's contract with the Company.

(e) CEO. The Chief Executive Officer of the Company.

(f) Change in Control. Any of the events described in and subject to Section 7.7.

(g) Code. The Internal Revenue Code of 1986, as amended, and the regulations and other authority promulgated thereunder by the appropriate governmental authority. References herein to any provision of the Code shall refer to any successor provision thereto.

(h) Committee. A committee appointed by the Board consisting of at least two directors, who fulfill the "outside directors" requirements of Section 162(m) of the Code, to administer the Plan. The Committee may be the Compensation Committee of the Board, or any subcommittee of the Compensation Committee. The Board shall have the power to fill vacancies on the Committee arising by resignation, death, removal or otherwise. The Board, in its sole discretion, may bifurcate the powers and duties of the Committee among one or more separate committees, or retain all powers and duties of the Committee in a single Committee. The members of the Committee shall serve at the discretion of the Board.

(i) Common Stock. The common stock of the Company, \$.01 per value per share, and any class of common stock into which such common shares may hereafter be converted, reclassified, re-capitalized, or exchanged.

(j) Company. ION Geophysical Corporation, a corporation organized under the laws of the State of Delaware, and any successor-in-interest thereto.

(k) Consultant. An independent agent, consultant, attorney, an individual who has agreed to become an Employee within the next six months, or any other individual who is not a Director or employee of the Company (or any Parent or Subsidiary) and who, in the opinion of the Committee, is in a position to contribute to the growth or financial success of the Company (or any Parent or Subsidiary), (ii), is a natural person and (iii) provides bona fide services to the Company (or any Parent or Subsidiary), which services are not in connection with the offer or sale of securities in a capital raising transaction, and do not directly or indirectly promote or maintain a market for the Company's securities.

(l) Covered Employee. A named executive officer who is one of the group of covered employees, as defined in Section 162(m) of the Code and Treasury Regulation § 1.162-27(c) (or its successor), during any such period that the Company is a Publicly Held Corporation.

(m) Deferred Stock. Shares of Common Stock to be issued or transferred to a Grantee under an Other Stock-Based Award granted pursuant to Section 5 at the end of a specified deferral period, as set forth in the Incentive Agreement pertaining thereto.

(n) Director. Any individual who is a member of the Board.

(o) Director Plan. The Amended and Restated 1996 Non-Employee Director Stock Option Plan.

(p) Disability. As determined by the Committee in its discretion exercised in good faith, a physical or mental condition of the Employee that would entitle him to disability income payments under the Company's long term disability insurance policy or plan for employees, as then effective, if any; or in the event that the Grantee is not covered, for whatever reason, under the Company's long-term disability

insurance policy or plan, "Disability" means a permanent and total disability as defined in Section 22(e)(3) of the Code. A determination of Disability may be made by a physician selected or approved by the Committee and, in this respect, the Grantee shall submit to any reasonable examination by such physician upon request.

(q) Employee. Any employee of the Company (or any Parent or Subsidiary) within the meaning of Section 3401(c) of the Code who, in the opinion of the Committee, is in a position to contribute to the growth, development or financial success of the Company (or any Parent or Subsidiary), including, without limitation, officers who are members of the Board.

(r) Employment. Employment by the Company (or any Parent or Subsidiary), or by any corporation issuing or assuming an Incentive Award in any transaction described in Section 424(a) of the Code, or by a parent corporation or a subsidiary corporation of such corporation issuing or assuming such Incentive Award, as the parent-subsidiary relationship shall be determined at the time of the corporate action described in Section 424(a) of the Code. In this regard, neither the transfer of a Grantee from Employment by the Company to Employment by any Parent or Subsidiary, nor the transfer of a Grantee from Employment by any Parent or Subsidiary to Employment by the Company, shall be deemed to be a termination of Employment of the Grantee. Moreover, the Employment of a Grantee shall not be deemed to have been terminated because of an approved leave of absence from active Employment on account of temporary illness, authorized vacation or granted for reasons of professional advancement, education, health, government service or military leave, or during any period required to be treated as a leave of absence by virtue of any applicable statute, Company personnel policy or agreement. Whether an authorized leave of absence shall constitute termination of Employment hereunder shall be determined by the Committee in its discretion. Unless otherwise provided in the Incentive Agreement, the term "Employment" for purposes of the Plan is also defined to include compensatory or advisory services performed by a Consultant for the Company (or any Parent or Subsidiary).

(s) Exchange Act. The Securities Exchange Act of 1934, as amended.

(t) Fair Market Value. While the Company is a Publicly Held Corporation, the Fair Market Value of one share of Common Stock on the date in question is deemed to be the closing sales price on the immediately preceding business day of a share of Common Stock as reported on the New York Stock Exchange or other principal securities exchange on which Shares are then listed or admitted to trading, or as quoted on any national interdealer quotation system, if such shares are not so listed.

(u) Grantee. Any Employee, Director or Consultant who is granted an Incentive Award under the Plan.

(v) Immediate Family. With respect to a Grantee, the Grantee's child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including adoptive relationships.

(w) Incentive Award. A grant of an award under the Plan to a Grantee, including any Nonstatutory Stock Option, Incentive Stock Option, Stock Appreciation Right, Performance Share, Restricted Stock, Restricted Stock Unit or Other Stock-Based Award, as well as any Supplemental Payment.

(x) Incentive Agreement. The written agreement entered into between the Company and the Grantee setting forth the terms and conditions pursuant to which an Incentive Award is granted under the Plan, as such agreement is further defined in Section 7.1 (a).

(y) Incentive Stock Option or ISO. A Stock Option granted by the Committee to an Employee under Section 2 that is designated by the Committee as an Incentive Stock Option and intended to qualify as an Incentive Stock Option under Section 422 of the Code.

(z) Independent SAR. A Stock Appreciation Right described in Section 2.5.

(aa) Insider. While the Company is a Publicly Held Corporation, an individual who is, on the relevant date, an officer, director or ten percent (10%) beneficial owner of any class of the Company's

equity securities that is registered pursuant to Section 12 of the Exchange Act, all as defined under Section 16 of the Exchange Act.

(bb) Non-Employee Director. A Director who is not an Employee.

(cc) Non-Employee Director Award. Any Nonstatutory Stock Option, SAR, Performance Shares, Restricted Stock, Restricted Stock Unit or Other Stock-Based Award granted, whether singly, in combination, or in tandem, to a Grantee who is a Non-Employee Director pursuant to such applicable terms, conditions, and limitations as the Board or Committee may establish in accordance with this Plan.

(dd) Nonstatutory Stock Option. A Stock Option granted by the Committee to a Grantee under Section 2 that is not designated by the Committee as an Incentive Stock Option or to which Section 421 of the Code does not apply.

(ee) Option Price. The exercise price at which a Share may be purchased by the Grantee of a Stock Option.

(ff) Other Stock-Based Award. An award granted by the Committee to a Grantee under Section 2 that is not a Nonstatutory Stock Option, SAR, Performance Share, Restricted Stock or Restricted Stock Unit and is valued in whole or in part by reference to, or is otherwise based upon, Common Stock.

(gg) Parent. Any corporation (whether now or hereafter existing) that constitutes a "Parent" of the Company, as defined in Section 424(e) of the Code.

(hh) Performance-Based Exception. The performance-based exception from the tax deductibility limitations of Section 162(m) of the Code, as prescribed in Section 162(m) of the Code and Treasury Regulation § 1.162-27(e) (or its successor), which is applicable during such period that the Company is a Publicly Held Corporation.

(ii) Performance Period. A period of time determined by the Committee over which performance is measured for the purpose of determining a Grantee's right to and the payment value of any Performance Share or Other Stock-Based Award.

(jj) Performance Share. An Incentive Award representing a contingent right to receive Shares of Common Stock at the end of a Performance Period.

(kk) Period of Restriction. A period when Restricted Stock or Restricted Stock Units are subject to a substantial risk of forfeiture (based on the passage of time, the achievement of performance goals, or upon the occurrence of other events as determined by the Committee, in its discretion), as provided in Section 4.

(ll) Plan. 2004 Long-Term Incentive Plan, as set forth herein and as it may be amended from time to time.

(mm) Publicly Held Corporation. A corporation issuing any class of common equity securities required to be registered under Section 12 of the Exchange Act.

(nn) Restricted Stock. An Award granted to a Grantee pursuant to Section 4.

(oo) Restricted Stock Unit. An Award granted to a Grantee pursuant to Section 4, except no Shares are actually awarded to the Grantee on the date of grant.

(pp) Retirement. The voluntary termination of Employment from the Company or any Parent or Subsidiary constituting retirement for age on any date after the Employee attains the normal retirement age of 65 years, or such other age as may be designated by the Committee in the Employee's Incentive Agreement.

(qq) intentionally deleted.

(rr) Share. A share of Common Stock of the Company.

(ss) Share Pool. The number of Shares authorized for issuance under Section 1.4 as adjusted for awards and payouts under Section 1.5 and as adjusted for changes in corporate capitalization under Section 7.5.

(tt) Spread. The difference between the exercise price per Share specified in any SAR grant and the Fair Market Value of a Share on the date of exercise of the SAR.

(uu) Stock Appreciation Right or SAR. A Tandem SAR described in Section 2.4 or an Independent SAR described in Section 2.5.

(vv) Stock Option or Option. Pursuant to Section 2 or Section 6, (i) an Incentive Stock Option granted to an Employee, or (ii) a Nonstatutory Stock Option granted to an Employee, Director or Consultant, whereunder such option the Grantee has the right to purchase Shares of Common Stock. In accordance with Section 422 of the Code, only an Employee of the Company, Parent or Subsidiary may be granted an Incentive Stock Option.

(ww) Subsidiary. Any corporation (whether now or hereafter existing) which constitutes a "subsidiary" of the Company, as defined in Section 424(f) of the Code.

(xx) Supplemental Payment. Any amount, as described in Sections 2.6, 3.2 and/or 4.3, that is dedicated to payment of income taxes which are payable by the Grantee resulting from an Incentive Award.

(yy) Tandem SAR. A Stock Appreciation Right that is granted in connection with a related Stock Option pursuant to Section 2.4, the exercise of which shall require forfeiture of the right to purchase a Share under the related Stock Option (and when a Share is purchased under the Stock Option, the Tandem SAR with respect thereto, shall similarly be canceled).

### 1.3 Plan Administration

(a) Authority of the Committee. Except as may be limited by law and subject to the provisions herein, the Committee shall have full power to (i) select Grantees who shall participate in the Plan; (ii) determine the sizes, duration and types of Incentive Awards; (iii) determine the terms and conditions of Incentive Awards and Incentive Agreements; (iv) determine whether any Shares subject to Incentive Awards will be subject to any restrictions on transfer; (v) construe and interpret the Plan and any Incentive Agreement or other agreement entered into under the Plan; and (vi) establish, amend, or waive rules for the Plan's administration. Further, the Committee shall make all other determinations which may be necessary or advisable for the administration of the Plan. Notwithstanding the preceding, without the prior approval of the Company's shareholders, any Stock Option previously granted under the Plan shall not be repriced, replaced, or regranted through cancellation, or by lowering the exercise price of a previously granted option, except as provided in Section 7.5.

(b) Meetings. The Committee shall designate a chairman from among its members who shall preside at all of its meetings, and shall designate a secretary, without regard to whether that person is a member of the Committee, who shall keep the minutes of the proceedings and all records, documents, and data pertaining to its administration of the Plan. Meetings shall be held at such times and places as shall be determined by the Committee and the Committee may hold telephonic meetings.

(c) Decisions Binding. All determinations and decisions made by the Committee shall be made in its discretion pursuant to the provisions of the Plan, and shall be final, conclusive and binding on all persons including the Company, Employees, Directors, Grantees, and their estates and beneficiaries. The Committee's decisions and determinations with respect to any Incentive Award need not be uniform and may be made selectively among Incentive Awards and Grantees, whether or not such Incentive Awards are similar or such Grantees are similarly situated.

(d) Modification of Outstanding Incentive Awards. Subject to the stockholder approval requirements of Section 8.6 if applicable, the Committee may, in its discretion, provide for the extension of the exercisability of an Incentive Award, accelerate the vesting or exercisability of an Incentive Award, eliminate or make less

restrictive any restrictions contained in an Incentive Award, waive any restriction or other provisions of an Incentive Award, or otherwise amend or modify an Incentive Award in any manner that is either (i) not adverse to the Grantee to whom such Incentive Award was granted or (ii) consented to by such Grantee; *provided, however*, no Stock Option issued under the Plan will be repriced, replaced or regranted through cancellation, or by lowering the Option Price of a previously granted Stock Option, and the period during which a Stock Option may be exercised shall not be extended such that the compensation payable under the Stock Option would be subject to the excise tax applicable under Section 409A of the Code. With respect to an Incentive Award that is an incentive stock option (as described in Section 422 of the Code), no adjustment to such option shall be made to the extent constituting a "modification" within the meaning of Section 424(h)(3) of the Code unless otherwise agreed to by the Grantee in writing. Except as provided in this Plan in connection with a Change of Control or a Corporate Event, the language of this ~~Section 1.3(d)~~ prohibits all forms of repricing, including cash buyouts and Incentive Award exchanges, without stockholder approval.

(e) *Delegation of Authority.* The Committee may delegate to designated officers or other employees of the Company any of its duties and authority under the Plan pursuant to such conditions or limitations as the Committee may establish from time to time; *provided, however*, the Committee may not delegate to any person the authority to (i) grant Incentive Awards, or (ii) take any action which would contravene the requirements of Rule 16b-3 under the Exchange Act or the Performance-Based Exception under Section 162(m) of the Code.

(f) *Expenses of Committee.* The Committee may employ legal counsel, including, without limitation, independent legal counsel and counsel regularly employed by the Company, and other agents, as the Committee may deem appropriate for the administration of the Plan. The Committee may rely upon any opinion or computation received from any such counsel or agent. All expenses incurred by the Committee in interpreting and administering the Plan, including, without limitation, meeting expenses and professional fees, shall be paid by the Company.

(g) *Indemnification.* Each person who is or was a member of the Committee, or of the Board, shall be indemnified by the Company against and from any damage, loss, liability, cost and expense that may be imposed upon or reasonably incurred by him in connection with or resulting from any claim, action, suit, or proceeding to which he may be a party or in which he may be involved by reason of any action taken or failure to act under the Plan, except for any such act or omission constituting willful misconduct or gross negligence. Such person shall be indemnified by the Company for all amounts paid by him in settlement thereof, with the Company's approval, or paid by him in satisfaction of any judgment in any such action, suit, or proceeding against him, *provided* he shall give the Company an opportunity, at its own expense, to handle and defend the same before he undertakes to handle and defend it on his own behalf. The foregoing right of indemnification shall not be exclusive of any other rights of indemnification to which such persons may be entitled under the Company's Articles or Certificate of Incorporation or Bylaws, by contract, as a matter of law, or otherwise, or any power that the Company may have to indemnify them or hold them harmless.

(h) *Awards in Foreign Countries.* The Board shall have the authority to adopt modifications, procedures, sub-plans, and other similar plan documents as may be necessary or desirable to comply with provisions of the laws of foreign countries in which the Company or its subsidiaries may operate to assure the viability of the benefits of Incentive Awards made to individuals employed or providing services in such countries and to meet the objectives of the Plan.

#### 1.4 *Shares of Common Stock Available for Incentive Awards*

Subject to this Section 1.4 and subject to adjustment under Section 7.5, there shall be available for Incentive Awards that are granted wholly or partly in Common Stock (including rights or Options that may be exercised or settled in Common Stock) 15,200,000 Shares of Common Stock.

The number of Shares of Common Stock that are the subject of Incentive Awards under this Plan, that are forfeited or terminated, expire unexercised, are settled in cash in lieu of Common Stock or in a manner such that all or some of the Shares covered by an Incentive Award are not issued to a Grantee or are exchanged for Incentive Awards that do not involve Common Stock, shall again immediately become available

for Incentive Awards hereunder; *provided, however*, the aggregate number of Shares which may be issued upon exercise of ISOs shall in no event exceed 15,200,000 Shares (subject to adjustment pursuant to Section 7.5).

Any Shares of Common Stock reserved for issuance under the Director Plan in excess of the number of Shares as to which Incentive Awards have been awarded thereunder shall no longer be available for grant under the Director Plan after the Effective Date but shall instead be available for grant under the terms and conditions of this Plan. Any Shares as to which Awards granted or issued under the Director Plan that may lapse, expire, terminate, or be cancelled, are settled in cash in lieu of common stock, are tendered (either by actual delivery or attestation) to pay the Option Price, or satisfy any tax withholding requirements shall be deemed available for issuance or reissuance under the preceding paragraph of this Section of the Plan.

Subject to adjustment under Section 7.5 and the limit set forth above, the following additional limits are imposed under the Plan:

(a) The maximum number of Shares that may be covered by Incentive Awards granted to any one individual pursuant to Section 2 (relating to Options and SARs) shall be 15,200,000 Shares during any one calendar-year period. To the extent required by Section 162(m) of the Code, Shares subject to the foregoing limit with respect to which the related Incentive Award described in Section 2 is forfeited, expires, or is canceled shall not again be available for grant under this limit.

(b) For Performance Shares that are intended to qualify for the Performance-Based Exception, no more than 15,200,000 Shares may be delivered to any one Grantee for Performance Periods beginning in any one calendar year, regardless of whether the applicable Performance Period during which the Performance Shares are earned ends in the same year in which it begins or in a later calendar year; provided that Performance Shares described in this paragraph (b) that are intended to qualify for the Performance-Based Exception shall be subject to the following: (i) If the Performance Shares are denominated in Shares but are settled in an equivalent amount of cash, the foregoing limit shall be applied as though the Incentive Award was settled in Shares; and (ii) If delivery of Shares or cash is deferred until after Performance Shares have been earned, any adjustment in the amount delivered to reflect actual or deemed investment experience after the date the shares are earned shall be disregarded.

(c) For Supplemental Payments that are intended to qualify for the Performance-Based Exception, no more than \$2,000,000 may be paid to any one Grantee for Performance Periods beginning in any one calendar year, regardless of whether the applicable Performance Period during which the Supplemental Payment is earned ends in the same year in which it begins or in a later calendar year; provided that Supplemental Payments described in this paragraph (c) that are intended to qualify for the Performance-Based Exception shall be subject to the following: (i) If a Supplemental Payment is denominated in cash but an equivalent amount of Shares is delivered in lieu of delivery of cash, the foregoing limit shall be applied as though the Supplemental Payment was settled in cash; and (ii) if delivery of Shares or cash is deferred until after the Supplemental Payment has been earned, any adjustment in the amount delivered to reflect actual or deemed investment experience after the date the Supplemental Payment is earned shall be disregarded.

#### *1.5 Share Pool Adjustments for Awards and Payouts*

The following Incentive Awards and payouts shall reduce, on a one Share for one Share basis, the number of Shares authorized for issuance under the Share Pool:

- (a) Stock Option;
- (b) SAR (except a Tandem SAR);
- (c) A payout of a Performance Share in Shares;
- (d) Restricted Stock or a payout of Restricted Stock Units in Shares; and
- (e) A payout of an Other Stock-Based Award in Shares.

The following transactions shall restore, on a one Share for one Share basis, the number of Shares authorized for issuance under the Share Pool:

(A) A payout of an SAR or Other Stock-Based Award in the form of cash;

(B) A cancellation, termination, expiration, forfeiture, or lapse for any reason (with the exception of the termination of a Tandem SAR upon exercise of the related Stock Option, or the termination of a related Stock Option upon exercise of the corresponding Tandem SAR) of any Shares subject to an Incentive Award; and

(C) Payment of an Option Price with previously acquired Shares or by withholding Shares which otherwise would be acquired on exercise (i.e., the Share Pool shall be increased by the number of Shares turned in or withheld as payment of the Option Price plus any Shares withheld to pay withholding taxes).

#### 1.6 *Common Stock Available*

The Common Stock available for issuance or transfer under the Plan shall be made available from Shares now or hereafter (a) held in the treasury of the Company, (b) are authorized but unissued, or (c) to be purchased or acquired by the Company. No fractional Shares shall be issued under the Plan; any payment for fractional Shares shall be made in cash.

#### 1.7 *Participation*

(a) Eligibility. The Committee shall from time to time designate those key Employees, Directors or Consultants, if any, to be granted Incentive Awards under the Plan, the type and number of Incentive Awards granted, and any other terms or conditions relating to the Incentive Awards as it may deem appropriate to the extent consistent with the provisions of the Plan. A Grantee who has been granted an Incentive Award may, if otherwise eligible, be granted additional Incentive Awards at any time.

(b) Incentive Stock Option Eligibility. No Consultant or Non-Employee Director shall be eligible for the grant of any Incentive Stock Option. In addition, no Employee shall be eligible for the grant of any Incentive Stock Option who owns or would own immediately before the grant of such Incentive Stock Option, directly or indirectly, stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company, or any Parent or Subsidiary. This restriction does not apply if, at the time such Incentive Stock Option is granted, the Incentive Stock Option exercise price is at least one hundred and ten percent (110%) of the Fair Market Value on the date of grant and the Incentive Stock Option by its terms is not exercisable after the expiration of five (5) years from the date of grant. For the purpose of the immediately preceding sentence, the attribution rules of Section 424(d) of the Code shall apply for the purpose of determining an Employee's percentage ownership in the Company or any Parent or Subsidiary. This paragraph shall be construed consistent with the requirements of Section 422 of the Code.

#### 1.8 *Types of Incentive Awards*

The types of Incentive Awards under the Plan are Stock Options, Stock Appreciation Rights and Supplemental Payments as described in Section 2, Performance Shares and Supplemental Payments as described in Section 3, Restricted Stock, Restricted Stock Units and Supplemental Payments as described in Section 4, and Other Stock-Based Awards and Supplemental Payments as described in Section 5, and any combination of the foregoing.

## SECTION 2

### STOCK OPTIONS AND STOCK APPRECIATION RIGHTS

#### 2.1 *Grant of Stock Options*

The Committee is authorized to grant (a) Nonstatutory Stock Options to Employees, Directors or Consultants and (b) Incentive Stock Options to Employees only, in accordance with the terms and conditions of the Plan, and with such additional terms and conditions, not inconsistent with the Plan, as the Committee



shall determine in its discretion. Successive grants may be made to the same Grantee whether or not any Stock Option previously granted to such person remains unexercised.

## 2.2 Stock Option Terms

(a) Written Agreement. Each grant of a Stock Option shall be evidenced by a written Incentive Agreement. Among its other provisions, each Incentive Agreement shall set forth, subject to Section 422 of the Code, the extent to which the Grantee shall have the right to exercise the Stock Option following termination of the Grantee's Employment. Such provisions shall be determined in the discretion of the Committee, shall be included in the Grantee's Incentive Agreement, and need not be uniform among all Stock Options issued pursuant to the Plan. In addition, Incentive Agreement shall state whether the Stock Option is intended to meet the requirements of Section 422 of the Code.

(b) Number of Shares. Each Stock Option shall specify the number of Shares of Common Stock to which it pertains.

(c) Exercise Price. The exercise price per Share of Common Stock under each Stock Option shall be determined by the Committee; *provided, however*, that in the case of a Stock Option, such exercise price shall not be less than 100% of the Fair Market Value per Share on the date the Stock Option is granted (110% in the case of an Incentive Stock Option for 10% or greater shareholders pursuant to Section 1.7(b)). Each Stock Option shall specify the method of exercise, which shall be consistent with the requirements of Section 2.3(a).

(d) Term. In the Incentive Agreement, the Committee shall fix the term of each Stock Option, which shall be not more than ten (10) years from the date of grant (five years for ISO grants to 10% or greater shareholders pursuant to Section 1.7(b)). In the event no term is fixed, such term shall be ten (10) years from the date of grant.

(e) Exercise. The Committee shall determine the time or times at which a Stock Option may be exercised in whole or in part. Each Stock Option may specify the required period of continuous Employment and/or the performance objectives to be achieved before the Stock Option or portion thereof will become exercisable. Each Stock Option, the exercise of which, or the timing of the exercise of which, is dependent, in whole or in part, on the achievement of designated performance objectives, may specify a minimum level of achievement in respect of the specified performance objectives below which no Stock Options will be exercisable and a method for determining the number of Stock Options that will be exercisable if performance is at or above such minimum but short of full achievement of the performance objectives. All such terms and conditions shall be set forth in the Incentive Agreement.

(f) \$100,000 Annual Limit on Incentive Stock Options. Notwithstanding any contrary provision in the Plan, to the extent that the aggregate Fair Market Value (determined as of the time the Incentive Stock Option is granted) of the Shares of Common Stock with respect to which Incentive Stock Options are exercisable for the first time by any Grantee during any single calendar year (under the Plan and any other stock option plans of the Company and its Subsidiaries or Parent) exceeds the sum of \$100,000, such Incentive Stock Option shall be treated as a Nonstatutory Stock Option to the extent in excess of the \$100,000 limit, and not an Incentive Stock Option, but all other terms and provisions of such Stock Option shall remain unchanged. This paragraph shall be applied by taking Incentive Stock Options into account in the order in which they were granted and shall be construed in accordance with Section 422(d) of the Code. In the absence of such regulations or other authority, or if such regulations or other authority require or permit a designation of the Options which shall cease to constitute Incentive Stock Options, then such Incentive Stock Options, only to the extent of such excess, shall automatically be deemed to be Nonstatutory Stock Options but all other terms and conditions of such Incentive Stock Options, and the corresponding Incentive Agreement, shall remain unchanged.

## 2.3 Stock Option Exercises

(a) Method of Exercise and Payment. Stock Options shall be exercised by the delivery of a signed written notice of exercise to the Company as of a date set by the Company in advance of the effective date of

the proposed exercise. The notice shall set forth the number of Shares with respect to which the Option is to be exercised.

The Option Price upon exercise of any Stock Option shall be payable to the Company in full either: (i) in cash or its equivalent, or (ii) by tendering previously acquired Shares having an aggregate Fair Market Value at the time of exercise equal to the Option Price, or (iii) by withholding Shares which otherwise would be acquired on exercise having an aggregate Fair Market Value at the time of exercise equal to the total Option Price, or (iv) by any combination of (i), (ii), and (iii) above. Any payment in Shares shall be effected by surrender of such Shares to the Company in good form for transfer and shall be valued at their Fair Market Value on the date when the Stock Option is exercised. The Company shall not withhold shares, and the Grantee shall not surrender, or attest to the ownership of, Shares in payment of the Option Price if such action would cause the Company to recognize compensation expense (or additional compensation expense) with respect to the Stock Option for financial reporting purposes.

While the Company is a Publicly Held Corporation, the Committee may also allow the Option Price to be paid with such other consideration as shall constitute lawful consideration for the issuance of Shares (including, without limitation, effecting a "cashless exercise" with a broker or dealer), subject to applicable securities law restrictions and tax withholdings, or by any other means which the Committee determines to be consistent with the Plan's purpose and applicable law.

As soon as practicable after receipt of a written notification of exercise and full payment, the Company shall deliver, or cause to be delivered, to or on behalf of the Grantee, in the name of the Grantee or other appropriate recipient, Share certificates for the number of Shares purchased under the Stock Option. Such delivery shall be effected for all purposes when the Company or a stock transfer agent of the Company shall have deposited such certificates in the United States mail, addressed to Grantee or other appropriate recipient.

Subject to Section 7.2 during the lifetime of a Grantee, each Option granted to him shall be exercisable only by the Grantee (or his legal guardian or personal representative in the event of his Disability) or by a broker or dealer acting on his behalf pursuant to a cashless exercise under the foregoing provisions of this Section 2.3(a).

(b) Restrictions on Share Transferability. The Committee may impose such restrictions on any Shares acquired pursuant to the exercise of a Stock Option as it may deem advisable, including, without limitation, restrictions under (i) any stockholders' agreement, buy/sell agreement, right of first refusal, non-competition, and any other agreement between the Company and any of its securities holders or employees, (ii) any applicable federal securities laws, (iii) the requirements of any stock exchange or market upon which such Shares are then listed and/or quoted, or (iv) any blue sky or state securities law applicable to such Shares. Any certificate issued to evidence Shares issued upon the exercise of an Incentive Award may bear such legends and statements as the Committee shall deem advisable to assure compliance with federal and state laws and regulations.

Any Grantee or other person exercising an Incentive Award may be required by the Committee to give a written representation that the Incentive Award and the Shares subject to the Incentive Award will be acquired for investment and not with a view to public distribution; *provided, however*, that the Committee, in its sole discretion, may release any person receiving an Incentive Award from any such representations either prior to or subsequent to the exercise of the Incentive Award.

(c) Notification of Disqualifying Disposition of Shares from Incentive Stock Options. Notwithstanding any other provision of the Plan, a Grantee who disposes of Shares of Common Stock acquired upon the exercise of an Incentive Stock Option by a sale or exchange either (i) within two (2) years after the date of the grant of the Incentive Stock Option under which the Shares were acquired or (ii) within one (1) year after the transfer of such Shares to him pursuant to exercise, shall promptly notify the Company of such disposition, the amount realized and his adjusted basis in such Shares.

(d) Proceeds of Option Exercise. The proceeds received by the Company from the sale of Shares pursuant to Stock Options exercised under the Plan shall be used for general corporate purposes.

(e) *Information Required in Connection with Exercise of Incentive Stock Option.* The Company shall provide the Grantee with a written statement required by Section 6039 of the Code no later than January 31 of the year following the calendar year during which the Grantee exercises an Option that is intended to be an Incentive Stock Option.

#### 2.4 *Stock Appreciation Rights in Tandem with Nonstatutory Stock Options*

(a) *Grant.* The Committee may, at the time of grant of a Nonstatutory Stock Option, or at any time thereafter during the term of the Nonstatutory Stock Option, grant Stock Appreciation Rights with respect to all or any portion of the Shares of Common Stock covered by such Nonstatutory Stock Option. A Stock Appreciation Right in tandem with a Nonstatutory Stock Option is referred to herein as a "Tandem SAR."

(b) *General Provisions.* The terms and conditions of each Tandem SAR shall be evidenced by an Incentive Agreement. The Option Price per Share of a Tandem SAR shall be fixed in the Incentive Agreement and shall not be less than one hundred percent (100%) of the Fair Market Value of a Share on the grant date of the Nonstatutory Stock Option to which it relates.

(c) *Exercise.* A Tandem SAR may be exercised at any time the Nonstatutory Stock Option to which it relates is then exercisable, but only to the extent such Nonstatutory Stock Option is exercisable, and shall otherwise be subject to the conditions applicable to such Nonstatutory Stock Option. When a Tandem SAR is exercised, the Nonstatutory Stock Option to which it relates shall terminate to the extent of the number of Shares with respect to which the Tandem SAR is exercised. Similarly, when a Nonstatutory Stock Option is exercised, the Tandem SARs relating to the Shares covered by such Nonstatutory Stock Option exercise shall terminate.

(d) *Settlement.* Upon exercise of a Tandem SAR, the holder shall receive, for each Share specified in the Tandem SAR grant, an amount equal to the Appreciation. The Appreciation shall be payable in cash, Common Stock, or a combination of both, as specified in the Incentive Agreement. The Appreciation shall be paid within 30 calendar days of the exercise of the Tandem SAR. If the Appreciation is to be paid in Common Stock or cash only, the resulting shares or cash shall be determined dividing (1) by (2), where (1) is the number of Shares as to which the Tandem SAR is exercised multiplied by the Appreciation in such shares and (2) is the Fair Market Value of a Share on the exercise date. If a portion of the Appreciation is to be paid in Shares, the Share amount shall be determined by calculating the amount of cash payable pursuant to the preceding sentence then by dividing (1) as defined herein, minus the amount of cash payable, by (2) as defined herein.

#### 2.5 *Stock Appreciation Rights Independent of Nonstatutory Stock Options*

(a) *Grant.* The Committee may grant Stock Appreciation Rights independent of Nonstatutory Stock Options ("Independent SARs").

(b) *General Provisions.* The terms and conditions of each Independent SAR shall be evidenced by an Incentive Agreement. The exercise price per share of Common Stock shall be not less than one hundred percent (100%) of the Fair Market Value of a Share of Common Stock on the date of grant of the Independent SAR. The term of an Independent SAR shall be determined by the Committee.

(c) *Exercise.* Independent SARs shall be exercisable at such time and subject to such terms and conditions as the Committee shall specify in the Incentive Agreement for the Independent SAR grant.

(d) *Settlement.* Upon exercise of an Independent SAR, the holder shall receive, for each Share specified in the Independent SAR grant, an amount equal to the Spread. The Spread shall be payable in cash, Common Stock, or a combination of both, as specified in the Incentive Agreement. The Spread shall be paid within 30 calendar days of the exercise of the Independent SAR. If the Spread is to be paid in Common Stock or cash only, the resulting shares or cash shall be determined by dividing (1) by (2), where (1) is the number of Shares as to which the Independent SAR is exercised multiplied by the Spread in such Shares and (2) is the Fair Market Value of a Share on the exercise date. If a portion of the Spread is to be paid in Shares, the Share amount shall be determined by calculating the amount of cash payable pursuant to the preceding sentence then by dividing (1) as defined herein, minus the amount of cash payable, by (2) as defined herein.

## 2.6 *Supplemental Payment on Exercise of Nonstatutory Stock Options or Stock Appreciation Rights*

The Committee, either at the time of grant or as of the time of exercise of any Nonstatutory Stock Option or Stock Appreciation Right, may provide in the Incentive Agreement for a Supplemental Payment by the Company to the Grantee with respect to the exercise of any Nonstatutory Stock Option or Stock Appreciation Right. The Supplemental Payment shall be in the amount specified by the Committee, which amount shall not exceed the amount necessary to pay the federal and state income tax payable with respect to both the exercise of the Nonstatutory Stock Option and/or Stock Appreciation Right and the receipt of the Supplemental Payment, assuming the holder is taxed at either the maximum effective income tax rate applicable thereto or at a lower tax rate as deemed appropriate by the Committee. The Committee shall have the discretion to grant Supplemental Payments that are payable solely in cash or Supplemental Payments that are payable in cash, Common Stock, or a combination of both, as determined by the Committee at the time of payment.

## SECTION 3

### PERFORMANCE SHARES

#### 3.1 *Performance Based Awards*

(a) Grant. The Committee is authorized to grant Performance Shares to selected Grantees who are Employees or Consultants. Each grant of Performance Shares shall be evidenced by an Incentive Agreement in such amounts and upon such terms as shall be determined by the Committee. The Committee may make grants of Performance Shares in such a manner that more than one Performance Period is in progress concurrently. For each Performance Period, the Committee shall establish the number of Performance Shares and their contingent values which may vary depending on the degree to which performance criteria established by the Committee are met.

#### (b) Performance Criteria.

(i) The grant of Performance Shares shall be subject to such conditions, restrictions and contingencies, as determined by the Committee.

(ii) The Committee may designate a grant of Performance Shares to any Grantee as intended to qualify for the Performance-Based Exception. To the extent required by Code section 162(m), any grant of Performance Shares so designated shall be conditioned on the achievement of one or more performance goals, subject to the following:

(A) The performance goals shall be based upon criteria in one or more of the following categories: performance of the Company as a whole, performance of a segment of the Company's business, and individual performance. Performance criteria for the Company shall relate to the achievement of predetermined financial objectives for the Company and its Subsidiaries on a consolidated basis. Performance criteria for a segment of the Company's business shall relate to the achievement of financial and operating objectives of the segment for which the Grantee is accountable.

(B) Performance criteria shall include pre-tax or after-tax profit levels, including: earnings per share, earnings before interest and taxes, earnings before interest, taxes, depreciation and amortization, net operating profits after tax, and net income; total shareholder return; return on assets, equity, capital or investment; cash flow and cash flow return on investment; economic value added and economic profit; growth in earnings per share; levels of operating expense and maintenance expense; or measures of customer satisfaction and customer service, as determined from time to time including the relative improvement therein.

(C) Individual performance criteria shall relate to a Grantee's overall performance, taking into account, among other measures of performance, the attainment of individual goals and objectives. The performance goals may differ among Grantees.

(c) Modification. If the Committee determines, in its discretion exercised in good faith, that the established performance measures or objectives are no longer suitable to the Company's objectives because of

a change in the Company's business, operations, corporate structure, capital structure, or other conditions the Committee deems to be appropriate, the Committee may modify the performance measures and objectives to the extent it considers to be necessary. However, if any Performance Shares are designated as intended to qualify for the Performance-Based Exception, no such modification shall be made to the extent the modification would otherwise cause the Performance Shares to not qualify for the Performance-Based Exception.

(d) *Payment.* The basis for payment of Performance Shares for a given Performance Period shall be the achievement of those performance objectives determined by the Committee at the beginning of the Performance Period as specified in the Grantee's Incentive Agreement. If minimum performance is not achieved for a Performance Period, no payment shall be made and all contingent rights shall cease. If minimum performance is achieved or exceeded, the number of Performance Shares may be based on the degree to which actual performance exceeded the pre-established minimum performance standards. The amount of payment shall be determined by multiplying the number of Performance Shares granted at the beginning of the Performance Period times the final Performance Share value. Payments shall be made in cash or Common Stock in the discretion of the Committee as specified in the Incentive Agreement.

(e) *Special Rule for Covered Employees.* No later than the ninetieth (90th) day following the beginning of a Performance Period (or twenty-five percent (25%) of the Performance Period) the Committee shall establish performance goals as described in Section 3.1(b) applicable to Performance Shares awarded to Covered Employees in such a manner as shall permit payments with respect thereto to qualify for the Performance-Based Exception, if applicable. If a Performance Share granted to a Covered Employee is intended to comply with the Performance-Based Exception, the Committee in establishing performance goals shall comply with Treasury Regulation § 1.162-27(e)(2) (or its successor). As soon as practicable following the Company's determination of the Company's financial results for any Performance Period, the Committee shall certify in writing: (i) whether the Company achieved its minimum performance for the objectives for the Performance Period, (ii) the extent to which the Company achieved its performance objectives for the Performance Period, (iii) any other terms that are material to the grant of Performance Shares, and (iv) the calculation of the payments, if any, to be paid to each Grantee for the Performance Period.

### 3.2 *Supplemental Payment on Vesting of Performance Shares*

The Committee, either at the time of grant or at the time of vesting of Performance Shares, may provide for a Supplemental Payment by the Company to the Grantee in an amount specified by the Committee, which amount shall not exceed the amount necessary to pay the federal and state income tax payable with respect to both the vesting of such Performance Shares and receipt of the Supplemental Payment, assuming the Grantee is taxed at either the maximum effective income tax rate applicable thereto or at a lower tax rate as seemed appropriate by the Committee. The Committee shall have the discretion to grant Supplemental Payments that are payable in Common Stock.

## SECTION 4

### RESTRICTED STOCK AND RESTRICTED STOCK UNITS

#### 4.1 *Grant of Restricted Stock or Restricted Stock Units*

Subject to the terms and provisions of the Plan, the Committee, at any time and from time to time, may grant Restricted Stock and/or Restricted Stock Units to Grantees in such amounts as the Committee shall determine. Restricted Stock Units shall be similar to Restricted Stock except that no Shares are actually awarded to the Grantee on the date of grant.

#### 4.2 *Restricted Stock Award or Restricted Stock Unit Award Terms*

(a) *Written Agreement.* The terms and conditions of each grant of Restricted Stock Award and/or Restricted Stock Unit Award shall be evidenced by an Incentive Agreement that shall specify the Period(s) of Restriction, the number of shares of Restricted Stock or the number of Restricted Stock Units granted, and such other provisions as the Committee shall determine.

(b) Transferability. Except as provided in this Plan or an Incentive Agreement, Restricted Stock and/or Restricted Stock Units granted herein may not be sold, transferred, pledged, assigned, or otherwise alienated or hypothecated until the end of the applicable Period of Restriction established by the Committee and specified in the Incentive Agreement (and in the case of Restricted Stock Units until the date of delivery or other payment), or upon earlier satisfaction of any other conditions, as specified by the Committee, in its sole discretion, and set forth in the Incentive Agreement or otherwise at any time by the Committee. All rights with respect to the Restricted Stock and/or Restricted Stock Units granted to a Grantee under the Plan shall be available during his lifetime only to such Grantee, except as otherwise provided in an Incentive Agreement or at any time by the Committee.

(c) Other Restrictions. The Committee shall impose such other conditions and/or restrictions on any Restricted Stock or Restricted Stock Units granted pursuant to the Plan as it may deem advisable including, without limitation, a requirement that Grantees pay a stipulated purchase price for each Share of Restricted Stock or each Restricted Stock Unit, restrictions based upon the achievement of specific performance goals, time-based restrictions on vesting following the attainment of the performance goals, time-based restrictions, and/or restrictions under applicable laws or under the requirements of any stock exchange or market upon which such Shares are listed or traded, or holding requirements or sale restrictions placed on the Shares by the Company upon vesting of such Restricted Stock or Restricted Stock Units.

To the extent deemed appropriate by the Committee, the Company may retain the certificates representing shares of Restricted Stock in the Company's possession until such time as all conditions and/or restrictions applicable to such shares have been satisfied or lapse.

Except as otherwise provided in this Section 4, shares of Restricted Stock covered by each Restricted Stock Award shall become freely transferable by the Grantee after all conditions and restrictions applicable to such shares have been satisfied or lapse (including satisfaction of any applicable tax withholding obligations) at the close of the Period of Restriction (but no later than 2½ months following the end of the year that contains the close of the Period of Restriction), or as soon as practicable thereafter. Restricted Stock Units shall be paid in cash, Shares, or a combination of cash and Shares as the Committee, in its sole discretion shall determine.

(d) Certificate Legend. In addition to any legends placed on certificates pursuant to Section 7.1(c), each certificate representing Restricted Stock granted pursuant to the Plan may bear a legend such as the following or as otherwise determined by the Committee in its sole discretion:

THE SALE OR TRANSFER OF SHARES OF STOCK REPRESENTED BY THIS CERTIFICATE, WHETHER VOLUNTARY, INVOLUNTARY, OR BY OPERATION OF LAW, IS SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER AS SET FORTH IN THE SIXTH AMENDED AND RESTATED 2004 LONG-TERM INCENTIVE PLAN, AND IN THE ASSOCIATED INCENTIVE AGREEMENT. A COPY OF THE PLAN AND SUCH INCENTIVE AGREEMENT MAY BE OBTAINED FROM ION GEOPHYSICAL CORPORATION.

(e) Voting Rights. Unless otherwise determined by the Committee or as otherwise set forth in a Grantee's Incentive Agreement, to the extent permitted or required by law, as determined by the Committee, Grantees holding shares of Restricted Stock granted hereunder may be granted the right to exercise full voting rights with respect to those shares during the Period of Restriction. A Grantee shall have no voting rights with respect to any Restricted Stock Units granted hereunder.

(f) Termination of Employment. Each Incentive Agreement shall set forth the extent to which the Grantee shall have the right to retain Restricted Stock and/or Restricted Stock Units following termination of the Grantee's employment with or provision of services to the Company, its Affiliates, and/or its Subsidiaries, as the case may be. Such provisions shall be determined in the sole discretion of the Committee, shall be included in the Incentive Agreement entered into with each Grantee, need not be uniform among all Shares of Restricted Stock or Restricted Stock Units issued pursuant to the Plan, and may reflect distinctions based on the reasons for termination.

(g) Section 83(b) Election. The Committee may provide in an Incentive Agreement that the Award of Restricted Stock is conditioned upon the Grantee making or refraining from making an election with respect to the Award under Section 83(b) of the Code. If a Grantee makes an election pursuant to Section 83(b) of the

Code concerning a Restricted Stock Award, the Grantee shall be required to file promptly a copy of such election with the Company.

#### 4.3 *Supplemental Payment on Vesting of Restricted Stock and Restricted Stock Units*

The Committee, either at the time of grant or at the time of vesting of Restricted Stock or Restricted Stock Units, may provide for a Supplemental Payment by the Company to the Grantee in an amount specified by the Committee, which amount shall not exceed the amount necessary to pay the federal and state income tax payable with respect to both the vesting of such Restricted Stock or Restricted Stock Units and receipt of the Supplemental Payment, assuming the Grantee is taxed at either the maximum effective income tax rate applicable thereto or at a lower tax rate as seemed appropriate by the Committee. The Committee shall also have the discretion to grant Supplemental Payments that are payable in Common Stock.

### SECTION 5

#### OTHER STOCK-BASED AWARDS

##### 5.1 *Grant of Other Stock-Based Awards*

Other Stock-Based Awards may be awarded by the Committee to selected Grantees that are denominated or payable in, valued in whole or in part by reference to, or otherwise related to, Shares of Common Stock, as deemed by the Committee to be consistent with the purposes of the Plan and the goals of the Company. Other types of Stock-Based Awards include, without limitation, Deferred Stock, purchase rights, Shares of Common Stock awarded which are not subject to any restrictions or conditions, convertible or exchangeable debentures, other rights convertible into Shares, Incentive Awards valued by reference to the value of securities of or the performance of a specified Subsidiary, division or department, and settlement in cancellation of rights of any person with a vested interest in any other plan, fund, program or arrangement that is or was sponsored, maintained or participated in by the Company or any Parent or Subsidiary. As is the case with other Incentive Awards, Other Stock-Based Awards may be awarded either alone or in addition to or in tandem with any other Incentive Awards.

##### 5.2 *Other Stock-Based Award Terms*

(a) Written Agreement. The terms and conditions of each grant of an Other Stock-Based Award shall be evidenced by an Incentive Agreement.

(b) Purchase Price. Except to the extent that an Other Stock-Based Award is granted in substitution for an outstanding Incentive Award or is delivered upon exercise of a Stock Option, the amount of consideration required to be received by the Company shall be either (i) no consideration other than services actually rendered (in the case of authorized and unissued shares) or to be rendered, or (ii) in the case of an Other Stock-Based Award in the nature of a purchase right, consideration (other than services rendered or to be rendered) at least equal to 50% of the Fair Market Value of the Shares covered by such grant on the date of grant (or such percentage higher than 50% that is required by any applicable tax or securities law).

(c) Performance Criteria and Other Terms. In its discretion, the Committee may specify such criteria, periods or goals for vesting in Other Stock-Based Awards and payment thereof to the Grantee as it shall determine; and the extent to which such criteria, periods or goals have been met shall be determined by the Committee. All terms and conditions of Other Stock-Based Awards shall be determined by the Committee and set forth in the Incentive Agreement. The Committee may also provide for a Supplemental Payment similar to such payment as described in Section 4.3.

(d) Payment. Other Stock-Based Awards may be paid in Shares of Common Stock or other consideration related to such Shares, in a single payment or in installments on such dates as determined by the Committee, all as specified in the Incentive Agreement.

(e) Dividends. The Grantee of an Other Stock-Based Award may be entitled to receive, currently or on a deferred basis, dividends or dividend equivalents with respect to the number of Shares covered by the Other Stock-Based Award, as determined by the Committee and set forth in the Incentive Agreement. The

Committee may also provide in the Incentive Agreement that such amounts (if any) shall be deemed to have been reinvested in additional Shares of Common Stock.

## SECTION 6

### PROVISIONS RELATING TO NON-EMPLOYEE DIRECTOR AWARDS

#### 6.1 *Generally*

All Awards to Non-Employee Directors shall be determined by the Board or Committee.

#### 6.2 *Vesting Period*

Unless the Committee shall otherwise prescribe or as otherwise specified in an applicable Incentive Agreement, each Incentive Award granted to a Non-Employee Director shall vest as follows:

(a) each Incentive Award granted to a Non-Employee Director under the Plan during his initial year of service as a Non-Employee Director, if any, shall vest in 33.33% consecutive annual installments on the first, second and third anniversary dates of the date of grant of each such Incentive Award;

(b) each Incentive Award granted to a Non-Employee Director under the Plan during his second full year of service as a Non-Employee Director, if any, shall vest in 50% consecutive annual installments on the first and second anniversary dates of the Date of Grant of each such Incentive Award;

(c) each Incentive Award granted to a Non-Employee Director under the Plan during his third full year of service as a Non-Employee Director, if any, shall fully vest on the first anniversary date of the date of grant of each such Incentive Award; and

(d) each Incentive Award granted to a Non-Employee Director following the completion of his third full year of service as a Non-Employee Director, if any, shall be fully vested on the date of grant.

## SECTION 7

### PROVISIONS RELATING TO PLAN PARTICIPATION

#### 7.1 *Plan Conditions*

(a) *Incentive Agreement.* Each Grantee to whom an Incentive Award is granted shall be required to enter into an Incentive Agreement with the Company, in such a form as is provided by the Committee. The Incentive Agreement shall contain specific terms as determined by the Committee, in its discretion, with respect to the Grantee's particular Incentive Award. Such terms need not be uniform among all Grantees or any similarly-situated Grantees. The Incentive Agreement may include, without limitation, vesting, forfeiture and other provisions particular to the particular Grantee's Incentive Award, as well as, for example, provisions to the effect that the Grantee (i) shall not disclose any confidential information acquired during Employment with the Company, (ii) shall abide by all the terms and conditions of the Plan and such other terms and conditions as may be imposed by the Committee, (iii) shall not interfere with the employment or other service of any employee, (iv) shall not compete with the Company or become involved in a conflict of interest with the interests of the Company, (v) shall forfeit an Incentive Award as determined by the Committee (including if terminated for Cause), (vi) shall not be permitted to make an election under Section 83(b) of the Code when applicable, and (vii) shall be subject to any other agreement between the Grantee and the Company regarding Shares that may be acquired under an Incentive Award including, without limitation, a stockholders' agreement or other agreement restricting the transferability of Shares by Grantee. An Incentive Agreement shall include such terms and conditions as are determined by the Committee, in its discretion, to be appropriate with respect to any individual Grantee. The Incentive Agreement shall be signed by the Grantee to whom the Incentive Award is made and by an Authorized Officer.

(b) *No Right to Employment.* Nothing in the Plan or any instrument executed pursuant to the Plan shall create any Employment rights or right to serve on the Board (including without limitation, rights to continued



Employment or to continue to provide services as a Director or Consultant) by any Grantee or affect the right of the Company to terminate the Employment or services of any Grantee at any time without regard to the existence of the Plan.

(c) *Securities Requirements.* The Company shall be under no obligation to effect the registration pursuant to the Securities Act of 1933 of any Shares of Common Stock to be issued hereunder or to effect similar compliance under any state laws. Notwithstanding anything herein to the contrary, the Company shall not be obligated to cause to be issued or delivered any certificates evidencing Shares pursuant to the Plan unless and until the Company is advised by its counsel that the issuance and delivery of such certificates is in compliance with all applicable laws, regulations of governmental authorities, and the requirements of any securities exchange or national quotation system on which Shares are traded or quoted. The Committee may require, as a condition of the issuance and delivery of certificates evidencing Shares of Common Stock pursuant to the terms hereof, that the recipient of such Shares make such covenants, agreements and representations, and that such certificates bear such legends, as the Committee, in its discretion, deems necessary or desirable.

If the Shares issuable on exercise of an Incentive Award are not registered under the Securities Act of 1933, the Company may imprint on the certificate for such Shares the following legend or any other legend which counsel for the Company considers necessary or advisable to comply with the Securities Act of 1933:

THE SHARES OF STOCK REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 OR UNDER THE SECURITIES LAWS OF ANY STATE AND MAY NOT BE SOLD OR TRANSFERRED EXCEPT UPON SUCH REGISTRATION OR UPON RECEIPT BY THE CORPORATION OF AN OPINION OF COUNSEL SATISFACTORY TO THE CORPORATION, IN FORM AND SUBSTANCE SATISFACTORY TO THE CORPORATION, THAT REGISTRATION IS NOT REQUIRED FOR SUCH SALE OR TRANSFER.

## 7.2 *Transferability*

Incentive Awards granted under the Plan shall not be transferable or assignable, pledged, or otherwise encumbered other than by will or the laws of descent and distribution. However, only with respect to Incentive Awards that are not Incentive Stock Options, the Committee may, in its discretion, authorize all or a portion of the Nonstatutory Stock Options to be granted on terms which permit transfer by the Grantee to (i) the members of the Grantee's Immediate Family, (ii) a trust or trusts for the exclusive benefit of Immediate Family members, (iii) a partnership in which Immediate Family members are the only partners, (iv) any other entity owned solely by Immediate Family members, or (v) pursuant to a domestic relations order that would qualify under Code Section 414(p); *provided* that (A) the Incentive Agreement pursuant to which such Nonstatutory Stock Options are granted must expressly provide for transferability in a manner consistent with this Section 7.2, (B) the actual transfer must be approved in advance by the Committee, and (C) subsequent transfers of transferred Nonstatutory Stock Options shall be prohibited except in accordance with the first sentence of this section. Following any permitted transfer, the Nonstatutory Stock Option shall continue to be subject to the same terms and conditions as were applicable immediately prior to transfer, *provided* that the term "Grantee" (subject to the immediately succeeding paragraph) shall be deemed to refer to the transferee. The events of termination of employment, as set out in Section 7.6 and in the Incentive Agreement, shall continue to be applied with respect to the original Grantee, and the Incentive Award shall be exercisable by the transferee only to the extent, and for the periods, specified in the Incentive Agreement.

Except as may otherwise be permitted under the Code, in the event of a permitted transfer of a Nonstatutory Stock Option hereunder, the original Grantee shall remain subject to withholding taxes upon exercise. In addition, the Company and the Committee shall have no obligation to provide any notices to any Grantee or transferee thereof, including, for example, notice of the expiration of an Incentive Award following the original Grantee's termination of employment.

The designation by a Grantee of a beneficiary of an Incentive Award shall not constitute a transfer of the Incentive Award. No transfer by will or by the laws of descent and distribution shall be effective to bind the Company unless the Committee has been furnished with a copy of the deceased Grantee's enforceable will or such other evidence as the Committee deems necessary to establish the validity of the transfer. Any attempted

transfer in violation of this Section 7.2 shall be void and ineffective. The Committee in its discretion shall make all determinations under this Section 7.2.

### *7.3 Rights as a Stockholder*

(a) *No Stockholder Rights.* Except as otherwise set forth in Section 4, a Grantee of an Incentive Award (or a permitted transferee of such Grantee) shall have no rights as a stockholder with respect to any Shares of Common Stock until the issuance of a stock certificate for such Shares.

(b) *Representation of Ownership.* In the case of the exercise of an Incentive Award by a person or estate acquiring the right to exercise such Incentive Award by reason of the death or Disability of a Grantee, the Committee may require reasonable evidence as to the ownership of such Incentive Award or the authority of such person and may require such consents and releases of taxing authorities as the Committee may deem advisable.

### *7.4 Listing and Registration of Shares of Common Stock*

The exercise of any Incentive Award granted hereunder shall only be effective at such time as counsel to the Company shall have determined that the issuance and delivery of Shares of Common Stock pursuant to such exercise is in compliance with all applicable laws, regulations of governmental authorities and the requirements of any securities exchange or quotation system on which Shares of Common Stock are traded or quoted. The Committee may, in its discretion, elect to suspend the right to exercise any Incentive Award during any Company-imposed employee "blackout" stock trading period that is necessary or desirable to comply with requirements of such laws, regulations or requirements. The Committee may also, in its discretion, elect to extend the period for exercise of any Incentive Award to reflect any such "blackout" period. The Committee may, in its discretion, defer the effectiveness of any exercise of an Incentive Award in order to allow the issuance of Shares of Common Stock to be made pursuant to registration or an exemption from registration or other methods for compliance available under federal or state securities laws. The Committee shall inform the Grantee in writing of its decision to defer the effectiveness of the exercise of an Incentive Award.

### *7.5 Change in Stock and Adjustments*

(a) *Changes in Law.* Subject to Section 7.7 (which only applies in the event of a Change of Control), in the event of any change in applicable law which warrants equitable adjustment because it interferes with the intended operation of the Plan, then, if the Committee should determine, in its absolute discretion, that such change equitably requires an adjustment in the number or kind of shares of stock or other securities or property theretofore subject, or which may become subject, to issuance or transfer under the Plan or in the terms and conditions of outstanding Incentive Awards, such adjustment shall be made in accordance with such determination. Such adjustments may include changes with respect to (i) the aggregate number of Shares that may be issued under the Plan, (ii) the number of Shares subject to Incentive Awards, and (iii) the price per Share for outstanding Incentive Awards. Any adjustment under this paragraph of an outstanding Incentive Stock Option shall be made only to the extent not constituting a "modification" within the meaning of Section 424(h)(3) of the Code unless otherwise agreed to by the Grantee in writing. The Committee shall give notice to each applicable Grantee of such adjustment, which shall be effective and binding.

(b) *Exercise of Corporate Powers.* The existence of the Plan or outstanding Incentive Awards hereunder shall not affect in any way the right or power of the Company or its stockholders to make or authorize any or all adjustments, re-capitalizations, reorganizations or other changes in the Company's capital structure or its business or any merger or consolidation of the Company, or any issue of bonds, debentures, preferred or prior preference stocks ahead of or affecting the Common Stock or the rights thereof, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceeding whether of a similar character or otherwise.

(c) *Recapitalization of the Company.* Subject to Section 7.7 (which only applies in the event of a Change in Control), in the event that the Committee shall determine that any dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), re-capitalization, stock split,

reverse stock split, rights offering, reorganization, merger, consolidation, split-up, spin-off, split-off, combination, subdivision, repurchase, or exchange of Common Stock or other securities of the Company, issuance of warrants or other rights to purchase Common Stock or other securities of the Company, or other similar corporate transaction or event affects the Common Stock such that an adjustment is determined by the Committee to be appropriate to prevent the dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan, then the Committee shall, in such manner as it deems equitable, adjust any or all of (i) the number of shares and type of Common Stock (or the securities or property) which thereafter may be made the subject of Incentive Awards, (ii) the number of shares and type of Common Stock (or other securities or property) subject to outstanding Incentive Awards, (iii) the number of shares and type of Common Stock (or other securities or property) subject to the annual per-individual limitation under Section 1.4(a) of the Plan, (iv) the Option Price of each outstanding Incentive Award, and (v) the number of or Option Price of Shares of Common Stock then subject to outstanding SARs previously granted and unexercised under the Plan to the end that the same proportion of the Company's issued and outstanding shares of Common Stock in each instance shall remain subject to exercise at the same aggregate Option Price; *provided however*, that the number of Shares of Common Stock (or other securities or property) subject to any Incentive Award shall always be a whole number. In lieu of the foregoing, if deemed appropriate, the Committee may make provision for a cash payment to the holder of an outstanding Incentive Award. Notwithstanding the foregoing, no such adjustment or cash payment shall be made or authorized to the extent that such adjustment or cash payment would cause the Plan or any Stock Option to violate Section 422 of the Code. Such adjustments shall be made in accordance with the rules of any securities-exchange, stock market, or stock quotation system to which the Company is subject.

Upon the occurrence of any such adjustment or cash payment, the Company shall provide notice to each affected Grantee of its computation of such adjustment or cash payment, which shall be conclusive and shall be binding upon each such Grantee.

(d) Issue of Common Stock by the Company. Except as herein above expressly provided in this Section 7.5 and subject to Section 7.7 in the event of a Change in Control, the issue by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, for cash or property, or for labor or services, either upon direct sale or upon the exercise of rights or warrants to subscribe therefor, or upon any conversion of shares or obligations of the Company convertible into such shares or other securities, shall not affect, and no adjustment by reason thereof shall be made with respect to, the number of, or Fair Market Value of, any Incentive Awards then outstanding under previously granted Incentive Awards.

(e) Assumption of Incentive Awards by a Successor. Unless otherwise determined by the Committee in its discretion pursuant to the next paragraph, but subject to the accelerated vesting and other provisions of Section 7.7 that apply in the event of a Change in Control, in the event of a Corporate Event (defined below), each Grantee shall be entitled to receive, in lieu of the number of Shares subject to Incentive Awards, such shares of capital stock (or other securities or property) as may be issuable or payable with respect to or in exchange for the number of Shares which Grantee would have received had he exercised the Incentive Award immediately prior to such Corporate Event, together with any adjustments (including, without limitation, adjustments to the Option Price and the number of Shares issuable on exercise of outstanding Stock Options). A "Corporate Event" means any of the following: (i) a dissolution or liquidation of the Company, (ii) a sale of all or substantially all of the Company's assets, or (iii) a merger, consolidation or combination involving the Company (other than a merger, consolidation or combination (A) in which the Company is the continuing or surviving corporation and (B) which does not result in the outstanding Shares being converted into or exchanged for different securities, cash or other property, or any combination thereof). The Committee shall take whatever other action it deems appropriate to preserve the rights of Grantees holding outstanding Incentive Awards.

Subject to the accelerated vesting and other provisions of Section 7.7 that apply in the event of a Change in Control, in the event of a Corporate Event, the Committee in its discretion shall have the right and power to:

(i) cancel, effective immediately prior to the occurrence of the Corporate Event, each outstanding Incentive Award (whether or not then exercisable) and, in full consideration of such cancellation, pay to the Grantee an amount in cash equal to the excess of (A) the value, as determined by the Committee, of the property (including cash) received by the holders of Common Stock as a result of such Corporate Event over (B) the exercise price of such Incentive Award, if any; or

(ii) provide for the exchange or substitution of each Incentive Award outstanding immediately prior to such Corporate Event (whether or not then exercisable) for another award with respect to the Common Stock or other property for which such Incentive Award is exchangeable and, incident thereto, make an equitable adjustment as determined by the Committee, in its discretion, in the exercise price of the Incentive Award, if any, or in the number of Shares or amount of property (including cash) subject to the Incentive Award; or

(iii) provide for the assumption of the Plan and such outstanding Incentive Awards by the surviving entity or its parent.

The Committee, in its discretion, shall have the authority to take whatever action it deems to be necessary or appropriate to effectuate the provisions of this Subsection (e).

(f) intentionally deleted.

#### *7.6 Termination of Employment, Death, Disability and Retirement*

(a) Termination of Relationship. Unless otherwise expressly provided in the Grantee's Incentive Agreement, if the Grantee's Employment or services as a Director or Consultant is terminated for any reason other than due to his death, Disability, Retirement, or for Cause, any non-vested portion of any Stock Option or other applicable Incentive Award at the time of such termination shall automatically expire and terminate and no further vesting shall occur after the termination date. In such event, except as otherwise expressly provided in his Incentive Agreement, the Grantee shall be entitled to exercise his rights only with respect to the portion of the Incentive Award that was vested as of his termination of Employment or service date. In such event, except as otherwise expressly provided in his Incentive Agreement, the Grantee shall be entitled to exercise his vested Stock Options for a period that shall end on the earlier of (i) the expiration date set forth in the Incentive Agreement or (ii) one hundred eighty (180) days after the date of his termination, except with respect to Incentive Stock Options, in which case such period shall be three (3) months.

(b) Termination for Cause. Unless otherwise expressly provided in the Grantee's Incentive Agreement, in the event of the termination of a Grantee's Employment, or service as a Consultant or Director, for Cause, all vested and non-vested Stock Options and other Incentive Awards (other than vested Restricted Stock or vested Restricted Stock Units) granted to such Grantee shall immediately expire, and shall not be exercisable to any extent, as of 12:01 a.m., Houston, Texas time, on the date of such termination of Employment or service for cause.

(c) Retirement. Unless otherwise expressly provided in the Grantee's Incentive Agreement, upon the termination of Employment due to the Retirement of any Employee who is a Grantee:

(i) all of his Stock Options and Stock Appreciation Rights then outstanding shall become 100% vested and immediately and fully exercisable until the earlier of (A) the expiration date set forth in the Incentive Agreement for such Incentive Award; or (B) the expiration of (1) twelve months after the date of his termination of Employment due to his Retirement in the case of any Incentive Award other than an Incentive Stock Option or (2) three months after his termination date in the case of an Incentive Stock Option;

(ii) any Period of Restriction with respect to any of his Restricted Stock or Restricted Stock Units shall be deemed to have expired and all restrictions imposed on Restricted Stock or Restricted Stock

Units shall lapse, and each such Incentive Award shall thereupon become free of all restrictions and fully vested; and

(iii) all of the restrictions and conditions of any of his Other Stock-Based Awards then outstanding shall be deemed satisfied, and the Period of Restriction with respect thereto shall be deemed to have expired, and each such Incentive Award shall thereupon become free of all restrictions and fully vested.

(d) *Disability or Death.* Unless otherwise expressly provided in the Grantee's Incentive Agreement, upon the termination of Employment or service as a Director due to the Disability or death of any Employee or Non-Employee Director who is a Grantee:

(i) all of his Stock Options and Stock Appreciation Rights then outstanding shall become 100% vested and immediately and fully exercisable until the earlier of (A) the expiration date set forth in the Incentive Agreement for such Incentive Award; or (B) the expiration of (1) twelve months after the date of his termination of Employment due to his Disability or death in the case of any Incentive Award other than an Incentive Stock Option or (2) three months after his termination date in the case of an Incentive Stock Option;

(ii) any Period of Restriction with respect to any of his Restricted Stock or Restricted Stock Unit shall be deemed to have expired and all restrictions imposed on Restricted Stock or Restricted Stock Units shall lapse, and each such Incentive Award shall thereupon become free of all restrictions and fully vested; and

(iii) all of the restrictions and conditions of any of his Other Stock-Based Awards then outstanding shall be deemed satisfied, and the Period of Restriction with respect thereto shall be deemed to have expired, and each such Incentive Award shall thereupon become free of all restrictions and fully vested.

In the case of any vested Incentive Stock Option held by an Employee following termination of Employment, notwithstanding the definition of 'Disability' in Section 1.2, whether the Employee has incurred a 'Disability' for purposes of determining the length of the Option exercise period following termination of Employment under this Subsection (d) shall be determined by reference to Section 22(e)(3) of the Code to the extent required by Section 422(c)(6) of the Code. The Committee shall determine whether a Disability for purposes of this Subsection (d) has occurred.

(e) *Continuation.* Subject to the conditions and limitations of the Plan and applicable law and regulation in the event that a Grantee ceases to be an Employee or Consultant, as applicable, for whatever reason, the Committee and Grantee may mutually agree with respect to any outstanding Option or other Incentive Award then held by the Grantee (i) for an acceleration or other adjustment in any vesting schedule applicable to the Incentive Award, (ii) for a continuation of the exercise period following termination for a longer period than is otherwise provided under such Incentive Award, or (iii) to any other change in the terms and conditions of the Incentive Award. In the event of any such change to an outstanding Incentive Award, a written amendment to the Grantee's Incentive Agreement shall be required.

#### 7.7 *Change in Control*

In the event of a Change in Control (as defined below), the following actions shall automatically occur as of the day immediately preceding the Change in Control date unless expressly provided otherwise in the Grantee's Incentive Agreement:

(a) all of the Stock Options and Stock Appreciation Rights then outstanding shall become 100% vested and immediately and fully exercisable;

(b) any Period of Restriction with respect to any Restricted Stock or Restricted Stock Unit shall be deemed to have expired and all restrictions imposed on Restricted Stock or Restricted Stock Units shall lapse, and thus each such Incentive Award shall become free of all restrictions and fully vested;

(c) all of the restrictions and conditions of any Other Stock-Based Awards then outstanding shall be deemed satisfied, and the Period of Restriction with respect thereto shall be deemed to have expired, and thus each such Incentive Award shall become free of all restrictions and fully vested; and

(d) all of the Performance Shares, Restricted Stock, Restricted Stock Units and any Other Stock-Based Awards shall become fully vested, deemed earned in full, and promptly paid within thirty (30) days to the affected Grantees without regard to payment schedules and notwithstanding that the applicable performance cycle, retention cycle or other restrictions and conditions have not been completed or satisfied.

Notwithstanding any other provision of this Plan, unless otherwise expressly provided in the Grantee's Incentive Agreement, the provisions of this Section 7.7 may not be terminated, amended, or modified to adversely affect any Incentive Award theretofore granted under the Plan without the prior written consent of the Grantee with respect to his outstanding Incentive Awards, subject, however, to the last paragraph of this Section 7.7.

For all purposes of this Plan, a "Change in Control" of the Company means the occurrence of any one or more of the following events:

(a) The acquisition by any individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Exchange Act (a "Person")) of beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of forty percent (40%) or more of either (i) the then outstanding shares of common stock of the Company (the "Outstanding Company Stock") or (ii) the combined voting power of the then outstanding voting securities of the Company entitled to vote generally in the election of directors (the "Outstanding Company Voting Securities"); *provided, however*, that the following acquisitions shall not constitute a Change in Control: (i) any acquisition directly from the Company or any Subsidiary, (ii) any acquisition by the Company or any Subsidiary or by any employee benefit plan (or related trust) sponsored or maintained by the Company or any Subsidiary, or (iii) any acquisition by any corporation pursuant to a reorganization, merger, consolidation or similar business combination involving the Company (a "Merger"), if, following such Merger, the conditions described in clauses (i) and (ii) of Section 7.7(c) (below) are satisfied;

(b) Individuals who, as of the Effective Date, constitute the Board of Directors of the Company (the "Incumbent Board") cease for any reason to constitute at least a majority of the Board; *provided, however*, that any individual becoming a director subsequent to the Effective Date whose election, or nomination for election by the Company's shareholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board shall be considered as though such individual were a member of the Incumbent Board, but excluding, for this purpose, any such individual whose initial assumption of office occurs as a result of either an actual or threatened election contest (a solicitation by any person or group of persons for the purpose of opposing a solicitation of proxies or consents by the Board with respect to the election or removal of Directors at any annual or special meeting of stockholders) or other actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board;

(c) Approval by the stockholders of the Company of a Merger, unless immediately following such Merger, (i) substantially all of the holders of the Outstanding Company Voting Securities immediately prior to Merger beneficially own, directly or indirectly, more than 50% of the common stock of the corporation resulting from such Merger (or its parent corporation) in substantially the same proportions as their ownership of Outstanding Company 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 the Incumbent Board at the time of the execution of the initial agreement providing for such Merger; or

(d) The sale or other disposition of all or substantially all of the assets of the Company.

#### 7.8 Exchange of Incentive Awards

The Committee may, in its discretion, permit any Grantee to surrender outstanding Incentive Awards in order to exercise or realize his rights under other Incentive Awards or in exchange for the grant of new Incentive Awards, or require holders of Incentive Awards to surrender outstanding Incentive Awards (or comparable rights under other plans or arrangements) as a condition precedent to the grant of new Incentive Awards.

## SECTION 8

### GENERAL

#### 8.1 *Effective Date and Grant Period*

The amendment and restatement of this Plan is adopted by the Board effective as of February 14, 2008. No Incentive Award that is an Incentive Stock Option shall be granted under the Plan after ten (10) years from the Effective Date. Unless sooner terminated by action of the Board, this Plan will terminate at 5:00 p.m. Houston, Texas time, on May 3, 2014. Incentive Awards under this Plan may not be granted after that date, but any Incentive Award duly granted before that date will continue to be effective in accordance with its terms and conditions.

#### 8.2 *Funding and Liability of Company*

No provision of the Plan shall require the Company, for the purpose of satisfying any obligations under the Plan, to purchase assets or place any assets in a trust or other entity to which contributions are made, or otherwise to segregate any assets. In addition, the Company shall not be required to maintain separate bank accounts, books, records or other evidence of the existence of a segregated or separately maintained or administered fund for purposes of the Plan. Although bookkeeping accounts may be established with respect to Grantees who are entitled to cash, Common Stock or rights thereto under the Plan, any such accounts shall be used merely as a bookkeeping convenience. The Company shall not be required to segregate any assets that may at any time be represented by cash, Common Stock or rights thereto. The Plan shall not be construed as providing for such segregation, nor shall the Company, the Board or the Committee be deemed to be a trustee of any cash, Common Stock or rights thereto. Any liability or obligation of the Company to any Grantee with respect to an Incentive Award shall be based solely upon any contractual obligations that may be created by this Plan and any Incentive Agreement, and no such liability or obligation of the Company shall be deemed to be secured by any pledge or other encumbrance on any property of the Company. Neither the Company, the Board nor the Committee shall be required to give any security or bond for the performance of any obligation that may be created by the Plan.

#### 8.3 *Withholding Taxes*

(a) *Tax Withholding.* The Company shall have the power and the right to deduct or withhold, or require a Grantee to remit to the Company, an amount sufficient to satisfy federal, state, and local taxes, domestic or foreign, required by law or regulation to be withheld with respect to any taxable event arising as a result of the Plan or an Incentive Award hereunder.

(b) *Share Withholding.* With respect to tax withholding required upon the exercise of Stock Options or SARs, or upon any other taxable event arising as a result of any Incentive Awards, Grantees may elect, subject to the approval of the Committee in its discretion, to satisfy the withholding requirement, in whole or in part, by having the Company withhold Shares having a Fair Market Value on the date the tax is to be determined equal to the minimum withholding tax which could be imposed on the transaction. All such elections shall be made in writing, signed by the Grantee, and shall be subject to any restrictions or limitations that the Committee, in its discretion, deems appropriate.

#### 8.4 *No Guarantee of Tax Consequences*

Neither the Company nor the Committee makes any commitment or guarantee that any federal, state or local tax treatment will apply or be available to any person participating or eligible to participate hereunder.

#### 8.5 *Designation of Beneficiary by Grantee*

Each Grantee may, from time to time, name any beneficiary or beneficiaries (who may be named contingently or successively) to whom any benefit under the Plan is to be paid in case of his death before he receives any or all of such benefit. Each such designation shall revoke all prior designations by the same Grantee, shall be in a form prescribed by the Committee, and will be effective only when filed by the Grantee in writing with the Committee during the Grantee's lifetime. In the absence of any such designation, benefits remaining unpaid at the Grantee's death shall be paid to the Grantee's estate.

#### *8.6 Amendment and Termination*

The Board shall have the power and authority to terminate or amend the Plan at any time. No termination, amendment, or modification of the Plan shall adversely affect in any material way any outstanding Incentive Award previously granted to a Grantee under the Plan, without the written consent of such Grantee or other designated holder of such Incentive Award.

In addition, to the extent that the Committee determines that (a) the listing or qualification requirements of any national securities exchange or quotation system on which the Company's Common Stock is then listed or quoted, if applicable, or (b) the Code (or regulations promulgated thereunder), require stockholder approval in order to maintain compliance with such listing or quotation system requirements or to maintain any favorable tax advantages or qualifications, then the Plan shall not be amended in such respect without approval of the Company's stockholders.

#### *8.7 Governmental Entities and Securities Exchanges*

The granting of Incentive Awards and the issuance of Shares under the Plan shall be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required. Certificates evidencing shares of Common Stock delivered under this Plan (to the extent that such shares are so evidenced) may be subject to such stop transfer orders and other restrictions as the Committee may deem advisable under the rules and regulations of the Securities and Exchange Commission, any securities exchange or transaction reporting system upon which the Common Stock is then listed or to which it is admitted for quotation, and any applicable federal or state securities law, if applicable. The Committee may cause a legend or legends to be placed upon such certificates (if any) to make appropriate reference to such restrictions.

#### *8.8 Successors to Company*

All obligations of the Company under the Plan with respect to Incentive Awards granted hereunder shall be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

#### *8.9 Miscellaneous Provisions*

(a) No Employee or Consultant, or other person shall have any claim or right to be granted an Incentive Award under the Plan. Neither the Plan, nor any action taken hereunder, shall be construed as giving any Employee, Director or Consultant, any right to be retained in the Employment or other service of the Company or any Parent or Subsidiary.

(b) By accepting any Incentive Award, each Grantee and each person claiming by or through him shall be deemed to have indicated his acceptance of the Plan.

(c) Performance-based awards granted under the Plan to a Grantee who is subject to the Company's Compensation Recoupment Policy, as may be amended from time to time, may be reduced or subject to recoupment pursuant to the terms and conditions of such policy.

#### *8.10 Severability*

In the event that any provision of this Plan shall be held illegal, invalid or unenforceable for any reason, such provision shall be fully severable, but shall not affect the remaining provisions of the Plan, and the Plan shall be construed and enforced as if the illegal, invalid, or unenforceable provision was not included herein.

#### *8.11 Gender, Tense and Headings*

Whenever the context so requires, words of the masculine gender used herein shall include the feminine and neuter, and words used in the singular shall include the plural. Section headings as used herein are inserted solely for convenience and reference and constitute no part of the interpretation or construction of the Plan.



#### 8.12 *Governing Law*

The Plan shall be interpreted, construed and constructed in accordance with the laws of the State of Texas without regard to its conflicts of law provisions, except as may be superseded by applicable laws of the United States or applicable provisions of the Delaware General Corporation Law.

#### 8.13 *Successor to Director Plan*

This Plan shall serve as the successor to the Director Plan. All outstanding Awards under the Director Plan shall continue to be governed solely by the terms and conditions of the instrument evidencing such grant or issuance. Notwithstanding any provision in this Plan to the contrary, no provision of this Plan is intended to modify, extend or renew any option granted under the Director Plan. Any provision in this Plan that is contrary to a provision in the Director Plan that would create a modification, extension or renewal of such option is hereby incorporated into this Plan. All terms, conditions and limitations, if any, that are set forth in any previously granted option agreement shall remain in full force and effect under the terms of the Plan pursuant to which it was issued.

#### 8.14 *Deferred Compensation*

This Plan and any Incentive Agreement issued under the Plan is intended to meet the requirements of Section 409A of the Code and shall be administered in a manner that is intended to meet those requirements and shall be construed and interpreted in accordance with such intent. To the extent that an Incentive Award or payment, or the settlement or deferral thereof, is subject to Section 409A of the Code, except as the Board otherwise determines in writing, the Incentive Award shall be granted, paid, settled or deferred in a manner that will meet the requirements of Section 409A of the Code, including regulations or other guidance issued with respect thereto, such that the grant, payment, settlement or deferral shall not be subject to the excise tax applicable under Section 409A of the Code. Any provision of this Plan or any Incentive Agreement that would cause an Incentive Award or the payment, settlement or deferral thereof to fail to satisfy Section 409A of the Code shall be amended (in a manner that as closely as practicable achieves the original intent of this Plan or the Incentive Agreement, as applicable) to comply with Section 409A of the Code on a timely basis, which may be made on a retroactive basis, in accordance with regulations and other guidance issued under Section 409A of the Code. In the event the Plan allows for a deferral of compensation, the Plan is intended to qualify for certain exemptions under Title I of ERISA provided for plans that are unfunded and maintained primarily for the purpose of providing deferred compensation for a select group of management or highly-compensated employees.

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

Form 10-K

(Mark One)

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended December 31, 2010

or

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 1-12691

ION Geophysical Corporation

(Exact Name of Registrant as Specified in Its Charter)

Delaware

22-2286646

(State or Other Jurisdiction of Incorporation or Organization)

(I.R.S. Employer Identification No.)

2105 CityWest Blvd Suite 400

Houston, Texas 77042-2839

(Address of Principal Executive Offices, Including Zip Code)

(281) 933-3339

(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class

Name of Each Exchange on Which Registered

Common Stock, \$0.01 par value

New York Stock Exchange

Rights to Purchase Series A Junior Participating Preferred Stock

New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes [X] No [ ]

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act Yes [ ] No [X]

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes [X] No [ ]

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).\* Yes [ ] No [ ]

\* The registrant has not yet been phased into the interactive data requirements.

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [ ]

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer [ ]

Accelerated filer [X]

Non-accelerated filer [ ]

Smaller reporting company [ ]

(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes [ ] No [X]

As of June 30, 2010 (the last business day of the registrant's second quarter of fiscal 2010), the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was \$495.25 million based on the closing sale price on such date as reported on the New York Stock Exchange.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date: common stock, \$0.01 par value, 153,028,861 shares outstanding as of February 18, 2011.

DOCUMENTS INCORPORATED BY REFERENCE

Document

Parts Into Which Incorporated

Portions of the Proxy Statement for the Annual Meeting of Stockholders to be held May 27, 2011

Part III

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## PART I

**Preliminary Note:** This Annual Report on Form 10-K contains “forward-looking statements” as that term is defined in the Private Securities Litigation Reform Act of 1995. Forward-looking statements should be read in conjunction with the cautionary statements and other important factors included in this Form 10-K. See Item 1A. “Risk Factors” for a description of important factors which could cause actual results to differ materially from those contained in the forward-looking statements.

In this Form 10-K, “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. Certain trademarks, service marks and registered marks of ION referred to in this Form 10-K are defined in Item 1. “Business — Intellectual Property.”

### Item 1. Business

We are a technology-focused seismic solutions company that provides advanced acquisition equipment, software and planning and seismic processing services to the global energy industry. Our products, technologies, and services are used by oil and gas exploration and production (E&P) companies and seismic acquisition contractors to generate high-resolution images of the subsurface during exploration, exploitation, and production operations. Our products and services are intended to measure and interpret seismic data about rock and fluid properties within the Earth’s subsurface to enable oil and gas companies to make improved drilling and production decisions. The seismic surveys for our data library business are substantially pre-funded by our customers and we contract with third party seismic data acquisition companies to acquire the data, all of which minimizes our risk exposure. We serve customers in all major energy producing regions of the world from strategically located offices in 19 cities on five continents.

On March 25, 2010, we completed the disposition of most of our land seismic equipment businesses in connection with the formation of a land equipment joint venture with BGP, Inc., China National Petroleum Corporation (“BGP”), a subsidiary of China National Petroleum Corporation (“CNPC”). The resulting joint venture company, organized under the laws of the People’s Republic of China, is named INOVA Geophysical Equipment Limited (“INOVA Geophysical”). BGP owns a 51% interest in INOVA Geophysical, and ION owns a 49% interest. We believe that this joint venture will provide us the opportunity to further extend the geographic scope of our business through the sales and service facilities of BGP, especially in Africa, the Middle East, China, and Southeast Asia.

Our products and services include the following:

- Land seismic data acquisition equipment (principally through our 49% ownership in INOVA Geophysical),
- Marine seismic data acquisition equipment,
- Navigation, command & control, and data management software products,
- Planning services for survey design and optimization,
- Seismic data processing and reservoir imaging services, and
- Seismic data libraries.

Seismic imaging plays a fundamental role in hydrocarbon exploration and reservoir development by delineating structures, rock types, and fluid locations in the subsurface. Geoscientists interpret seismic data to identify new sources of hydrocarbons and pinpoint drilling locations for wells, which can be costly and involve high risk. As oil and gas reservoirs have become harder to find and more expensive to develop and exploit in recent years, the demand for advanced seismic imaging solutions has grown. In addition, seismic technologies are now being applied more broadly over the entire life cycle of a hydrocarbon reservoir to optimize production. For example, time-lapse seismic images (referred to as “4D” or “four-dimensional” surveys), in which the fourth dimension is time, can be made of producing reservoirs to track the movement of injected or produced fluids and/or to identify locations containing by-passed hydrocarbons.

ION has been involved in the seismic technology industry for approximately 40 years, starting in the 1960s when we designed and manufactured seismic equipment under our previous company name, Input/Output, Inc. In recent years, we have transformed our business from being solely a manufacturer and seller of seismic equipment to being a provider of a full range of seismic imaging products, technologies, and services.

We operate our company through four business segments: Systems, Software, Solutions and INOVA Geophysical.

- *Systems* — towed streamer and redeployable ocean bottom cable seismic data acquisition systems and shipboard recorders, streamer positioning and control systems and energy sources (such as air guns and air gun controllers) and analog geophone sensors.
- *Software* — software systems and related services for navigation and data management involving towed marine streamer and seabed operations.
- *Solutions* — advanced seismic data processing services for marine and land environments, reservoir solutions, onboard processing and quality control, seismic data libraries, and Integrated Seismic Solutions (“ISS”) services.
- *INOVA Geophysical* — through our interest in INOVA Geophysical, cable-based, cableless and radio-controlled seismic data acquisition systems, digital sensors, vibroseis vehicles (i.e. vibrator trucks) and source controllers for detonator and energy sources business lines.

Our executive headquarters are located at 2105 CityWest Boulevard, Suite 400, Houston, Texas 77042-2839. Our international sales headquarters are located at Oilfields Supply Center Ltd. B-23, Jebel Ali Free Zone, P.O. Box 18627, Dubai, United Arab Emirates. Our telephone number is (281) 933-3339. Our home page on the internet is [www.iongeo.com](http://www.iongeo.com). We make our website content available for information purposes only. Our website should not be relied upon for investment purposes, and it is not incorporated by reference into this Form 10-K.

In portions of this Form 10-K, we incorporate by reference information from parts of other documents filed with the Securities and Exchange Commission (SEC). The SEC allows us to disclose important information by referring to it in this manner, and you should review this information. We make our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, annual reports to stockholders, and proxy statements for our stockholders’ meetings, as well as any amendments to those reports, available free of charge through our website as soon as reasonably practicable after we electronically file those materials with, or furnish them to, the SEC.

You can learn more about us by reviewing our SEC filings on our website. Our SEC reports can be accessed through the Investor Relations section on our website. The SEC also maintains a website at [www.sec.gov](http://www.sec.gov) that contains reports, proxy statements, and other information regarding SEC registrants, including our company.

### **Seismic Industry Overview**

Since the 1930s, oil and gas companies have sought to reduce exploration risk by using seismic data to create an image of the Earth’s subsurface. Seismic data is recorded when listening devices placed on the Earth’s surface or seabed floor, or carried within the streamer cable of a towed streamer vessel, measure how long it takes for sound vibrations to echo off rock layers underground. For seismic acquisition onshore, the acoustic energy producing the sound vibrations is generated by the detonation of small explosive charges or by large vibroseis (vibrator) vehicles. In marine acquisition, the energy is provided by a series of air guns that deliver highly compressed air into the water column.

The acoustic energy propagates through the subsurface as a spherical wave front, or seismic wave. Interfaces between different types of rocks will both reflect and transmit this wave front. Onshore, the reflected signals return to the surface where they are measured by sensitive receivers that may be either analog coil-spring geophones or digital accelerometers based on MEMS (micro-electro-mechanical systems) technology; offshore, the reflected signals are recorded by either hydrophones towed in an array behind a streamer

acquisition vessel or by multicomponent geophones or MEMS sensors that are placed directly on the seabed. Once the recorded seismic energy is processed using advanced algorithms and workflows, images of the subsurface can be created to depict the structure, lithology (rock type), fracture patterns, and fluid content of subsurface horizons, highlighting the most promising places to drill for oil and natural gas. This processing also aids in engineering decisions, such as drilling and completion methods, as well as decisions affecting overall reservoir production.

Typically, an E&P company engages the services of a geophysical acquisition company to prepare site locations, coordinate logistics, and acquire seismic data in a selected area. The E&P company generally relies upon third parties, such as ION, to provide the contractor with equipment, navigation and data management software, and field support services necessary for data acquisition. After the data is collected, the same geophysical contractor, a third-party data processing company, the Company's data processing service or the E&P company itself will process the data using proprietary algorithms and workflows to create a series of seismic images. Geoscientists then interpret the data by reviewing the images and integrating the geophysical data with other geological and production information such as well logs or core information.

During the 1960s, digital seismic data acquisition systems (which converted the analog output from the geophones into digital data for recording) and computers for seismic data processing were introduced. Using the new systems and computers, the signals could be recorded on magnetic tape and sent to data processors where they could be adjusted and corrected for known distortions. The final processed data was displayed in a form known as "stacked" data. Computer filing, storage, database management, and algorithms used to process the raw data quickly grew more sophisticated, dramatically increasing the amount of subsurface seismic information.

Until the early 1980s, the primary commercial seismic imaging technology was two-dimensional, or 2-D, technology. 2-D seismic data is recorded using straight lines of receivers crossing the surface of the Earth. Once processed, 2-D seismic data allows geoscientists to see only a thin vertical slice of the Earth. A geoscientist using 2-D seismic technology must speculate on the characteristics of the Earth between the slices and attempt to visualize the true three-dimensional (3-D) structure of the subsurface.

The commercial development of 3-D imaging technology in the early 1980s was an important technological milestone for the seismic industry. Previously, the high cost of 3-D seismic data acquisition techniques and the lack of computing power necessary to process, display, and interpret 3-D data on a commercial basis had slowed its widespread adoption. Today's 3-D seismic techniques record the reflected energy across a series of closely-spaced seismic lines that collectively provide a more holistic, spatially-sampled depiction of geological horizons and, in some cases, rock and fluid properties, within the Earth.

3-D seismic data and the associated computer-based interpretation platforms are designed to allow geoscientists to generate more accurate subsurface maps than could be constructed on the basis of the more widely spaced 2-D seismic lines. In particular, 3-D seismic data provided more detailed information about and higher-quality images of subsurface structures, including the geometry of bedding layers, salt structures, and fault planes. The improved 3-D seismic images allowed the oil and gas industry to discover new reservoirs, reduce finding and development costs, and lower overall hydrocarbon exploration risk. Driven by faster computers and more sophisticated mathematical equations to process the data, the technology advanced quickly.

As commodity prices decreased in the late 1990's and the pace of innovation in 3-D seismic imaging technology slowed, E&P companies slowed the commissioning of new seismic surveys. Also, business practices employed by geophysical contractors impacted demand for seismic data. In an effort to sustain higher utilization of existing capital assets, geophysical contractors increasingly began to collect speculative seismic data for their own account in the hopes of selling it later to E&P companies. Contractors typically selected an area, acquired data using generic acquisition parameters and generic processing algorithms, capitalized the acquisition costs, and attempted to sell the survey results to multiple E&P companies. These generic, speculative, multi-client surveys were not tailored to meet the unique imaging objectives of individual clients and caused an oversupply of seismic data in many regions. Additionally, since contractors incurred most of the

costs of this speculative seismic data at the time of acquisition, contractors lowered prices to recover as much of their fixed investment as possible, which drove operating margins down.

From 2004 to 2008, commodity prices increased and E&P companies again increased their capital investment programs, which drove higher demand for our products and services. The financial crisis that occurred in 2008 and the resulting economic downturn drove hydrocarbon prices down sharply, with crude oil prices falling to approximately \$35 per barrel during early 2009. These conditions sharply reduced exploration activities in North America and in many parts of the world. Since then, crude oil prices have recovered to within a range of approximately \$85 to \$100 per barrel in early 2011, but North America natural gas prices have remained depressed due in part to the excess supply of natural gas in the market.

Our seismic contractor customers and the E&P companies that are users of our products, services and technology generally reduced their capital spending levels from late 2008 through early 2010. However, in the second half of 2010, we started to see increased levels of capital spending related to E&P activity. The number of rigs drilling for oil in North America is approaching record levels with U.S. rig counts increasing by approximately 600 year over year. Over the past decade, a majority of all new oil and gas reserves discovered worldwide were located offshore and we believe that offshore E&P activity will continue to grow in an effort to meet global energy demands. Meanwhile, interest in oil shale opportunities is increasing and developments in the technology to locate and extract oil shale reserves are progressing. Almost 60% of new U.S. onshore natural gas production is now coming from the shale gas plays, which exhibit first year decline rates of 65% to 85%. We expect that exploration and production expenditures will continue to recover as E&P companies and seismic contractors continue to see recovery in activity levels related to their business.

## **ION Geophysical's Business Strategy**

### ***Factors Affecting Long-Term Demand***

The global recession that began in 2008 reduced the demand for (and associated prices of) hydrocarbons, which adversely affected our business and results of operations. However, we are now seeing increased levels of capital spending related to E&P activity, particularly in the second half of 2010, and we believe that current conditions exist that favor increased seismic spending for the years ahead. These conditions include the following:

- Demand for both crude oil and natural gas should continue to increase as the financial health of developed countries continues to improve, and higher demand continues in high-growth emerging markets such as China and India;
- The clear potential for large undiscovered or underdeveloped reservoirs in offshore locations should continue to drive demand by E&P companies and seismic contractors for improvements in marine equipment technology and offshore seismic data libraries; and
- E&P companies are focusing more on hydrocarbon reservoirs that are located in deeper waters or deeper in the geologic column, which should increase demand for newer and more efficient imaging processing and equipment technology solutions.

The complex hydrocarbon reservoirs that have been developed in recent years generally have more subtle characteristics than the reservoirs that were discovered in prior decades and these unconventional reservoir types include tar sand deposits or shale gas or oil formations. As a result, the process of finding and developing these hydrocarbon deposits is proving to be more challenging, which in turn results in escalating costs and increasing demands for newer and more efficient imaging technologies. Also, producers are increasingly using seismic data to enhance production from known fields by repeating time-lapse seismic surveys over a defined area. We believe that this trend should benefit seismic companies such as ION by extending the utility of subsurface imaging beyond exploration and into production monitoring, which can continue for decades.

We believe that E&P companies will, in the future, increasingly use seismic technology providers who will collaborate with them to tailor seismic surveys that address specific geophysical problems and to apply



advanced imaging technologies to take into account the geologic peculiarities of a specific area. In the future, we expect that E&P companies will rely less on undifferentiated, mass seismic studies created using analog sensors and traditional processing technologies that do not adequately identify geologic complexities.

### ***Becoming a Broad-Based Seismic Provider***

Two acquisitions in 2004 were important in our evolution to becoming a broad-based seismic solutions company:

- Our acquisition of Concept Systems Holdings Limited (Concept Systems) and its integrated planning, navigation, command & control, and data management software and solutions for towed streamer and seabed operations; and
- Our acquisition of GX Technology Corporation (GXT), and its advanced seismic data imaging solutions services and seismic data libraries for the marine environment.

Through these and other acquisitions, along with our research and development efforts, our technologies and services include seismic data acquisition hardware, command and control software, value-added services associated with seismic survey design, seismic data processing and interpretation, and seismic data libraries.

In March 2010, we completed the formation of INOVA Geophysical, our joint venture with BGP. The scope of the joint venture's business is to design, develop, engineer and manufacture land-based equipment used in seismic data acquisition for the petroleum industry, and to conduct related research and development, distribution, sales and marketing and field support operations.

A key part of the strategy behind the joint venture is to leverage our research and development experience and expertise with the operational experience and expertise of BGP. The R&D centers for the joint venture have remained primarily in the U.S. and Canada. However, we intend to evaluate lower cost manufacturing opportunities in China on a case-by-case basis and pursue these opportunities when appropriate. In addition, it is intended for BGP's crews to field test new technology and related equipment for operational feedback and quality improvements. Finally, we expect that BGP will eventually purchase the majority of its land equipment from the joint venture and will purchase more ION products and services from our other business segments.

A key element of our business strategy has been to understand the challenges faced by E&P companies in survey planning, acquisition, processing and even interpretation, and to strive to develop and offer technology and services that enable us to work with the E&P companies to solve their challenges. We have found that a collaborative relationship with E&P companies, with a goal of better understanding their imaging challenges and then working with them and our contractor customers to assure that the right technologies are properly applied, is the most effective method for meeting our customers' needs. This strategy of being a full solutions provider to solve the most difficult challenges for our customers is an important element of our long term business strategy, and we are implementing this approach globally through local personnel in our regional organizations who understand the unique challenges in their areas.

The rapid decline of natural gas prices in late 2008 and continuing through 2010 has made it even more important for the E&P industry to reduce the number of dry holes, optimize the wells that are successful and to solve more difficult oil challenges such as locating and extracting oil shale reserves. E&P companies continue to be interested in technology to increase production and in improving their understanding of targeted reservoirs, in both the exploration and production phases. We believe that our new technologies, such as DigiFIN™, Orca® and our 49% interest in INOVA Geophysical's FireFly, will continue to attract interest because they are designed to deliver improvements in image quality within more productive delivery systems. For more information regarding our products and services, see "*— Products and Services*" below.

In summary, our business strategy is predicated on successfully executing seven key imperatives:

- Continuing to manage our cost structure to reflect current market and economic conditions while keeping key strategic technology programs progressing with an overall goal of enabling E&P companies to solve their complex reservoir problems most efficiently and effectively;

- Expanding our Solutions business in new regions with new customers and new land and marine service offerings, including proprietary services for E&P producers;
- Globalizing our Solutions data processing business by opening advanced imaging centers in strategic locations, and expanding our presence in the land seismic processing segment, with emphasis on serving the national oil companies;
- Developing and introducing our next generation of marine towed streamer products, with a goal of developing markets beyond the new vessel market;
- Expanding our seabed imaging solutions business using our VectorSeis® Ocean (VSO) acquisition system platform and derivative products to obtain technical and market leadership in what we continue to believe is a very important and expanding market; and
- Through our investment in INOVA Geophysical, increasing market share and profitability in land acquisition systems and furthering the commercialization of FireFly, as well as other land equipment technologies.
- Also through our investment in INOVA Geophysical, we seek to leverage its land equipment business to design and deliver lower cost, more reliable land imaging systems to our worldwide customer base of land acquisition contractors while concurrently tapping into a broader set of global geophysical opportunities associated with the exploration, asset development, and production operations of BGP's parent, CNPC.

### **Full-Wave Digital**

Our seismic data acquisition products and services, including the INOVA Geophysical seismic data acquisition product line, are well suited for traditional 2-D, 3-D, and 4-D data collection as well as more advanced multicomponent — or “full-wave digital” — seismic data collection techniques.

Conventional geophone sensors are based on a mechanical, coil-spring magnet arrangement. The single component geophone measures ground motion in one direction, even though reflected energy in the Earth travels in multiple directions. This type of geophone can capture only pressure waves (P-waves). P-waves represent only a portion of the full seismic wavefield. Conventional geophones have limitations in collecting shear waves (S-waves), which involve a component of particle motion that is orthogonal to the direction of wave propagation (a more “horizontal” component of motion). In addition, geophones require accurate placement both vertically and spatially. Inaccurate placement, which can result from poorly planned surveys or human error, can introduce distortions that negatively affect the final subsurface image.

Multicomponent seismic sensors are designed to record the full seismic wavefield by measuring reflected seismic energy in three directions. This vector-based measurement enables multicomponent sensors to record not only P-wave data, but also to record shear waves. ION's VectorSeis sensor was developed using MEMS accelerometer technology to enable a true vector measurement of all seismic energy reflected in the subsurface. VectorSeis is designed to capture the entire seismic signal and more faithfully record all wavefields traveling within the Earth. By measuring both P-waves and S-waves, the VectorSeis 'full-wave' sensor records a more complete and accurate seismic dataset having higher frequency content than conventional sensors. When data recorded by VectorSeis is processed using the advanced imaging techniques offered by our Solutions segment, we are able to deliver higher-definition images of the subsurface to our oil and gas customers, which enables geophysicists to better identify subtle structural, rock, and fluid-oriented features in the Earth. In addition, we believe that full-wave technologies should deliver improved operating efficiencies in field acquisition and reduce cycle times across the seismic workflow, from planning through acquisition and final image rendering.

VectorSeis acquires full-wave seismic data in both land and marine environments using a portfolio of advanced imaging platforms manufactured by ION and INOVA Geophysical:

- VectorSeis Ocean (VSO) — ION's redeployable ocean bottom cable system for the seabed;

- FireFly — INOVA Geophysical's cableless full-wave land acquisition system; and
- Scorpion® — INOVA Geophysical's cable-based land acquisition system.

## Products and Services

### *Systems Products*

Products for our Systems segment include the following:

*Marine Acquisition Systems* — Our traditional marine acquisition system consists of towed marine streamers and shipboard electronics that collect seismic data in water depths greater than 30 meters. Marine streamers, which contain hydrophones, electronic modules and cabling, may measure up to 12,000 meters in length and are towed (up to 20 at a time) behind a towed streamer seismic acquisition vessel. The hydrophones detect acoustical energy transmitted through water from the Earth's subsurface structures. Our DigiSTREAMER™ system, our next-generation towed streamer system, was successfully commissioned at the start of the North Sea season in 2008. Another DigiSTREAMER system was delivered during 2008, and a third DigiSTREAMER system was delivered in 2009. In 2010, we entered into a contract with BGP for delivery of a twelve-streamer DigiSTREAMER system in 2011. DigiSTREAMER uses solid streamer and continuous acquisition technology for towed streamer operations.

During 2004, we introduced our VectorSeis Ocean (VSO) system, an advanced system for seismic data acquisition using redeployable ocean bottom cable, and we shipped the first system to Reservoir Exploration Technology, ASA (RXT), a Norwegian seismic contractor. Since then, we have delivered five VSO systems to RXT. In 2007, we entered into a multi-year agreement with RXT under which RXT agreed to purchase a minimum of \$160.0 million in VSO systems and related equipment from us through 2011. The agreement granted RXT exclusive rights to the VSO product line through 2011 and entitled us to receive a royalty of 2.1% of all revenues generated by RXT through the use of VSO equipment from January 2008 through the end of the term of the agreement. Through December 31, 2009, RXT had purchased only a total of \$39 million of VSO systems and related equipment toward their commitment. Because RXT did not purchase the minimum annual quantity of equipment, in February 2010 we notified RXT that it no longer had exclusive rights to the VSO product line.

*Marine Positioning Systems* — Our DigiCOURSE® marine streamer positioning system includes streamer cable depth control devices, lateral control devices, compasses, acoustic positioning systems, and other auxiliary sensors. This equipment is designed to control the vertical and horizontal positioning of the streamer cables and provides acoustic, compass, and depth measurements to allow processors to tie navigation and location data to geophysical data to determine the location of potential hydrocarbon reserves. DigiFIN™ is an advanced lateral streamer control system that we commercialized in 2008. We delivered nine DigiFIN systems in 2008 and 13 systems in 2009. In 2010, we sold an additional six DigiFIN systems and completed two DigiFIN vessel expansions. DigiFIN is designed to maintain tighter, more uniform marine streamer separation along the entire length of the streamer cable, which allows for better sampling of seismic data and improved subsurface images. We believe that DigiFIN also enables faster line changes and minimizes the requirements for in-fill seismic work.

*Source and Source Control Systems* — We manufacture and sell air guns, which are the primary seismic energy source used in marine environments to initiate the acoustic energy transmitted through the Earth's subsurface. An air gun fires a high compression burst of air underwater to create an energy wave for seismic measurement. We offer a digital source control system (DigiSHOT®), which allows for reliable control of air gun arrays for 4-D exploration activities.

*Geophones* — Geophones are analog sensor devices that measure acoustic energy reflected from rock layers in the Earth's subsurface using a mechanical, coil-spring element. We market a full suite of geophones and geophone test equipment that operate in most environments, including land, transition zone, and downhole. We believe our Sensor group is the leading designer and manufacturer of precision analog geophones used in seismic data acquisition. Our analog geophones are used in other industries as

well. In January 2010, we announced that our land sensors business unit had commercialized a new, high performance geophone (the SM-24XL™), which features a simplified product design to deliver enhanced durability in the field and to record high-quality acoustic data for customers.

### *Software Products and Services*

Through this segment, we supply software systems and services for towed marine streamer and seabed operations. Software developed by our subsidiary, Concept Systems, is installed on towed streamer marine vessels worldwide and is a component of many redeployable and permanent seabed monitoring systems. Products and services for our Software segment include the following:

*Marine Imaging* — ORCA is our next-generation software product for towed streamer navigation and integrated data management applications. We believe that Orca has made significant inroads into the towed streamer market with several major seismic contractors adopting the technology for their new, high-end seismic vessels. During 2010, we observed 17 streamer vessels being installed with Orca, a number of these being replacements of legacy Concept Systems installations. Orca was initially targeted at larger scale vessels shooting highly complex surveys, but is now making inroads into smaller vessels working in less complex configurations. Orca includes modules designed to manage marine acquisition surveys integrating the navigation, source control, and streamer control functions. Orca can manage complex marine surveys such as time-lapse 4-D surveys and WATS (Wide Azimuth Towed Streamer) surveys. WATS is an advanced acquisition technique for imaging complex structures (for example, subsalt) in the marine environment, generally implemented with multiple source vessels that shoot at some distance from the streamer recording vessel. Orca is designed to function with our DigiFIN product, which enables streamer lateral control, and DigiSTREAMER, our new marine streamer acquisition system. SPECTRA® is Concept Systems' legacy integrated navigation and survey control software system for towed streamer-based 2-D, 3-D, and 4-D seismic survey operations.

*Seabed Imaging* — Concept Systems also offers GATOR®, an integrated navigation and data management software system for multi-vessel ocean bottom cable and transition zone (such as marshlands) operations. The GATOR system is designed to provide real-time, multi-vessel positioning and data management solutions for ocean-bottom, shallow-water, and transition zone crews.

*Survey Design, Planning and Optimization* — Concept Systems also offers consulting services for planning, designing and supervising complex surveys, including 4D and WATS survey operations. Concept Systems' acquisition expertise and in-field software platforms and development capability are designed to allow their clients, including oil companies and seismic acquisition contractors, to optimize these complex surveys, improving image quality and reducing costs.

*Post-Survey Analysis Tools* — Concept Systems' command and control systems such as Orca, SPECTRA and GATOR are designed to integrate with its post-survey tools for processing, analysis, and data quality control. These tools include the SPRINT® navigation processing and quality control software for marine geophysical surveys, and the REFLEX® software for seismic coverage and attribute analysis.

### *Solutions Services*

Services for our Solutions segment include the following:

*Seismic Data Processing Services* — In our Solutions segment, we believe that our GXT Imaging Solutions group is a leader in advanced land and marine seismic data processing services. E&P companies apply our solutions to produce high-quality fidelity subsurface images in marine, ocean bottom and land environments.

GXT offers processing and imaging services designed to help our E&P customers reduce exploration and production risk, appraise and develop reservoirs, and increase production. GXT develops a series of subsurface images by applying its processing technology to data owned or licensed by its customers and also provides its customers with support services (even onboard seismic vessels), such as data pre-

conditioning for imaging and outsourced management, including quality control, of seismic data acquisition and image processing services.

GXT utilizes a globally distributed network of Linux-cluster processing centers throughout the world (including South America, Africa, Canada and Europe), scaled to local needs, which are combined with our major hub in Houston, to process seismic data by applying advanced proprietary algorithms and workflows that incorporate processing techniques such as illumination analysis, data conditioning and velocity modeling, and time and depth migration. These techniques help produce more detailed, higher-quality imaging of subsurface formations.

GXT pioneered pre-stack depth migration (PreSDM) technology, a processing technique involving the application of advanced, computer-intensive processing algorithms, which convert time-based seismic information to a geological depth basis. While pre-stack depth migration is not required for every imaging situation, it generally provides the most accurate subsurface images in areas of complex geology. Our Reverse Time Migration (RTM) technology was developed to improve imaging in areas where complex structural conditions or steeply dipping subsurface horizons have provided imaging challenges for oil and gas companies. Both PreSDM and RTM techniques have proved effective in their application to hard-to-image subsalt reservoirs in the Gulf of Mexico.

The Solutions segment has a broad portfolio of offerings throughout the entire seismic workflow. Our technologies are designed to allow us to clearly define a solution to ensure that our customers' goals are met, such as removing false reflections and identifying fractures in reservoirs. Our service offerings include the following:

- imaging services, including full-wave processing designed to remove source-generated or ambient noise from data acquired with single-point sensors and develop higher resolution images of the subsurface; and
- support services, such as data pre-conditioning for imaging and outsourced management of seismic data acquisition and image processing services;
- velocity modeling designed to build and analyze velocity models in structurally complex environments;
- preSDM solutions designed to convert data acquired in the time domain to an accurate, depth-based domain; and
- reservoir analysis and interpretation.

Our AXIS Geophysics group (AXIS), based in Denver, Colorado, focuses on advanced seismic data processing for stratigraphically complex onshore environments. Many hydrocarbon plays, including shale gas, are impacted by subsurface anisotropy which causes seismic velocities to vary according to source-receiver direction. AXIS has developed a proprietary data processing technique called AZIM™ that is designed to better account for the anisotropic effects of the Earth (i.e., different layers of geological formations that are not parallel to each other), which tend to distort seismic images. AZIM is designed to correct for these anisotropic effects by producing higher resolution images in areas where the velocity of seismic waves varies with compass direction (or azimuth). The AZIM technique is used to analyze fracture patterns within reservoirs.

We believe that the application of ION's advanced processing technologies and imaging techniques can better identify complex hydrocarbon-bearing structures and deeper exploration prospects. We also believe that the combination of GXT's capabilities in advanced velocity model building and depth imaging, along with AXIS' capability in anisotropic imaging, provides an advanced toolkit for maximizing the data measurements obtained by our VectorSeis full-wave sensor.

*Integrated Seismic Solutions (ISS)* — ION's ISS services are designed to manage the entire seismic process, from survey planning and design to data acquisition and management, through pre-processing and final subsurface imaging. The ISS group focuses on the technologically intensive components of the image development process, such as survey planning and design and data processing and interpretation,

and outsources the logistics component to geophysical logistics contractors. ION offers its ISS services to customers on both a proprietary and multi-client basis. On both bases, the customers pre-fund a majority of the data acquisition costs. With the proprietary service, the customer also pays for the imaging and processing, but has exclusive ownership of the data after it has been processed. For multi-client surveys, we assume some of the processing costs but retain ownership of the marketing rights to the data and images and receive on-going license revenue from subsequent data license sales.

*Seismic Data Libraries* — Since 2002, GXT has acquired and processed a growing seismic data library consisting of non-exclusive marine and ocean bottom data from around the world. The majority of the data libraries licensed by GXT consist of ultra-deep 2-D lines that E&P companies use to better evaluate the evolution of petroleum systems at the basin level, including insights into the character of source rocks and sediments, migration pathways, and reservoir trapping mechanisms. In many cases, the availability of geoscience data extends beyond seismic information to include magnetic, gravity, well log, and electromagnetic information, which help to provide a more comprehensive picture of the subsurface. Known as “SPANS,” these geophysical data libraries currently exist for major offshore basins worldwide, including the northern Gulf of Mexico, the southern Caribbean, the north and east coasts of South America, the east and west coasts of West Africa, the east and west coasts of India, northern Canada and Alaska, northeast Greenland and southeast Asia. In 2010, we completed the acquisition of an additional 6,500 kilometers of data off northeast Greenland, bringing that program’s total to 12,000 kilometers. Additionally, we added 6,000 kilometers to our Canadian Beaufort program which now contains over 22,000 kilometers of data. Additional SPANS and other seismic and non-seismic programs are planned or under development for other regions of the world.

### ***INOVA Geophysical***

#### ***Joint Venture***

On March 25, 2010, we completed the formation of our land equipment joint venture, INOVA Geophysical, with BGP. INOVA Geophysical is managed through a Board of Directors consisting of four members appointed by BGP and three members appointed by us.

The scope of the joint venture’s business is to design, develop, engineer and manufacture, and conduct research and development, distribution, sales and marketing and field support operations, of land-based equipment used in seismic data acquisition for the petroleum industry. Excluded from the scope of the joint venture’s business are (x) the analog sensor businesses of our company and of BGP and (y) the businesses of certain companies in which BGP or we were a minority owner at the date of the formation of the joint venture.

A key part of the strategy behind the joint venture is to leverage our research and development experience and expertise with the operational experience and expertise of BGP. The R&D centers for the joint venture have remained primarily in the U.S. and Canada. However, the joint venture intends to evaluate lower-cost manufacturing opportunities in China on a case-by-case basis and pursue these opportunities when appropriate. In addition, it is intended for BGP’s crews to field test new technology and related equipment for operational feedback and quality improvements. Finally, we expect that BGP will eventually purchase the majority of its land equipment from the joint venture and will purchase more ION products and services from our other business segments.

#### ***Products***

Products of INOVA Geophysical include the following:

*Land Acquisition Systems* — INOVA Geophysical’s cable-based Scorpion and ARIES® land acquisition systems consist of a central recording unit and multiple remote ground equipment modules that are connected by cable. The central recording unit is in a transportable enclosure that serves as the control center of each system and is typically mounted within a vehicle or helicopter. The central recording unit receives digitized data, stores the data on storage media for subsequent processing, and displays the data on optional monitoring devices. It also provides calibration, status, and test functionality. The remote

ground equipment consists of multiple remote modules and line taps positioned over the survey area. Seismic data is collected by analog geophones or VectorSeis digital sensors.

INOVA Geophysical's ARIES product line was acquired in connection with our acquisition of ARAM in September 2008. The product line consists of analog cable-based land acquisition systems and related peripherals and equipment. ARIES land system products include remote acquisition modules ("RAMs"), which acquire analog seismic data from the geophones and transmit the data digitally to the central processing equipment, and line tap units that interconnect baseline cables from the recording equipment to multiple receiver lines and function to retransmit data from the RAMs to central recording equipment. ARIES products also include system batteries (standard sealed or lithium-ion), central recording equipment (including seismic processing module and ARAM software), baseline cables that connect the central recording equipment with the taps and receiver line cables that connect geophones or hydrophone groups to a RAM. The latest version of ARIES — the ARIES II® land recording system — features a 24-bit system architecture that is designed to dramatically improve channel capacity, ensure efficient equipment deployment, and maximize system performance.

Scorpion is capable of recording full-wave seismic data. Digital sensors can provide increased response linearity and bandwidth, which translates into higher resolution images of the subsurface. In addition, one digital sensor can replace a string of six or more analog geophones, providing users with equipment weight reduction and improved operating efficiencies.

FireFly is a cableless land acquisition system for full-wave land seismic data acquisition. By removing the constraints of cables, geophysicists can custom-design surveys for multiple subsurface targets and increase receiver station density to more fully sample the subsurface. We believe that the cableless design of FireFly enables contractors to efficiently operate in challenging, culturally-intensive environments. FireFly's benefits include a decrease in system weight and, we believe, superior operational efficiencies, reduction in operational troubleshooting time, and better defined sampled seismic data. Also, we believe that the data management capabilities of FireFly should reduce the amount of time spent pre-processing the data.

VectorSeis is used as the primary sensor device on the FireFly cableless system. Since 1999, VectorSeis full-wave technology has been used to acquire seismic data in North America, Europe, Asia, the Pacific Basin region, the Middle East, and the Commonwealth of Independent States.

*Vibrators and Energy Sources* — Vibrators are devices carried by large vibroseis vehicles and, along with dynamite, are used as energy sources for land seismic acquisition. INOVA Geophysical markets and sells the AHV-IV™, an articulated tire-based vibrator vehicle, and a tracked vibrator, the XVib®, for use in environmentally sensitive areas such as the Arctic tundra and desert environments.

INOVA Geophysical's Pelton division is a provider of energy source control and positioning technologies. Pelton's Vib Pro™ control system provides vibrator vehicles with digital technology for energy control and global positioning system technology for navigation and positioning. Pelton's Shot Pro™ dynamite firing system, released in 2007, is the equivalent technology for seismic operations using dynamite energy sources.

## **Product Research and Development**

Our research and development efforts have focused on improving both the quality of the subsurface image and the seismic data acquisition economics for our customers. Our ability to compete effectively in the manufacture and sale of seismic equipment and data acquisition systems, as well as related processing services, depends principally upon continued technological innovation. Development cycles of most products, from initial conception through commercial introduction, may extend over several years.

During 2010, our product development efforts continued across selective business lines aimed at the development of strategic key products and technologies. Major research and development programs are expected to continue for our "Digi-" line of marine streamer technologies. Also, in our data processing business, we are investing in continued improvements in productivity and in enhancing our applications to

handle increasingly complex data acquisition environments and difficult-to-image geology. For a summary of our research and development expenditures during the past five years, see Item 6. "*Selected Financial Data.*"

Because many of these new products are under development, their commercial feasibility or degree of commercial acceptance, if any, is not yet known. No assurance can be given concerning the successful development of any new products or enhancements, the specific timing of their release or their level of acceptance in the marketplace.

### **Markets and Customers**

Based on historical revenues, we believe that we are a market leader in numerous product lines, including full-wave sensors based upon micro-electro magnetic systems (MEMS), navigation and data management software, marine positioning and streamer control systems, redeployable seabed recording systems and, through INOVA Geophysical, cableless land acquisition systems.

Our principal customers are seismic contractors and E&P companies. Seismic contractors purchase our data acquisition systems and related equipment and software to collect data in accordance with their E&P company customers' specifications or for their own seismic data libraries. We also market and sell products and offer services directly to E&P companies, primarily imaging-related processing services and multi-client seismic data libraries from our GXT subsidiary, as well as consulting services from Concept Systems and GXT. During 2010, 2009 and 2008, no single customer accounted for 10% or more of our consolidated net revenues.

In 2009, hydrocarbon price erosion caused E&P companies to revisit their capital investment plans, which, in turn, reverberated back through the supply chain to affect us both directly and indirectly through our seismic acquisition contractor customers. In 2010, we saw an expansion of E&P capital expenditure budgets as oil prices improved to within a range of approximately \$85 to \$100 per barrel by early 2011.

Contractors from China (including BGP) and other countries are increasingly active not only in their own countries but also in other international markets. As a result, a significant part of our marketing effort is focused on areas outside of the United States. Foreign sales are subject to special risks inherent in doing business outside of the United States, including the risk of armed conflict, civil disturbances, currency fluctuations, embargo and governmental activities, customer credit risks, and risk of non-compliance with U.S. and foreign laws, including tariff regulations and import/export restrictions.

We sell our products and services through a direct sales force consisting of employees and international third-party sales representatives responsible for key geographic areas. During 2010, 2009 and 2008, sales to destinations outside of North America accounted for approximately 60%, 64% and 60% of our consolidated net revenues, respectively. Further, systems sold to domestic customers are frequently deployed internationally and, from time to time, certain foreign sales require export licenses.

Traditionally, our business has been seasonal, with strongest demand in the fourth quarter of our fiscal year.

For information concerning the geographic breakdown of our net revenues, see Note 4 of *Notes to Consolidated Financial Statements*.

### **Manufacturing Outsourcing and Suppliers**

Since 2003, we have increased the use of contract manufacturers in our Systems segment as an alternative to manufacturing our own products. We have outsourced the manufacturing of our towed marine streamers, our redeployable ocean bottom cables and various components of VectorSeis Ocean. We may experience supply interruptions, cost escalations, and competitive disadvantages if we do not monitor these relationships properly.



## Competition

The market for seismic products and services is highly competitive and is characterized by continual changes in technology. Our principal competitor for land and marine seismic equipment is Societe d'Etudes Recherches et Construction Electroniques (Sercel), an affiliate of the French seismic contractor, Compagnie General de Geophysique Veritas (CGGVeritas). Sercel possesses the advantage of being able to sell its products and services to an affiliated seismic contractor that operates both land crews and seismic acquisition vessels, providing it with a greater ability to test new technology in the field and to capture a captive internal market for product sales. Sercel has also demonstrated that it is willing to offer extended financing sales terms to customers in situations where we declined to do so due to credit risk. We also compete with other seismic equipment companies on a product-by-product basis. Our ability to compete effectively in the manufacture and sale of seismic instruments and data acquisition systems depends principally upon continued technological innovation, as well as pricing, system reliability, reputation for quality, and ability to deliver on schedule.

Certain seismic contractors have designed, engineered, and manufactured seismic acquisition technology in-house (or through a controlled network of third-party vendors) in order to achieve differentiation versus their competition. For example, WesternGeco L.L.C. (a wholly-owned subsidiary of Schlumberger Limited, a large integrated oilfield services company) relies heavily on its in-house technology development for designing, engineering, and manufacturing its "Q-Technology" platform, which includes seismic acquisition and processing systems. Although this technology competes directly with ION's technology for marine streamer, seabed, and land acquisition, WesternGeco does not provide Q-Technology services to other seismic acquisition contractors. However, the risk exists that other seismic contractors may decide to conduct more of their own seismic technology development, which would put additional pressures on the demand for ION acquisition equipment.

In addition, over the last several years, we have seen both new-build and consolidation activity within the marine towed streamer segment, which could impact our business results in the future. We expect the number of 2-D and 3-D marine streamer vessels, including those in operation, under construction, or announced additions to capacity, to increase to approximately 132 by year-end 2011, compared to approximately 119 at December 31, 2010. In addition, there has been an increase in acquisition activity within the sector, with the major vessel operators — Schlumberger, CGGVeritas, and Petroleum Geo-Services ASA (PGS) — all moving to acquire new market entrants in the last several years. Many of these incumbent operators develop their own marine streamer technologies, such that consolidation in the sector reduces the number of potential customers and vessel outfitting opportunities for us.

Our GXT Imaging Solutions group competes with more than a dozen processing companies that are capable of providing pre-stack depth migration services to E&P companies. See "*Products and Services — Solutions Services*." While the barriers to entry into this market are relatively low, the barriers to competing at the higher end of the market, which is the advanced pre-stack depth migration market, where our efforts are focused, are significantly higher. At the higher end of this market, CGGVeritas and WesternGeco are our Solutions division's two primary competitors for advanced imaging services. Both of these companies are larger than ION in terms of revenues, number of processing locations, and sales and marketing resources. In addition, both CGGVeritas and WesternGeco possess an advantage of being part of affiliated seismic contractor companies, providing them with access to customer relationships and seismic datasets that require processing.

Concept Systems provides advanced data integration software and services to seismic contractors acquiring data using either towed streamer vessels or ocean-bottom cable on the seabed. Vessels or ocean-bottom cable crews that do not use Concept Systems software either rely upon manual data integration, reconciliation, and quality control, or develop and maintain their own proprietary software packages. There is evidence of growing competition to Concept Systems' core command and control business from Sercel and other smaller companies. Concept Systems has signed long term (between two and five years) technology partnerships with many of its key clients and will continue to seek to develop key new technologies with these clients. An important competitive factor for companies in the same business as Concept Systems is the ability to provide advanced complex command and control software with a high level of reliability combined with expert systems and project support to ensure operations run cost effectively.

## Intellectual Property

We rely on a combination of patents, copyrights, trademark, trade secrets, confidentiality procedures, and contractual provisions to protect our proprietary technologies. Although our portfolio of patents is considered important to our operations and particular patents may be material to specific business lines, no one patent is considered essential to our consolidated business operations.

Our patents, copyrights, and trademarks offer us only limited protection. Our competitors may attempt to copy aspects of our products despite our efforts to protect our proprietary rights, or may design around the proprietary features of our products. Policing unauthorized use of our proprietary rights is difficult, and we are unable to determine the extent to which such use occurs. Our difficulties are compounded in certain foreign countries where the laws do not offer as much protection for proprietary rights as the laws of the United States. From time to time, third parties inquire and claim that we have infringed upon their intellectual property rights and we make similar inquiries and claims to third parties. No material liabilities have resulted from these third party claims to date. For more information on current litigation related to the Company's intellectual property, see Item 3. "*Legal Proceedings.*"

The information contained in this Annual Report on Form 10-K contains references to trademarks, service marks and registered marks of ION and our subsidiaries, as indicated. Except where stated otherwise or unless the context otherwise requires, the terms "VectorSeis," "System Four," "FireFly," "ARIES," "ARIES II," "DigiSHOT," "XVib," "DigiCOURSE," "GATOR," "SPECTRA," "Orca," "Scorpion," "SPRINT," "DigiBIRD," and "REFLEX" refer to VECTORSEIS®, SYSTEM FOUR®, FIREFLY®, ARIES®, ARIES II®, DIGISHOT®, XVIB®, DIGICOURSE®, GATOR®, SPECTRA®, ORCA®, SCORPION®, SPRINT®, DigiBIRD® and REFLEX® registered marks owned by ION or INOVA Geophysical, and the terms "AZIM," "BasinSPAN," "DigiSTREAMER," "SM-24XL," "AHV-IV," "Vib Pro," "Shot Pro," and "DigiFIN," refer to AZIM™, BasinSPAN™, DigiSTREAMER™, SM-24XL™, AHV-IV™, Vib Pro™, Shot Pro™ and DigiFIN™ trademarks and service marks owned by ION or INOVA Geophysical.

## Regulatory Matters

Our operations are subject to laws, regulations, government policies, and product certification requirements worldwide. Changes in such laws, regulations, policies or requirements could affect the demand for our products or result in the need to modify products, which may involve substantial costs or delays in sales and could have an adverse effect on our future operating results. Our export activities are also subject to extensive and evolving trade regulations. Certain countries are subject to trade restrictions, embargoes, and sanctions imposed by the U.S. government. These restrictions and sanctions prohibit or limit us from participating in certain business activities in those countries.

Our operations are subject to numerous local, state, and federal laws and regulations in the United States and in foreign jurisdictions concerning the containment and disposal of hazardous materials, the remediation of contaminated properties, and the protection of the environment. We do not currently foresee the need for significant expenditures to ensure our continued compliance with current environmental protection laws. Regulations in this area are subject to change, and there can be no assurance that future laws or regulations will not have a material adverse effect on us.

The Deepwater Horizon incident in the U.S. Gulf of Mexico in April 2010 resulted in a moratorium on certain offshore drilling activities by the Bureau of Ocean Energy Management, Regulation and Enforcement, or "BOEMRE". This event negatively impacted our Solutions segment during our second quarter of 2010, during which we experienced a reduction in new venture and multi-client seismic data library sales. The BOEMRE has issued and is expected to issue additional new safety and environmental guidelines or regulations for drilling in the Gulf of Mexico and other offshore regions, and may take other steps that could increase the costs of exploration and production, reduce the area of operations and result in permitting delays.

Our customers' operations are also significantly impacted by laws and regulations concerning the protection of the environment and endangered species. For instance, many of our marine contractors have been affected by regulations protecting marine mammals in the Gulf of Mexico. To the extent that our customers'

operations are disrupted by future laws and regulations, our business and results of operations may be materially adversely affected.

## **Employees**

As of December 31, 2010, we had 915 regular, full-time employees, 598 of whom were located in the U.S. From time to time and on an as-needed basis, we supplement our regular workforce with individuals that we hire temporarily or as independent contractors in order to meet certain internal manufacturing or other business needs. Our U.S. employees are not represented by any collective bargaining agreement, and we have never experienced a labor-related work stoppage. We believe that our employee relations are satisfactory. During 2010, 256 of our legacy land systems employees became employees of INOVA Geophysical, thereby reducing our headcount.

## **Financial Information by Segment and Geographic Area**

For a discussion of financial information by business segment and geographic area, see Note 4 of *Notes to Consolidated Financial Statements*.

## **Item 1A. Risk Factors**

This report contains or incorporates by reference statements concerning our future results and performance and other matters that are “forward-looking” statements within the meaning of Section 27A of the Securities Act of 1933, as amended (“Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (“Exchange Act”). These statements involve known and unknown risks, uncertainties, and other factors that may cause our or our industry’s results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance, or achievements expressed or implied by such forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “would,” “should,” “intend,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “potential,” or “continue” or the negative of such terms or other comparable terminology. Examples of other forward-looking statements contained or incorporated by reference in this report include statements regarding:

- the effects of current and future worldwide economic conditions and demand for oil and natural gas and seismic equipment and services;
- the on-going effects and aftermath of the Deepwater Horizon disaster in the Gulf of Mexico on regulatory requirements affecting us and our customers and on demand for seismic equipment and services;
- future benefits to be derived from our INOVA Geophysical joint venture;
- a continuation in the future of increased capital expenditures for seismic spending;
- the expected outcome of litigation and other claims against us;
- the timing of anticipated sales;
- future levels of spending by our customers;
- future oil and gas commodity prices;
- expected net revenues, income from operations and net income;
- expected gross margins for our products and services;
- future benefits to our customers to be derived from new products and services;
- future growth rates for our products and services;
- the degree and rate of future market acceptance of our new products and services;

- our expectations regarding oil and gas exploration and production companies and contractor end-users purchasing our more technologically-advanced products and services;
- anticipated timing and success of commercialization and capabilities of products and services under development and start-up costs associated with their development;
- expected improved operational efficiencies from our full-wave digital products and services;
- future cash needs and future availability of cash to fund our operations and pay our obligations;
- potential future acquisitions;
- future levels of capital expenditures;
- our ability to maintain our costs at consistent percentages of our revenues in the future;
- future demand for seismic equipment and services;
- future seismic industry fundamentals;
- future opportunities for new products and projected research and development expenses;
- success in integrating our acquired businesses;
- sufficient future profits to fully utilize our net operating losses;
- future compliance with our debt financial covenants;
- expectations regarding realization of deferred tax assets; and
- anticipated results regarding accounting estimates we make.

These forward-looking statements reflect our best judgment about future events and trends based on the information currently available to us. Our results of operations can be affected by inaccurate assumptions we make or by risks and uncertainties known or unknown to us. Therefore, we cannot guarantee the accuracy of the forward-looking statements. Actual events and results of operations may vary materially from our current expectations and assumptions. While we cannot identify all of the factors that may cause actual results to vary from our expectations, we believe the following factors should be considered carefully:

***Our INOVA Geophysical Joint Venture with BGP involves numerous risks.***

Our INOVA Geophysical joint venture with BGP is focused on designing, engineering, manufacturing, research and development, sales and marketing and field support of land-based equipment used in seismic data acquisition for the oil and gas industry. Excluded from the scope of the joint venture's business are the analog sensor businesses of our company and BGP and the businesses of certain companies in which BGP or we are currently a minority owner. In addition to these excluded businesses, all of our other businesses — including our Systems and Software segments and our Solutions division, which includes our Imaging Solutions, Integrated Seismic Solutions (ISS) and BasinSPAN and seismic data library businesses — remain owned and operated by us and do not comprise a part of the joint venture.

The INOVA Geophysical joint venture involves the integration of multiple product lines and business models from us and BGP that previously have operated independently. This has been and will continue to be a complex and time consuming process.

There can be no assurance that we will achieve the expected benefits of the joint venture. The INOVA Geophysical joint venture and future joint ventures or acquisitions that we complete may result in unexpected costs, expenses, and liabilities, which may have a material adverse effect on our business, financial condition or results of operations. We may encounter difficulties in developing and expanding the business of INOVA Geophysical, funding any future capital contributions to the joint venture, exercising influence over the management and activities of the joint venture, quality control concerns regarding joint venture products and services and potential conflicts of interest with the joint venture and our joint venture partner. Any inability to meet our obligations as a joint venture partner under the joint venture agreement could result in our being

subject to penalties and reduced percentage interests in the joint venture for our company. Also, we could be disadvantaged in the event of disputes and controversies with our joint venture partner, since our joint venture partner is a relatively significant customer of our products and services and future products and services of the joint venture.

The joint venture is also subject to, and exposes us to, various additional risks that could adversely affect our results of operations. These risks include the following:

- increased costs associated with the integration and operation of the new business and new technologies and the management of geographically dispersed operations;
- risks associated with the assimilation of new technologies (including incorporating BGP's land seismic equipment with our existing land seismic imaging product lines that were contributed to the joint venture), operations, sites, and personnel;
- difficulties in retaining and integrating key technical, sales and marketing personnel and the possible loss of such employees and costs associated with their loss;
- difficulties associated with preserving relationships with our customers, partners and vendors;
- risks that any technology developed by the joint venture may not perform as well as we had anticipated;
- the diversion of management's attention and other resources from other business operations and related concerns;
- the potential inability to replicate operating efficiencies in the joint venture's operations;
- potential impairments of goodwill and intangible assets;
- the requirement to maintain uniform standards, controls and procedures;
- the impairment of relationships with employees and customers as a result of the integration of management personnel from different companies;
- the divergence of our interests from BGP's interests in the future, disagreements with BGP on ongoing manufacturing, research and development and operational activities, or the amount, timing or nature of further investments in the joint venture;
- the terms of our joint venture arrangements may turn out to be unfavorable to us;
- we currently own 49% of the total equity interests in INOVA Geophysical, so there are certain decisions affecting the business of the joint venture that we cannot control or influence;
- we may not be able to realize the operating efficiencies, cost savings or other benefits that we expect from the joint venture;
- the joint venture's cash flows may be inadequate to fund its capital requirements, thereby requiring additional contributions to the capital of the joint venture by us and by BGP;
- joint venture profits and cash flows may prove inadequate to fund cash dividends from the joint venture to the joint venture partners; and
- the joint venture may experience difficulties and delays in ramping up production of the joint venture's products.

If the INOVA Geophysical joint venture is not successful, our business, results of operations and financial condition will likely be adversely affected.

In addition, the terms of the joint venture's governing instruments and the agreements regarding BGP's investment in our company contain a number of restrictive provisions affecting ION. For example, an investors' rights agreement grants pre-emptive rights to BGP with respect to certain future issuances of our stock. These restrictions may adversely affect our ability to quickly raise funds through a future issuance of

our securities, and could have the effect of discouraging, delaying or preventing a merger or acquisition of our company that our stockholders may otherwise consider to be favorable.

***We are subject to intense competition, which could limit our ability to maintain or increase our market share or to maintain our prices at profitable levels.***

Many of our sales are obtained through a competitive bidding process, which is standard for our industry. Competitive factors in recent years have included price, technological expertise, and a reputation for quality, safety and dependability. While no single company competes with us in all of our segments, we are subject to intense competition in each of our segments. New entrants in many of the markets in which certain of our products and services are currently strong should be expected. See Item 1. "*Business — Competition.*" We compete with companies that are larger than we are in terms of revenues, number of processing locations and sales and marketing resources. A few of our competitors have a competitive advantage in being part of an affiliated seismic contractor company. In addition, we compete with major service providers and government-sponsored enterprises and affiliates. Some of our competitors conduct seismic data acquisition operations as part of their regular business, which we do not, and have greater financial and other resources than we do. These and other competitors may be better positioned to withstand and adjust more quickly to volatile market conditions, such as fluctuations in oil and natural gas prices, as well as changes in government regulations. In addition, any excess supply of products and services in the seismic services market could apply downward pressure on prices for our products and services. The negative effects of the competitive environment in which we operate could have a material adverse effect on our results of operations.

***We may be unable to obtain broad intellectual property protection for our current and future products and we may become involved in intellectual property disputes.***

We rely on a combination of patent, copyright, and trademark laws, trade secrets, confidentiality procedures, and contractual provisions to protect our proprietary technologies. We believe that the technological and creative skill of our employees, new product developments, frequent product enhancements, name recognition, and reliable product maintenance are the foundations of our competitive advantage. Although we have a considerable portfolio of patents, copyrights, and trademarks, these property rights offer us only limited protection. Our competitors may attempt to copy aspects of our products despite our efforts to protect our proprietary rights, or may design around the proprietary features of our products. Policing unauthorized use of our proprietary rights is difficult, and we are unable to determine the extent to which such use occurs. Our difficulties are compounded in certain foreign countries where the laws do not offer as much protection for proprietary rights as the laws of the United States.

Third parties inquire and claim from time to time that we have infringed upon their intellectual property rights. Many of our competitors own their own extensive global portfolio of patents, copyrights, trademarks, trade secrets, and other intellectual property to protect their proprietary technologies. We believe that we have in place appropriate procedures and safeguards to help ensure that we do not violate a third party's intellectual property rights. However, no set of procedures and safeguards is infallible. We may unknowingly and inadvertently take action that is inconsistent with a third party's intellectual property rights, despite our efforts to do otherwise. Any such claims from third parties, with or without merit, could be time consuming, result in costly litigation, result in injunctions, require product modifications, cause product shipment delays or require us to enter into royalty or licensing arrangements. Such claims could have a material adverse affect on our results of operations and financial condition.

Much of our litigation in recent years have involved disputes over our and others' rights to technology. See Item 3. "*Legal Proceedings.*"

***Our stock price has been volatile from time to time. It declined precipitously during portions of 2008 through 2010, and could decline again.***

The securities markets in general and our common stock in particular have experienced significant price and volume volatility in recent years. The market price and trading volume of our common stock may

continue to experience significant fluctuations due not only to general stock market conditions but also to a change in sentiment in the market regarding our operations or business prospects or those of companies in our industry. In addition to the other risk factors discussed in this section, the price and volume volatility of our common stock may be affected by:

- operating results that vary from the expectations of securities analysts and investors;
- factors influencing the levels of global oil and natural gas exploration and exploitation activities, such as a decline in prices for natural gas in North America or disasters such as the Deepwater Horizon incident in the Gulf of Mexico in 2010;
- the operating and securities price performance of companies that investors or analysts consider comparable to us;
- announcements of strategic developments, acquisitions and other material events by us or our competitors; and
- changes in global financial markets and global economies and general market conditions, such as interest rates, commodity and equity prices and the value of financial assets.

To the extent that the price of our common stock remains at lower levels or it declines further, our ability to raise funds through the issuance of equity or otherwise use our common stock as consideration will be reduced. In addition, further increases in our leverage may make it more difficult for us to access additional capital. These factors may limit our ability to implement our operating and growth plans.

***The drilling moratorium in the U.S. Gulf of Mexico and the other regulatory initiatives undertaken in response to the Deepwater Horizon disaster and resulting oil spill in the U.S. Gulf of Mexico, has adversely affected, and could adversely affect in the future, our customers and our business.***

In April 2010, the Deepwater Horizon drilling rig in the U.S. Gulf of Mexico sank following a catastrophic explosion and fire, which resulted in the release of millions of gallons of hydrocarbons. In response to this incident, the Minerals Management Service (now known as the Bureau of Ocean Energy Management, Regulation and Enforcement, or "BOEMRE") of the U.S. Department of the Interior issued a notice on May 30, 2010 implementing a six-month moratorium on certain drilling activities in the U.S. Gulf of Mexico. The moratorium was lifted in October 2010, but the BOEMRE has issued and is expected to issue new safety and environmental guidelines or regulations for drilling in the Gulf of Mexico and in other U.S. offshore locations. On December 1, 2010, the U.S. Department of the Interior announced that the Atlantic Coast and the eastern Gulf of Mexico would be closed to offshore oil and gas drilling through 2017. In addition, as a result of these changes, the permitting process for exploration and development activities in the U.S. Gulf of Mexico has slowed considerably, resulting in very limited levels of activity there. These new safety and environmental regulations will expose our customers, and could expose us, to significant additional costs and liabilities. In addition, these and any such similar future laws and regulations could result in increased compliance costs or additional operating restrictions that may adversely affect the financial health of our customers or decrease the demand for our services. It is not possible to estimate whether or when drilling operations in the Gulf of Mexico will return to normal activity levels, due to uncertainties surrounding the timing for the issuance of drilling permits by the U.S. Department of Interior and new regulations related to drilling operations.

Although it is difficult to predict the ultimate impact of the moratorium or any new guidelines, regulations or legislation, a prolonged suspension of drilling activity in the Gulf of Mexico and other areas, new regulations and increased liability for companies operating in this sector would adversely affect many of our customers who operate in the Gulf. This could, in turn, adversely affect our business, results of operations and financial condition, particularly regarding sales of our marine seismic equipment and our Solutions' segment's survey and processing activities with respect to locations in the Gulf of Mexico. In fact, this incident negatively impacted our Solutions segment during the second quarter of 2010 by our experiencing a reduction in new venture and multi-client seismic data library sales. Data processing activity in our Solutions segment was not similarly impacted by this incident during the second quarter of 2010, but could be adversely

impacted in 2011. The uncertainties that have resulted from the incident's aftermath adversely affects us, our customers and other providers of equipment and services to E&P companies, due to the lack of visibility as to which companies will continue to be active in U.S. Gulf of Mexico deepwater exploration and development. As a result, we cannot currently predict the extent to which these events may adversely affect our future business, the extent and length of time that any such adverse impact will be felt.

***If we, our option holders or stockholders holding registration rights sell additional shares of our common stock in the future, the market price of our common stock could decline. Additionally, our outstanding shares of Series D Preferred Stock are convertible into shares of our common stock. The conversion of the Series D Preferred Stock and exercise of our stock options could result in substantial dilution to our existing stockholders. Sales in the open market of the shares of common stock acquired upon such conversion or exercises may have the effect of reducing the then-current market price for our common stock.***

The market price of our common stock could decline as a result of sales of a large number of shares of our common stock in the market in the future, or the perception that such sales could occur. These sales, or the possibility that these sales may occur, could make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate. As of February 18, 2011, we had 153,028,861 shares of common stock issued and outstanding. Substantially all of these shares are available for sale in the public market, subject in some cases to volume and other limitations or delivery of a prospectus. At February 18, 2011, we had outstanding stock options to purchase up to 7,574,842 shares of our common stock at a weighted average exercise price of \$7.45 per share. We also had, as of that date, 977,178 shares of common stock reserved for issuance under outstanding restricted stock and restricted stock unit awards.

As of February 18, 2011, Fletcher International, Ltd., the holder of our Series D Preferred Stock, held 22,000 shares of our Series D-1 Cumulative Convertible Preferred Stock and 5,000 shares of our Series D-2 Cumulative Convertible Preferred Stock. Under the terms of the agreement with Fletcher by which it purchased the Series D Preferred Stock, Fletcher has the ability to sell, under currently effective registration statements, the shares of our common stock acquired by it upon conversion of its remaining shares of Series D Preferred Stock. The shares of our Series D Preferred Stock held by Fletcher as of February 18, 2011 are convertible into 6,065,075 shares of our common stock. The conversion of our outstanding shares of Series D Preferred Stock into shares of our common stock will dilute the ownership interests of existing stockholders. Sales in the public market of shares of common stock issued upon conversion would likely apply downward pressure on prevailing market prices of our common stock.

The conversion price of our outstanding Series D Preferred Stock is also subject to certain customary anti-dilution adjustments. For additional information regarding the terms of our Series D Preferred Stock, see Item 7. "*Management's Discussion and Analysis of Financial Condition and Results of Operations.*" We currently have ongoing litigation with Fletcher in Delaware regarding issues involving our Series D Preferred Stock. For more information regarding our litigation with Fletcher, see Item 3. "*Legal Proceedings.*"

Shares of our common stock are also subject to certain demand and piggyback registration rights held by Laitram, L.L.C. We also may enter into additional registration rights agreements in the future in connection with any subsequent acquisitions or securities transactions we may undertake. Any sales of our common stock under these registration rights arrangements with Laitram or other stockholders could be negatively perceived in the trading markets and negatively affect the price of our common stock. Sales of a substantial number of our shares of common stock in the public market under these arrangements, or the expectation of such sales, could cause the market price of our common stock to decline.

***A depressed economic and credit environment and lower natural gas prices could have an adverse effect on customer demand for certain of our products and services, which in turn would adversely affect our results of operations, our cash flows, our financial condition, our ability to borrow and our stock price.***

Global market and economic conditions weakened significantly beginning in mid-2008. The global recession contributed to weakened demand and lower prices for natural gas on a worldwide basis, which reduced the levels of exploration for natural gas. Historically, demand for our products and services has been



sensitive to the level of exploration spending by E&P companies and geophysical contractors. The demand for our products and services will be reduced if exploration expenditures remain low. During periods of reduced levels of exploration for oil and natural gas, there have been oversupplies of seismic data and downward pricing pressures on our seismic products and services, which in turn, have limited our ability to meet sales objectives and maintain profit margins for our products and services. In the past, these then-prevailing industry conditions have had the effect of reducing our revenues and operating margins. The markets for oil and gas historically have been volatile and are likely to continue to be so in the future.

Turmoil or uncertainty in the credit markets and its potential impact on the liquidity of major financial institutions may have an adverse effect on our ability to fund our business strategy through borrowings under either existing or new debt facilities in the public or private markets and on terms we believe to be reasonable. Likewise, there can be no assurance that our customers will be able to borrow money on a timely basis or on reasonable terms, which could have a negative impact on their demand for our products and impair their ability to pay us for our products and services on a timely basis, or at all. Our sales are affected by interest rate fluctuations and the availability of liquidity, and we would be adversely affected by increases in interest rates or liquidity constraints. Rising interest rates may also make certain alternative products and services provided by our competitors more attractive to customers, which could lead to a decline in demand for our products and services. This could have a material adverse effect on our business, results of operations, financial condition and cash flows.

It is difficult to predict how long the economic slowdown will persist, whether it will deteriorate further, and which of our products and services will be adversely affected. We may have further impairment losses if events or changes in circumstances occur which reduce the fair value of an asset below its carrying amount. As a result, these conditions could adversely affect our financial condition and results of operations, and we may be subject to increased disputes and litigation because of these events and issues.

Stock markets, in general, have experienced in recent years, and may continue to experience, significant price and volume volatility, and the market price of our common stock may continue to be subject to similar market fluctuations unrelated to our operating performance or prospects.

***If capital expenditures for E&P companies remain at reduced levels compared to prior periods, the demand for our products and services may remain weak and our results of operations will be adversely affected.***

Demand for our products and services depends upon the level of spending by E&P companies and seismic contractors for exploration and development activities, and those activities depend in large part on oil and gas prices. Spending on products and services such as those we provide our customers are of a highly discretionary nature and subject to rapid and material change. Any significant decline in oil and gas related spending on behalf of our customers could cause alterations in our capital spending plans, project modifications, delays or cancellations, general business disruptions or delays in payment, or non-payment of amounts that are owed to us and could have a material adverse effect on our financial condition and results of operations and on our ability to continue to satisfy all of the covenants in our loan agreements. Additionally, increases in oil and gas prices may not increase demand for our products and services or otherwise have a positive effect on our financial condition or results of operations. Oil and gas companies' willingness to explore, develop and produce depends largely upon prevailing industry conditions that are influenced by numerous factors over which our management has no control, such as:

- the supply of and demand for oil and gas;
- the level of prices, and expectations about future prices, of oil and gas;
- the cost of exploring for, developing, producing and delivering oil and gas;
- the expected rates of declining current production;
- the discovery rates of new oil and gas reserves;

- weather conditions, including hurricanes, that can affect oil and gas operations over a wide area, as well as less severe inclement weather that can preclude or delay seismic data acquisition;
- domestic and worldwide economic conditions;
- political instability in oil and gas producing countries;
- technical advances affecting energy consumption;
- government policies regarding the exploration, production and development of oil and gas reserves;
- the ability of oil and gas producers to raise equity capital and debt financing; and
- merger and divestiture activity among oil and gas companies and seismic contractors.

Many of our products contain more advanced technologies than certain products that our competition offer, and these products may tend to be, for that reason, more expensive than products of our competitors, thereby giving them a pricing advantage.

Although we believe that the long-term trend is favorable, the level of oil and gas exploration and production activity has been volatile in recent years. Previously forecasted trends in oil and gas exploration and development activities may not continue and demand for our products and services may not reflect the level of activity in the industry. Any prolonged substantial reduction in oil and gas prices would likely affect oil and gas production levels and therefore adversely affect demand for the products and services we provide.

***We derive a substantial amount of our revenues from foreign operations and sales, which pose additional risks.***

Sales to customers outside of North America accounted for approximately 60% of our consolidated net revenues for 2010, and we believe that export sales will remain a significant percentage of our revenue. U.S. export restrictions affect the types and specifications of products we can export. Additionally, to complete certain sales, U.S. laws may require us to obtain export licenses, and we cannot assure you that we will not experience difficulty in obtaining these licenses.

Like many energy service companies, we have operations in and sales into certain international areas, including parts of the Middle East, West Africa, Latin America, Asia Pacific and the Commonwealth of Independent States, that are subject to risks of war, political disruption (such as the recent political turmoil in Egypt), civil disturbance, political corruption, possible economic and legal sanctions (such as possible restrictions against countries that the U.S. government may deem to sponsor terrorism) and changes in global trade policies. Our sales or operations may become restricted or prohibited in any country in which the foregoing risks occur. In particular, the occurrence of any of these risks could result in the following events, which in turn, could materially and adversely impact our results of operations:

- disruption of oil and natural gas E&P activities;
- restriction of the movement and exchange of funds;
- inhibition of our ability to collect receivables;
- enactment of additional or stricter U.S. government or international sanctions;
- limitation of our access to markets for periods of time;
- expropriation and nationalization of assets of our company or those of our customers;
- political and economic instability, which may include armed conflict and civil disturbance;
- currency fluctuations, devaluations, and conversion restrictions;
- confiscatory taxation or other adverse tax policies; and
- governmental actions that may result in the deprivation of our contractual rights.

Our international operations and sales increase our exposure to other countries' restrictive tariff regulations, other import/export restrictions and customer credit risk.

In addition, we are subject to taxation in many jurisdictions and the final determination of our tax liabilities involves the interpretation of the statutes and requirements of taxing authorities worldwide. Our tax returns are subject to routine examination by taxing authorities, and these examinations may result in assessments of additional taxes, penalties and/or interest.

***Our operating results may fluctuate from period to period, and we are subject to seasonality factors.***

Our operating results are subject to fluctuations from period to period as a result of new product or service introductions, the timing of significant expenses in connection with customer orders, unrealized sales, levels of research and development activities in different periods, the product mix sold, and the seasonality of our business. Because many of our products feature a high sales price and are technologically complex, we generally have experienced long sales cycles for these products and historically incur significant expense at the beginning of these cycles for component parts and other inventory necessary to manufacture a product in anticipation of a future sale, which may not ultimately occur. In addition, the revenues from our sales can vary widely from period to period due to changes in customer requirements and demand. These factors can create fluctuations in our net revenues and results of operations from period to period. Variability in our overall gross margins for any period, which depend on the percentages of higher-margin and lower-margin products and services sold in that period, compounds these uncertainties. As a result, if net revenues or gross margins fall below expectations, our results of operations and financial condition will likely be adversely affected. Additionally, our business can be seasonal in nature, with strongest demand typically in the fourth calendar quarter of each year. Customer budgeting cycles at times result in higher spending activity levels by our customers at different points of the year. While the fourth quarter of 2010 was strong, the fourth quarter of 2009 was not as strong as seen historically because the typical discretionary spending that normally occurs during the fourth quarter was not realized.

Due to the relatively high sales price of many of our products and seismic data libraries and relatively low unit sales volume, our quarterly operating results have historically fluctuated from period to period due to the timing of orders and shipments and the mix of products and services sold. This uneven pattern makes financial predictions for any given period difficult, increases the risk of unanticipated variations in our quarterly results and financial condition, and places challenges on our inventory management. Delays caused by factors beyond our control, such as the granting of permits for seismic surveys by third parties, the effect from disasters such as the Deepwater Horizon incident in the Gulf of Mexico and the availability and equipping of marine vessels, can affect our Solutions segment's revenues from its processing and ISS services from period to period. Also, delays in ordering products or in shipping or delivering products in a given period could significantly affect our results of operations for that period. Fluctuations in our quarterly operating results may cause greater volatility in the market price of our common stock.

***We invest significant sums of money in acquiring and processing seismic data for our Solutions' multi-client data library.***

We invest significant amounts in acquiring and processing new seismic data to add to our Solutions' multi-client data library. A majority of these investments are funded by our customers, while the remainder is recovered through future data licensing fees. In 2010, we invested \$64.4 million in our multi-client data library. Our customers generally commit to licensing the data prior to our initiating a new data library acquisition program. However, the aggregate amounts of future licensing fees for this data are sometimes uncertain and depend on a variety of factors, including the market prices of oil and gas, customer demand for seismic data in the library, and the availability of similar data from competitors. For example, the Deepwater Horizon incident in the Gulf of Mexico in April 2010 adversely affected our library sales in the second quarter of 2010; likewise, it is very possible that our processing activities could be affected by the continued slow pace of exploration and development activity in the U.S. Gulf of Mexico.

By making these investments in acquiring and processing new seismic data for our Solutions' multi-client library, we are exposed to the following risks:

- We may not fully recover our costs of acquiring and processing seismic data through future sales. The ultimate amounts involved in these data sales are uncertain and depend on a variety of factors, many of which are beyond our control.
- The timing of these sales is unpredictable and can vary greatly from period to period. The costs of each survey are capitalized and then amortized as a percentage of sales and/or over the expected useful life of the data. This amortization will affect our earnings and, when combined with the sporadic nature of sales, will result in increased earnings volatility.
- Regulatory changes that affect companies' ability to drill, either generally or in a specific location where we have acquired seismic data, could materially adversely affect the value of the seismic data contained in our library. Technology changes could also make existing data sets obsolete. Additionally, each of our individual surveys has a limited book life based on its location and oil and gas companies' interest in prospecting for reserves in such location, so a particular survey may be subject to a significant decline in value beyond our initial estimates.
- The value of our multi-client data could be significantly adversely affected if any material adverse change occurs in the general prospects for oil and gas exploration, development and production activities.
- The cost estimates upon which we base our pre-commitments of funding could be wrong. The result could be losses that have a material adverse effect on our financial condition and results of operations. These pre-commitments of funding are subject to the creditworthiness of our clients. In the event that a client refuses or is unable to pay its commitment, we could incur a substantial loss on that project.
- As part of our asset-light strategy, we routinely charter vessels from third-party vendors to acquire seismic data for our multi-client business. As a result, our cost to acquire our multi-client data could significantly increase if vessel charter prices rise materially.

Any reduction in the market value of such data will require us to write down its recorded value, which could have a significant material adverse effect on our results of operations.

***Goodwill and intangible assets that we have recorded in connection with our acquisitions are subject to impairment evaluations and, as a result, we could be required to write-off additional goodwill and intangible assets, which may adversely affect our financial condition and results of operations.***

In accordance with Accounting Standard Codification ("ASC") Topic 350, "Goodwill and Other Intangible Assets" (ASC 350), we are required to compare the fair value of our goodwill and intangible assets (when certain impairment indicators under ASC 350 are present) to their carrying amount. If the fair value of such goodwill or intangible assets is less than its carrying value, an impairment loss is recorded to the extent that the fair value of these assets within the reporting units is less than their carrying value. In 2008, we recorded an impairment charge of \$252.2 million related to our goodwill and intangible assets and in 2009 we recorded an impairment charge of \$38.0 million related to our intangible assets. Any further reduction in or impairment of the value of our goodwill or other intangible assets will result in additional charges against our earnings, which could have a material adverse effect on our reported results of operations and financial position in future periods. At December 31, 2010, our goodwill and other intangible asset balances were \$51.3 million and \$20.3 million, respectively.

***Due to the international scope of our business activities, our results of operations may be significantly affected by currency fluctuations.***

We derive a significant portion of our consolidated net revenues from international sales, subjecting us to risks relating to fluctuations in currency exchange rates. Currency variations can adversely affect margins on sales of our products in countries outside of the United States and margins on sales of products that include

components obtained from suppliers located outside of the United States. Through our subsidiaries, we operate in a wide variety of jurisdictions, including the United Kingdom, China, Canada, the Netherlands, Brazil, Russia, the United Arab Emirates and other countries. Certain of these countries have experienced economic problems and uncertainties from time to time. To the extent that world events or economic conditions negatively affect our future sales to customers in these and other regions of the world, or the collectability of receivables, our future results of operations, liquidity and financial condition may be adversely affected. We currently require customers in certain higher risk countries to provide their own financing. In some cases, we have assisted our customers in organizing international financing and export-import credit guarantees provided by the United States government. We do not currently extend long-term credit through notes to companies in countries we consider to be too risky from a credit risk perspective.

A majority of our foreign net working capital is within the United Kingdom. The subsidiaries in the United Kingdom and in other countries receive their income and pay their expenses primarily in their local currencies. To the extent that transactions of these subsidiaries are settled in their local currencies, a devaluation of those currencies versus the U.S. dollar could reduce the contribution from these subsidiaries to our consolidated results of operations as reported in U.S. dollars. For financial reporting purposes, such depreciation will negatively affect our reported results of operations since earnings denominated in foreign currencies that are converted to U.S. dollars are stated at a decreased value. In addition, since we participate in competitive bids for sales of certain of our products and services that are denominated in U.S. dollars, a depreciation of the U.S. dollar against other currencies could harm our competitive position relative to other companies. While we have employed economic cash flow and fair value hedges designed to minimize the risks associated with these exchange rate fluctuations, the hedging activities may be ineffective or may not offset more than a portion of the adverse financial impact resulting from currency variations. Accordingly, we cannot assure you that fluctuations in the values of the currencies of countries in which we operate will not materially adversely affect our future results of operations.

***As a technology-focused company, we are continually exposed to risks related to complex, highly technical products and services.***

Our customers often require demanding specifications for performance and reliability of our products and services. Because many of our products are complex and often use unique advanced components, processes, technologies, and techniques, undetected errors and design and manufacturing flaws may occur. Even though we attempt to assure that our systems are always reliable in the field, the many technical variables related to their operations can cause a combination of factors that can, and have from time to time, caused performance and service issues with certain of our products. Product defects result in higher product service, warranty, and replacement costs and may affect our customer relationships and industry reputation, all of which may adversely impact our results of operations. Despite our testing and quality assurance programs, undetected errors may not be discovered until the product is purchased and used by a customer in a variety of field conditions. If our customers deploy our new products and they do not work correctly, our relationship with our customers may be materially and adversely affected.

As a result of our systems' advanced and complex nature, we expect to experience occasional operational issues from time to time. Generally, until our products have been tested in the field under a wide variety of operational conditions, we cannot be certain that performance and service problems will not arise. In that case, market acceptance of our new products could be delayed and our results of operations and financial condition could be adversely affected.

The businesses of our Solutions and Software segments, being more concentrated in software, processing services, and proprietary technologies, have also exposed us to various risks that these technologies typically encounter, including the following:

- future competition from more established companies entering the market;
- technology obsolescence;
- dependence upon continued growth of the market for seismic data processing;

- the rate of change in the markets for these segments' technology and services;
- research and development efforts not proving sufficient to keep up with changing market demands;
- dependence on third-party software for inclusion in these segments' products and services;
- misappropriation of these segments' technology by other companies;
- alleged or actual infringement of intellectual property rights that could result in substantial additional costs;
- difficulties inherent in forecasting sales for newly developed technologies or advancements in technologies;
- recruiting, training, and retaining technically skilled personnel that could increase the costs for these segments, or limit their growth; and
- the ability to maintain traditional margins for certain of their technology or services.

***We are exposed to risks relating to the effectiveness of our internal controls.***

Following the end of our third quarter of 2009, we discovered an error in revenue recognition of certain product revenues in connection with the delivery of a FireFly land seismic data acquisition system and related hardware and components in China, which we had recorded in revenues for the second quarter of 2009. On November 4, 2009, we announced that we were restating our unaudited consolidated financial statements as of and for the three and six month periods ended June 30, 2009, as a result of this error. We had concluded that, as of June 30, 2009, our internal control over financial reporting was not effective because this error in revenue recognition necessitating the restatement of our second quarter 2009 results of operations constituted a material weakness in our internal control over financial reporting. This material weakness was remediated as of December 31, 2009. A material weakness is a deficiency, or a combination of control deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis.

In addition, we may in the future identify further material weaknesses or significant deficiencies in our internal control over financial reporting. Although we have remediated the above material weakness, there can be no assurance that such controls will effectively prevent material misstatements in our consolidated financial statements in future periods. In addition, we may in the future identify further material weaknesses or significant deficiencies in our internal control over financial reporting, which could adversely impact the accuracy and timeliness of our future reporting and reports and filings we make with the SEC.

***We rely on highly skilled personnel in our businesses, and if we are unable to retain or motivate key personnel or hire qualified personnel, we may not be able to grow effectively.***

Our performance is largely dependent on the talents and efforts of highly skilled individuals. Our future success depends on our continuing ability to identify, hire, develop, motivate, and retain skilled personnel for all areas of our organization. We require highly skilled personnel to operate and provide technical services and support for our businesses. Competition for qualified personnel required for our data processing operations and our other segments' businesses has intensified in recent years. Our growth has presented challenges to us to recruit, train, and retain our employees while managing the impact of potential wage inflation and the lack of available qualified labor in some markets where we operate. A well-trained, motivated and adequately-staffed work force has a positive impact on our ability to attract and retain business. Our continued ability to compete effectively depends on our ability to attract new employees and to retain and motivate our existing employees.

***If we do not effectively manage our transition into new products and services, our revenues may suffer.***

Products and services for the seismic industry are characterized by rapid technological advances in hardware performance, software functionality and features, frequent introduction of new products and services, and improvement in price characteristics relative to product and service performance. Among the risks

associated with the introduction of new products and services are delays in development or manufacturing, variations in costs, delays in customer purchases or reductions in price of existing products in anticipation of new introductions, write-offs or write-downs of the carrying costs of inventory and raw materials associated with prior generation products, difficulty in predicting customer demand for new product and service offerings and effectively managing inventory levels so that they are in line with anticipated demand, risks associated with customer qualification, evaluation of new products, and the risk that new products may have quality or other defects or may not be supported adequately by application software. The introduction of new products and services by our competitors also may result in delays in customer purchases and difficulty in predicting customer demand. If we do not make an effective transition from existing products and services to future offerings, our revenues and margins may decline.

Furthermore, sales of our new products and services may replace sales, or result in discounting of some of our current product or service offerings, offsetting the benefit of a successful introduction. In addition, it may be difficult to ensure performance of new products and services in accordance with our revenue, margin, and cost estimations and to achieve operational efficiencies embedded in our estimates. Given the competitive nature of the seismic industry, if any of these risks materializes, future demand for our products and services, and our future results of operations, may suffer.

***Technological change in the seismic industry requires us to make substantial research and development expenditures.***

The markets for our products and services are characterized by changing technology and new product introductions. We must invest substantial capital to develop and maintain a leading edge in technology, with no assurance that we will receive an adequate rate of return on those investments. If we are unable to develop and produce successfully and timely new and enhanced products and services, we will be unable to compete in the future and our business, our results of operations and our financial condition will be materially and adversely affected.

***The loss of any significant customer could materially and adversely affect our results of operations and financial condition.***

We have traditionally relied on a relatively small number of significant customers. Consequently, our business is exposed to the risks related to customer concentration. No single customer represented 10% or more of our consolidated net revenues for 2010, 2009 and 2008; however, our top five customers in total represented approximately 28%, 29% and 30%, respectively, of our consolidated net revenues during those years. The loss of any of our significant customers or deterioration in our relations with any of them could materially and adversely affect our results of operations and financial condition.

Historically, a relatively small number of customers has accounted for the majority of our net revenues in any period. During the last ten years, our traditional seismic contractor customers have been rapidly consolidating, thereby consolidating the demand for our products and services. The loss of any of our significant customers to further consolidation could materially and adversely affect our results of operations and financial condition.

***Certain of our facilities could be damaged by hurricanes and other natural disasters, which could have an adverse effect on our results of operations and financial condition.***

Certain of our facilities are located in regions of the United States that are susceptible to damage from hurricanes and other weather events, and, during 2005, were impacted by hurricanes or other weather events. Our Systems segment leases 93,000-square feet of facilities located in Harahan, Louisiana, in the greater New Orleans metropolitan area. In late August 2005, we suspended operations at these facilities and evacuated and locked down the facilities in preparation for Hurricane Katrina. These facilities did not experience flooding or significant damage during or after the hurricane. However, because of employee evacuations, power failures and lack of related support services, utilities and infrastructure in the New Orleans area, we were unable to resume full operations at the facilities until late September 2005. In September 2008, we lost power and

related services for several days at our offices located in the Houston metropolitan area and in Harahan, Louisiana as a result of Hurricane Ike and Hurricane Gustav.

Future hurricanes or similar natural disasters that impact our facilities may negatively affect our financial position and operating results for those periods. These negative effects may include reduced production and product sales; costs associated with resuming production; reduced orders for our products from customers that were similarly affected by these events; lost market share; late deliveries; additional costs to purchase materials and supplies from outside suppliers; uninsured property losses; inadequate business interruption insurance and an inability to retain necessary staff. To the extent that climate change increases the severity of hurricanes and other weather events, as some have suggested, it could worsen the severity of these negative effects on our financial position and operating results.

***Climate change regulations or legislation could result in increased operating costs and reduced demand for the oil and gas our clients intend to produce.***

More stringent regulations and laws relating to climate change and greenhouse gases (“GHGs”) may be adopted in the future and could reduce the demand for our products and services. On December 15, 2009, the U.S. Environmental Protection Agency (the “EPA”) officially concluded that atmospheric concentrations of carbon dioxide, methane and certain other GHGs present an endangerment to public health and welfare because such gases are, according to the EPA, contributing to warming of the earth’s atmosphere and other climatic changes. Consistent with its findings, the EPA has proposed or adopted various regulations under the Clean Air Act to address GHGs. Among other things, the EPA is limiting emissions of greenhouse gases from new cars and light duty trucks beginning with the 2012 model year. When those mobile source standards took effect on January 2, 2011, GHGs became categorized as regulated air pollutants. This revised status could trigger a variety of other Clean Air Act requirements, including construction and operating permit requirements for industrial plants and other stationary sources.

In response to the Fiscal Year 2008 Consolidated Appropriations Act, the EPA also has published a final rule requiring the reporting of GHG emissions from specified large sources in the United States on an annual basis, beginning in 2011 for emissions occurring after January 1, 2010. In a final rule published on November 30, 2010, the EPA extended those reporting requirements to include onshore oil and natural gas production, processing, transmission, storage, and distribution facilities.

At the same time, the U.S. Congress has been considering a variety of new legislative proposals concerning GHGs. In June 2009, for example, the House of Representatives passed the American Clean Energy and Security Act of 2009, which, if it had been enacted, would have established an economy-wide cap on emissions of GHGs so as to reduce U.S. emissions over time by approximately 80%. As an alternative, some proponents of GHG controls have advocated mandating a national “clean energy” standard. In 2011, President Obama encouraged Congress to adopt a goal of generating 80% of U.S. electricity from “clean energy” by 2035 with credit for renewable and nuclear power and partial credit for clean coal and “efficient natural gas”; the President also proposed ending tax breaks for the oil industry. Because of the lack of any comprehensive federal legislative program expressly addressing GHGs, there currently is uncertainty as to how and when additional federal regulation of GHGs might take place and as to whether the EPA should continue with its existing regulations in the absence of more specific Congressional direction.

A number of states, individually and regionally, have implemented or are considering their own GHG regulatory programs. These initiatives have included so-called cap-and-trade programs, under which overall GHG emissions are limited and GHG emissions allowances are then allocated and sold, clean energy standards, and other regulatory requirements.

New climate change and related clean energy regulatory initiatives could result in our customers’ incurring material compliance costs, e.g., by being required to purchase or to surrender allowances for GHGs resulting from their operations, or adversely affect the marketability of the oil and natural gas that our customers produce. The impact of such future programs cannot be predicted, but we do not expect our operations to be affected any differently than other similarly situated domestic competitors.



***Increased regulation of hydraulic fracturing could result in reductions or delays in drilling and completing new oil and natural gas wells, which could adversely impact our revenues by decreasing the demand for our seismic acquisition services.***

Hydraulic fracturing is a process used by oil and gas exploration and production operators in the completion of certain oil and gas wells whereby water, sand and chemicals are injected under pressure into subsurface formations to stimulate gas and, to a lesser extent, oil production. Due to concerns that hydraulic fracturing may adversely affect drinking water supplies, the EPA recently announced a plan to conduct a comprehensive research study to investigate any potential adverse impact that hydraulic fracturing may have on water quality and public health. The initial study results are expected to be available in late 2012. The U.S. Department of the Interior also has announced plans to develop a new policy for hydraulic fracturing on public lands that would require the disclosure of chemicals used in the process. Aside from these federal initiatives, several states have moved to require disclosure of fracturing fluid components or otherwise to regulate their use more closely. In certain areas of the country, new drilling permits for hydraulic fracturing have been put on hold pending development of additional standards. Adoption of legislation or regulations placing restrictions on hydraulic fracturing activities could impose operational delays, increased operating costs and additional regulatory burdens on exploration and production operators, which could reduce their production of natural gas and, in turn, adversely affect our revenues and results of operations by decreasing the demand for our seismic data acquisition services.

***We have outsourcing arrangements with third parties to manufacture some of our products. If these third party suppliers fail to deliver quality products or components at reasonable prices on a timely basis, we may alienate some of our customers and our revenues, profitability, and cash flow may decline. Additionally, current global economic conditions could have a negative impact on our suppliers, causing a disruption in our vendor supplies. A disruption in vendor supplies may adversely affect our results of operations.***

Our manufacturing processes require a high volume of quality components. We have increased our use of contract manufacturers as an alternative to our own manufacturing of products. We have outsourced the manufacturing of our towed marine streamers, our redeployable ocean bottom cables, our MEMS components, and various components of VectorSeis Ocean. Certain components used by us are currently provided by only one supplier. If, in implementing any outsource initiative, we are unable to identify contract manufacturers willing to contract with us on competitive terms and to devote adequate resources to fulfill their obligations to us or if we do not properly manage these relationships, our existing customer relationships may suffer. In addition, by undertaking these activities, we run the risk that the reputation and competitiveness of our products and services may deteriorate as a result of the reduction of our control over quality and delivery schedules. We also may experience supply interruptions, cost escalations, and competitive disadvantages if our contract manufacturers fail to develop, implement, or maintain manufacturing methods appropriate for our products and customers.

Reliance on certain suppliers, as well as industry supply conditions, generally involves several risks, including the possibility of a shortage or a lack of availability of key components, increases in component costs and reduced control over delivery schedules. If any of these risks are realized, our revenues, profitability, and cash flows may decline. In addition, as we come to rely more heavily on contract manufacturers, we may have fewer personnel resources with expertise to manage problems that may arise from these third-party arrangements.

Additionally, our suppliers could be negatively impacted by current global economic conditions. If certain of our suppliers were to experience significant cash flow issues or become insolvent as a result of such conditions, it could result in a reduction or interruption in supplies to us or a significant increase in the price of such supplies and adversely impact our results of operations and cash flows.

Under some of our outsourcing arrangements, our manufacturing outsourcers purchase agreed-upon inventory levels to meet our forecasted demand. Our manufacturing plans and inventory levels are generally based on sales forecasts. If demand proves to be less than we originally forecasted and we cancel our

committed purchase orders, our outsourcers generally will have the right to require us to purchase inventory which they had purchased on our behalf. Should we be required to purchase inventory under these terms, we may be required to hold inventory that we may never utilize.

***Our operations, and the operations of our customers, are subject to numerous government regulations, which could adversely limit our operating flexibility.***

Our operations are subject to laws, regulations, government policies, and product certification requirements worldwide. Changes in such laws, regulations, policies or requirements could affect the demand for our products or result in the need to modify products, which may involve substantial costs or delays in sales and could have an adverse effect on our future operating results. Our export activities are also subject to extensive and evolving trade regulations. Certain countries are subject to restrictions, sanctions, and embargoes imposed by the United States government. These restrictions, sanctions, and embargoes also prohibit or limit us from participating in certain business activities in those countries. Our operations are subject to numerous local, state, and federal laws and regulations in the United States and in foreign jurisdictions concerning the containment and disposal of hazardous materials, the remediation of contaminated properties, and the protection of the environment. These laws have been changed frequently in the past, and there can be no assurance that future changes will not have a material adverse effect on us. In addition, our customers' operations are also significantly impacted by laws and regulations concerning the protection of the environment and endangered species. Consequently, changes in governmental regulations applicable to our customers may reduce demand for our products and services. To the extent that our customers' operations are disrupted by future laws and regulations, our business and results of operations may be materially and adversely affected.

***Our certificate of incorporation and bylaws, Delaware law, our stockholders rights plan, the terms of our Series D Preferred Stock and contractual requirements under our agreements with Fletcher and BGP contain provisions that could discourage another company from acquiring us.***

Provisions of our certificate of incorporation and bylaws, Delaware law, our stockholders rights plan, the terms of our Series D Preferred Stock, our agreement with Fletcher and our investor rights agreement with BGP may discourage, delay or prevent a merger or acquisition that our stockholders may consider favorable, including transactions in which you might otherwise receive a premium for shares of our common stock. These provisions include:

- authorizing the issuance of "blank check" preferred stock without any need for action by stockholders;
- providing for a dividend on our common stock, commonly referred to as a "poison pill," which can be triggered after a person or group acquires, obtains the right to acquire or commences a tender or exchange offer to acquire, 20% or more of our outstanding common stock;
- providing for a classified board of directors with staggered terms;
- requiring supermajority stockholder voting to effect certain amendments to our certificate of incorporation and by-laws;
- eliminating the ability of stockholders to call special meetings of stockholders;
- prohibiting stockholder action by written consent;
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted on by stockholders at stockholder meetings; and
- requiring an acquiring party to assume all of our obligations under our agreement with Fletcher and the terms of the Series D Preferred Stock set forth in our certificates of rights and designations for those series, including the dividend, liquidation, conversion, voting and share registration provisions.

In addition, the terms of our INOVA Geophysical joint venture with BGP and BGP's investment in our company contain a number of provisions, such as certain pre-emptive rights granted to BGP with respect to

certain future issuances of our stock, that could have the effect of discouraging, delaying or preventing a merger or acquisition of our company that our stockholders may otherwise consider to be favorable.

**Note:** The foregoing factors pursuant to the Private Securities Litigation Reform Act of 1995 should not be construed as exhaustive. In addition to the foregoing, we wish to refer readers to other factors discussed elsewhere in this report as well as other filings and reports with the SEC for a further discussion of risks and uncertainties that could cause actual results to differ materially from those contained in forward-looking statements. We undertake no obligation to publicly release the result of any revisions to any such forward-looking statements, which may be made to reflect the events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

**Item 1B. Unresolved Staff Comments**

None.

**Item 2. Properties**

Our principal operating facilities at December 31, 2010 were as follows:

| <u>Operating Facilities</u>                      | <u>Square Footage</u> | <u>Segment</u>                               |
|--|-----------------------|--|
| Houston, Texas . . . . .                         | 116,000               | Global Headquarters and Solutions            |
| Harahan, Louisiana . . . . .                     | 93,000                | Systems                                      |
| Lacombe, Louisiana . . . . .                     | 87,000                | Systems                                      |
| Stafford, Texas . . . . .                        | 41,000                | Systems                                      |
| Jebel Ali, Dubai, United Arab Emirates . . . . . | 33,000                | International Sales Headquarters and Systems |
| Denver, Colorado . . . . .                       | 29,000                | Solutions                                    |
| Voorschoten, The Netherlands . . . . .           | 29,000                | Systems                                      |
| Edinburgh, Scotland . . . . .                    | 9,000                 | Software                                     |
| Calgary, Canada . . . . .                        | <u>5,000</u>          | Solutions                                    |
|  | <u>442,000</u>        |  |

Each of these operating facilities is leased by us under a long-term lease agreement. These lease agreements have terms that expire ranging from 2011 to 2017. See Note 17 of *Notes to Consolidated Financial Statements*.

In addition, we lease offices in Cranleigh and Norwich, England; Aberdeen, Scotland; Calgary, Canada; Beijing, China; and Moscow, Russia to support our global sales force. We also lease offices for our seismic data processing centers in Egham, England; Port Harcourt, Nigeria; Luanda, Angola; Moscow, Russia; Cairo, Egypt; Villahermosa, Mexico; and in Port of Spain, Trinidad. Our executive headquarters (utilizing approximately 23,100 square feet) is located at 2105 CityWest Boulevard, Suite 400, Houston, Texas. The machinery, equipment, buildings, and other facilities owned and leased by us are considered by our management to be sufficiently maintained and adequate for our current operations.

**Item 3. Legal Proceedings**

**WesternGeco**

On June 12, 2009, WesternGeco L.L.C. (“WesternGeco”) filed a lawsuit against us in the United States District Court for the Southern District of Texas, Houston Division. In the lawsuit, styled *WesternGeco L.L.C. v. ION Geophysical Corporation*, WesternGeco alleges that we have infringed several United States patents regarding marine seismic streamer steering devices that are owned by WesternGeco. WesternGeco is seeking unspecified monetary damages and an injunction prohibiting us from making, using, selling, offering for sale or supplying any infringing products in the United States. Based on our review of the lawsuit filed by WesternGeco and the WesternGeco patents at issue, we believe that our products do not infringe any WesternGeco patents, that the claims asserted against us by WesternGeco are without merit and that the

ultimate outcome of the claims will not result in a material adverse effect on our financial condition or results of operations. We intend to defend the claims against us vigorously.

On June 16, 2009, we filed an answer and counterclaims against WesternGeco, in which we deny that we have infringed WesternGeco's patents and assert that the WesternGeco patents are invalid or unenforceable. We also asserted that WesternGeco's Q-Marine system, components and technology infringe upon our United States patent related to marine seismic streamer steering devices. We also assert that WesternGeco tortiously interfered with our relationship with our customers. In addition, we are claiming that the lawsuit by WesternGeco is an illegal attempt by WesternGeco to control and restrict competition in the market for marine seismic surveys performed using laterally steerable streamers. We are requesting various remedies and relief, including a declaration that the WesternGeco patents are invalid or unenforceable, an injunction prohibiting WesternGeco from making, using, selling, offering for sale or supplying any infringing products in the United States, a declaration that the WesternGeco patents should be co-owned by us, and an award of unspecified monetary damages.

In June 2010, WesternGeco filed a lawsuit against various subsidiaries and affiliates of Fugro N.V. ("Fugro"), a seismic contractor customer of the Company, accusing the defendants of infringing the same United States patents regarding marine seismic streamer steering devices by planning to use certain equipment purchased from us on a survey located outside of U.S. territorial waters. The court approved the consolidation of the Fugro case with our case. The defendants in the Fugro case have filed a motion to dismiss the lawsuit.

#### **Fletcher**

We are or have been involved in two lawsuits filed in Delaware involving Fletcher International, Ltd. ("Fletcher"), the holder of shares of our Series D Preferred Stock.

Under our February 2005 agreement with Fletcher, the aggregate number of shares of common stock issued or issuable to Fletcher upon conversion of the Series D Preferred Stock could not exceed a designated maximum number of shares (the "Maximum Number"), and such Maximum Number could be increased by Fletcher providing us with a 65-day notice of increase. In November 2008, Fletcher exercised its right to increase the "Maximum Number" from 7,669,434 shares to 9,669,434 shares. On September 15, 2009, Fletcher delivered a second notice to us, intending to increase the "Maximum Number" of shares of common stock issuable upon conversion of our Series D Preferred Stock from 9,669,434 shares to 11,669,434 shares. Our interpretation of the agreement with Fletcher was that Fletcher had the right to issue only one notice to increase the Maximum Number (which Fletcher had exercised in November 2008). On November 6, 2009, we filed an action in the Court of Chancery of the State of Delaware, styled *ION Geophysical Corporation v. Fletcher International, Ltd.*, seeking a declaration that, under the agreement, Fletcher was permitted to deliver only one notice to increase the Maximum Number and that its second notice was legally invalid. Fletcher filed an answer and counterclaim, seeking specific performance and reimbursement and indemnification for its costs and expenses that it claimed it was entitled to under the 2005 agreement. On November 5, 2010, the Court of Chancery issued its opinion in the matter, and held that Fletcher was entitled to deliver multiple notices to increase the Maximum Number of shares of common stock (but not beyond a total of 15,724,306 shares). The Court also ruled that we are not required to indemnify Fletcher for its fees, costs and expenses incurred in connection with the proceedings. On November 8, 2010, Fletcher sent us a notice to increase the Maximum Number of shares to 15,724,306 shares, effective January 12, 2011. Currently, Fletcher's remaining outstanding shares of Series D Preferred Stock are convertible into up to 6,065,075 shares of our common stock.

On November 25, 2009, Fletcher filed a lawsuit against us and certain of our directors in the Delaware Court of Chancery. In the lawsuit, styled *Fletcher International, Ltd. v. ION Geophysical Corporation, f/k/a Input/Output, Inc., ION International S.à r.l., James M. Lapeyre, Bruce S. Appelbaum, Theodore H. Elliott, Jr., Franklin Myers, S. James Nelson, Jr., Robert P. Peebler, John Seitz, G. Thomas Marsh And Nicholas G. Vlahakis*, Fletcher alleged, among other things, that we violated Fletcher's consent rights contained in the Series D Preferred Stock Certificates of Designation, by having ION Sàrl, an indirect wholly-owned subsidiary of ION Geophysical Corporation, issuing a convertible promissory note to the Bank of China in connection with the Bank of China bridge loan funded on October 27, 2009, and that the directors violated their fiduciary

duty to the company by allowing ION Sàrl to issue the convertible note without Fletcher's consent. Fletcher sought a court order requiring ION Sàrl to repay the \$10 million advanced to ION Sàrl under the bridge loan and unspecified monetary damages. On March 24, 2010, the presiding judge in the case denied Fletcher's request for the court order. In a Memorandum Opinion issued on May 28, 2010 in response to a motion for partial summary judgment, the judge dismissed all of Fletcher's claims against our named directors but also concluded that, because the bridge loan note issued by ION Sàrl was convertible into ION common stock, Fletcher had the right to consent to the issuance of the note and that we violated Fletcher's consent right by ION Sàrl issuing the note without Fletcher's consent. In December 2010, the presiding judge in the case recused himself from the case without explanation and a new presiding judge was appointed to the case. The holder of the convertible note issued by ION Sàrl never exercised its right to convert the note, and the note was paid in full in March 2010. We believe that the remaining claims asserted by Fletcher in the lawsuit are without merit. We further believe that the monetary damages suffered by Fletcher as a result of ION Sàrl issuing the bridge loan note without Fletcher's consent are nonexistent or nominal, and that the ultimate outcome of the lawsuit will not result in a material adverse effect on our financial condition or results of operations. We intend to defend the remaining claims against us in this lawsuit vigorously.

### **Greatbatch**

In 2002, we filed a lawsuit against operating subsidiaries of battery manufacturer Greatbatch, Inc., including its Electrochem division (collectively "Greatbatch"), in the 24th Judicial District Court for the Parish of Jefferson in the State of Louisiana. In the lawsuit, styled *Input/Output, Inc. and I/O Marine Systems, Inc. v. Wilson Greatbatch Technologies, Inc., Wilson Greatbatch, Ltd. d/b/a Electrochem Lithium Batteries, and WGL Intermediate Holdings, Inc., Civil Action No. 578-881, Division "A"*, we alleged that Greatbatch had fraudulently misappropriated our product designs and other trade secrets related to the batteries and battery pack used in our DigiBIRD® marine towed streamer vertical control device and used our confidential information to manufacture and market competing batteries and battery packs. After a trial, on October 1, 2009 the jury concluded that Greatbatch had committed fraud, violated the Louisiana Unfair Trade Practices Act and breached a trust and nondisclosure agreement between us and Greatbatch, and awarded us \$21.7 million in compensatory damages. A judgment was entered consistent with the jury verdict. In December 2010, we and Greatbatch settled the lawsuit, pursuant to which Greatbatch paid us \$25.0 million in full satisfaction of the judgment. Upon the cash receipt, we recorded a gain on legal settlement of \$24.5 million, net of fees paid to attorneys.

### **Sercel**

On January 29, 2010, the jury in a patent infringement lawsuit filed by us against seismic equipment provider Sercel, Inc. in the United States District Court for the Eastern District of Texas returned a verdict in our favor. In the lawsuit, styled *Input/Output, Inc. et al v. Sercel, Inc., (5-06-cv-00236)*, we alleged that Sercel's 408, 428 and SeaRay digital seismic sensor units infringe our United States Patent No. 5,852,242, which is incorporated in our VectorSeis sensor technology. Products that use our VectorSeis technology include the System Four, Scorpion, FireFly, and VectorSeis Ocean seismic acquisition systems. After a two-week trial, the jury concluded that Sercel infringed our patent and that our patent was valid, and the jury awarded us \$25.2 million in compensatory past damages. In response to post-verdict motions made the parties, on September 16, 2010 the presiding judge issued a series of rulings that (a) granted our motion for a permanent injunction to be issued prohibiting the manufacture, use or sale of the infringing Sercel products, (b) confirmed that our patent was valid, (c) confirmed that the jury's finding of infringement was supported by the evidence and (d) disallowed \$5.4 million of lost profits that were based on infringing products that were manufactured and delivered by Sercel outside of the U.S., but were offered for sale by Sercel in the U.S. and involved underlying orders and payments received by Sercel in the U.S. In addition, the judge concluded that the evidence supporting the jury's finding that we are entitled to be awarded \$9.0 million in lost profits associated with certain infringing pre-verdict marine sales by Sercel was too speculative and therefore disallowed that award of lost profits. As a result of the judge's ruling, we are now entitled to be awarded an additional amount of damages equal to a reasonable royalty on the infringing pre-verdict Sercel marine sales. After learning that Sercel continued to make sales of infringing products after the January 2010 jury verdict was rendered, we

filed motions with the court to seek additional compensatory damages for the post-verdict infringing sales and enhanced damages as a result of the willful nature of Sercel's post-verdict infringement. On February 16, 2011, the Court entered a final judgment and permanent injunction in the case. The final judgment awarded us \$10.7 million in damages, plus interest, and the permanent injunction prohibits Sercel and parties acting in concert with Sercel from making, using, offering to sell, selling, or importing in the United States (which includes territorial waters of the United States) Sercel's 408UL, 428XL and SeaRay digital sensor units, and all other products that are only colorably different from those products. The Court ordered that the additional damages to be paid by Sercel as a reasonable royalty on the infringing pre-verdict Sercel marine sales and the additional damages to be paid by Sercel resulting from post-verdict infringing sales be determined in a separate future proceeding. We have not recorded any amounts related to this gain contingency as of December 31, 2010.

**Other**

We have been named in various other lawsuits or threatened actions that are incidental to our ordinary business. Litigation is inherently unpredictable. Any claims against us, whether meritorious or not, could be time consuming, cause us to incur costs and expenses, require significant amounts of management time and result in the diversion of significant operational resources. The results of these lawsuits and actions cannot be predicted with certainty. We currently believe that the ultimate resolution of these matters will not have a material adverse impact on our financial condition, results of operations or liquidity.

**Item 4. (Removed and Reserved)**

**PART II**

**Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**

Our common stock trades on the New York Stock Exchange (NYSE) under the symbol "IO." The following table sets forth the high and low sales prices of the common stock for the periods indicated, as reported in NYSE composite tape transactions.

| <u>Period</u>                 | <u>Price Range</u> |            |
|-------------------------------|--------------------|------------|
|                               | <u>High</u>        | <u>Low</u> |
| Year ended December 31, 2010: |                    |            |
| Fourth Quarter . . . . .      | \$8.71             | \$4.71     |
| Third Quarter . . . . .       | 5.14               | 3.42       |
| Second Quarter . . . . .      | 6.35               | 3.48       |
| First Quarter . . . . .       | 6.90               | 4.26       |
| Year ended December 31, 2009: |                    |            |
| Fourth Quarter . . . . .      | \$6.56             | \$3.07     |
| Third Quarter . . . . .       | 3.76               | 1.88       |
| Second Quarter . . . . .      | 3.51               | 1.53       |
| First Quarter . . . . .       | 4.60               | 0.83       |

We have not historically paid, and do not intend to pay in the foreseeable future, cash dividends on our common stock. We presently intend to retain cash from operations for use in our business, with any future decision to pay cash dividends on our common stock dependent upon our growth, profitability, financial condition and other factors our board of directors consider relevant. In addition, the terms of our credit facility prohibit us from paying dividends on or repurchasing shares of our common stock without the prior consent of the lenders.

The terms of our credit facility also contain covenants that restrict us, subject to certain exceptions, from (i) paying cash dividends on our common stock and (ii) repurchasing and acquiring shares of our common

stock unless there is no event of default under our credit agreement and the amount of such repurchases in any year does not exceed an amount equal to (A) 25% of our consolidated net income for the prior fiscal year, less (B) the amount of any permitted cash dividends paid on our common stock during such year.

On December 31, 2010, there were 502 holders of record of our common stock.

During the three months ended December 31, 2010, we withheld and subsequently cancelled shares of our common stock to satisfy minimum statutory income tax withholding obligations on the vesting of restricted stock for employees. The date of cancellation, number of shares and average effective acquisition price per share, were as follows:

| <u>Period</u>                                | <u>(a)<br/>Total Number of<br/>Shares Acquired</u> | <u>(b)<br/>Average Price<br/>Paid Per Share</u> | <u>(c) Total Number of<br/>Shares Purchased as<br/>Part of Publicly<br/>Announced Plans or<br/>Program</u> | <u>(d) Maximum Number<br/>(or Approximate<br/>Dollar<br/>Value) of Shares<br/>That<br/>May Yet Be Purchased<br/>Under the Plans or<br/>Program</u> |
|--|--|---|--|--|
| October 1, 2010 to<br>October 31, 2010 . . . | —  | —   | Not applicable   | Not applicable   |
| November 1, 2010 to<br>November 30, 2010 . . | —  | —   | Not applicable   | Not applicable   |
| December 1, 2010 to<br>December 31, 2010 . . | <u>57,262</u>                                      | <u>\$7.66</u>                                   | Not applicable   | Not applicable   |
| Total . . . . .                              | <u>57,262</u>                                      | <u>\$7.66</u>                                   |  |  |

**Item 6. Selected Financial Data**

The selected consolidated financial data set forth below with respect to our consolidated statements of operations for 2010, 2009, 2008, 2007 and 2006, and with respect to our consolidated balance sheets at December 31, 2010, 2009, 2008, 2007 and 2006 have been derived from our audited consolidated financial statements.

Our results of operations and financial condition have been affected by acquisitions and dispositions, debt refinancings and impairments of assets during the periods presented, which affect the comparability of the financial information shown. In particular, our results of operations for 2010, 2009 and 2008 were impacted by the following items:

- The loss on disposition of our land division in 2010 totaling \$38.1 million;
- The equity in losses of INOVA Geophysical in 2010 totaling \$23.7 million;
- The gain on a legal settlement in 2010 totaling \$24.5 million;
- The fair value adjustments of the warrant in 2010 and 2009 totaling \$12.8 million and (\$29.4) million, respectively;
- The write-off of deferred financing charges, including amortization of non-cash debt discounts, totaling \$18.8 million and \$6.7 million, in 2010 and 2009, respectively;
- The impairment of our goodwill and intangible assets in 2009 and 2008 totaling \$38.0 million and \$252.3 million, respectively; and
- The beneficial conversion charge of \$68.8 million associated with our outstanding convertible preferred stock for 2008.

This information should not be considered as being indicative of future operations, and should be read in conjunction with Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and the notes thereto included elsewhere in this Form 10-K.

|   | Years Ended December 31,                  |                    |                    |                  |                  |
|---|---|--------------------|--------------------|------------------|------------------|
|   | 2010                                      | 2009               | 2008               | 2007             | 2006             |
|   | (In thousands, except for per share data) |                    |                    |                  |                  |
| <b>Statement of Operations Data:</b>                                      |   |                    |                    |                  |                  |
| Product revenues  | \$165,202                                 | \$ 237,664         | \$ 417,511         | \$537,691        | \$354,258        |
| Service revenues  | 279,120                                   | 182,117            | 262,012            | 175,420          | 149,298          |
| Net revenues  | 444,322                                   | 419,781            | 679,523            | 713,111          | 503,556          |
| Cost of products  | 94,658                                    | 165,923            | 289,795            | 386,849          | 252,647          |
| Cost of services  | 183,931                                   | 121,720            | 181,980            | 119,679          | 91,592           |
| Gross profit  | 165,733                                   | 132,138            | 207,748            | 206,583          | 159,317          |
| Operating expenses:   |   |                    |                    |                  |                  |
| Research, development and engineering                                     | 25,227                                    | 44,855             | 49,541             | 49,965           | 37,853           |
| Marketing and sales   | 30,405                                    | 34,945             | 47,854             | 43,877           | 40,651           |
| General and administrative  | 57,254                                    | 72,510             | 70,893             | 48,847           | 40,865           |
| Impairment of goodwill and intangible assets                              | —   | 38,044             | 252,283            | —                | —                |
| Total operating expenses  | 112,886                                   | 190,354            | 420,571            | 142,689          | 119,369          |
| Income (loss) from operations   | 52,847                                    | (58,216)           | (212,823)          | 63,894           | 39,948           |
| Interest expense, net   | (30,770)                                  | (33,950)           | (11,284)           | (4,435)          | (3,730)          |
| Loss on disposition of land division                                      | (38,115)                                  | —                  | —                  | —                | —                |
| Fair value adjustment of warrant  | 12,788                                    | (29,401)           | —                  | —                | —                |
| Equity in losses of INOVA Geophysical                                     | (23,724)                                  | —                  | —                  | —                | —                |
| Gain on legal settlement  | 24,500                                    | —                  | —                  | —                | —                |
| Impairment of cost method investments                                     | (7,650)                                   | (4,454)            | —                  | —                | —                |
| Other income (expense)  | 228                                       | (4,023)            | 4,200              | (3,992)          | (2,161)          |
| Income (loss) before income taxes and change in accounting principle      | (9,896)                                   | (130,044)          | (219,907)          | 55,467           | 34,057           |
| Income tax expense (benefit)  | 26,942                                    | (19,985)           | 1,131              | 12,823           | 5,114            |
| Net income (loss) before change in accounting principle                   | (36,838)                                  | (110,059)          | (221,038)          | 42,644           | 28,943           |
| Cumulative effect of change in accounting principle                       | —   | —                  | —                  | —                | 398              |
| Net income (loss)   | (36,838)                                  | (110,059)          | (221,038)          | 42,644           | 29,341           |
| Preferred stock dividends and accretion                                   | 1,936                                     | 3,500              | 3,889              | 2,388            | 2,429            |
| Preferred stock beneficial conversion charge                              | —   | —                  | 68,786             | —                | —                |
| Net income (loss) applicable to common shares                             | <u>\$ (38,774)</u>                        | <u>\$(113,559)</u> | <u>\$(293,713)</u> | <u>\$ 40,256</u> | <u>\$ 26,912</u> |
| Net income (loss) per basic share before change in accounting principle   | \$ (0.27)                                 | \$ (1.03)          | \$ (3.06)          | \$ 0.49          | \$ 0.33          |
| Cumulative effect of change in accounting principle                       | —   | —                  | —                  | —                | 0.01             |
| Net income (loss) per basic share   | <u>\$ (0.27)</u>                          | <u>\$ (1.03)</u>   | <u>\$ (3.06)</u>   | <u>\$ 0.49</u>   | <u>\$ 0.34</u>   |
| Net income (loss) per diluted share before change in accounting principle | \$ (0.27)                                 | \$ (1.03)          | \$ (3.06)          | \$ 0.45          | \$ 0.32          |
| Cumulative effect of change in accounting principle                       | —   | —                  | —                  | —                | 0.01             |
| Net income (loss) per diluted share                                       | <u>\$ (0.27)</u>                          | <u>\$ (1.03)</u>   | <u>\$ (3.06)</u>   | <u>\$ 0.45</u>   | <u>\$ 0.33</u>   |
| Weighted average number of common shares outstanding                      | 144,278                                   | 110,516            | 95,887             | 81,941           | 79,497           |
| Weighted average number of diluted shares outstanding                     | 144,278                                   | 110,516            | 95,887             | 97,321           | 95,182           |



|   | Years Ended December 31,                  |             |            |           |           |
|---|---|-------------|------------|-----------|-----------|
|   | 2010                                      | 2009        | 2008       | 2007      | 2006      |
|   | (In thousands, except for per share data) |             |            |           |           |
| <b>Balance Sheet Data (end of year):</b>                                  |   |             |            |           |           |
| Working capital(1) . . . . .  | \$179,266                                 | \$ (59,018) | \$ 267,155 | \$220,522 | \$170,342 |
| Total assets . . . . .  | 624,442                                   | 748,186     | 861,431    | 709,149   | 655,136   |
| Notes payable and long-term debt . . . . .                                | 108,660                                   | 277,381     | 291,909    | 24,713    | 77,540    |
| Stockholders' equity . . . . .  | 380,447                                   | 282,468     | 325,070    | 476,240   | 369,668   |
| <b>Other Data:</b>  |   |             |            |           |           |
| Capital expenditures . . . . .  | \$ 7,372                                  | \$ 2,966    | \$ 17,539  | \$ 11,375 | \$ 13,704 |
| Investment in multi-client library . . . . .                              | 64,426                                    | 89,635      | 110,362    | 64,279    | 39,087    |
| Depreciation and amortization (other than multi-client library) . . . . . | 24,795                                    | 47,911      | 33,052     | 26,767    | 22,036    |
| Amortization of multi-client library . . . . .                            | 85,940                                    | 48,449      | 80,532     | 37,662    | 25,011    |

(1) The negative working capital amount shown above as of December 31, 2009 was the result of the re-classification of the majority of our then outstanding long-term debt as current and as a result of the fair value of a warrant associated with our prior bridge financing arrangements.

**Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

*Note: The following should be read in conjunction with our Consolidated Financial Statements and related Notes to Consolidated Financial Statements that appear elsewhere in this Annual Report on Form 10-K. References to "Notes" in the discussion below refer to the numbered Notes to Consolidated Financial Statements.*

**Executive Summary**

***Our Business***

We are a leading provider of geophysical technology, services, and solutions for the global oil and gas industry, offering advanced acquisition equipment, software and planning and seismic processing services to the global energy industry. Our product and service offerings allow exploration and production ("E&P") operators to obtain higher resolution images of the subsurface to reduce the risk of exploration and reservoir development, and to enable seismic contractors to acquire geophysical data more efficiently.

We serve customers in all major energy producing regions of the world from strategically located offices in 19 cities on five continents. In March 2010, we contributed most of our land seismic equipment business to a joint venture we formed with BGP Inc., China National Petroleum Corporation ("BGP"), a wholly-owned oil field service subsidiary of China National Petroleum Corporation ("CNPC"). The resulting joint venture company, organized under the laws of the People's Republic of China, is named INOVA Geophysical Equipment Limited ("INOVA Geophysical"). We believe that this joint venture will provide us the opportunity to further extend the geographic scope of our business through the sales and service facilities of BGP, especially in Africa, the Middle East, China and Southeast Asia.

Our products and services include the following:

- Land seismic data acquisition equipment (principally through our 49% ownership in INOVA Geophysical),
- Marine seismic data acquisition equipment,
- Navigation, command & control and data management software products,
- Planning services for survey design and optimization,
- Seismic data processing and reservoir imaging services, and
- Seismic data libraries.

We operate our company through four business segments: Systems, Software, Solutions and our INOVA Geophysical joint venture.

- Systems — towed streamer and redeployable ocean bottom cable seismic data acquisition systems and shipboard recorders, streamer positioning and control systems and energy sources (such as air guns and air gun controllers) and analog geophone sensors.
- Software — software systems and related services for navigation and data management involving towed marine streamer and seabed operations.
- Solutions — advanced seismic data processing services for marine and land environments, seismic data libraries, and Integrated Seismic Solutions (“ISS”) services.
- INOVA Geophysical — cable-based, cableless and radio-controlled seismic data acquisition systems, digital sensors, vibroseis vehicles (i.e. vibrator trucks) and source controllers for detonator and energy sources business lines.

### *Economic Conditions*

Demand for our products and services is cyclical and substantially dependent upon activity levels in the oil and gas industry, particularly our customers’ willingness and ability to expend their capital for oil and natural gas exploration and development projects. This demand is highly sensitive to current and expected future oil and natural gas prices. The volatility of oil and natural gas prices in recent years had resulted in sharply curtailed demand for oil and gas exploration activities in North America and other regions. Oil prices increased to record levels during the second quarter of 2008, but, in conjunction with the global recession, sharply declined, falling to approximately \$35 per barrel during early 2009. Since then, crude oil prices have recovered to within a range of approximately \$85 to \$100 per barrel by early 2011. Natural gas prices followed a similar, recession-induced downturn. After peaking at \$13.31 MMBtu in July 2008, Henry Hub natural gas prices fell by more than 50%. Unlike the recovery in oil prices, U.S. natural gas prices have remained depressed due to the excess supply of natural gas in the North American market.

Our seismic contractor customers and the E&P companies that are users of our products, services and technology generally reduced their capital spending levels in 2009 and 2010. Additionally, with the overall market decline, the market focus shifted from the acquisition of new seismic data to utilizing and reprocessing previously acquired seismic data. However, we saw increased levels of capital spending related to E&P activity during the second half of 2010. The number of rigs drilling for oil in North America is approaching record levels with U.S. rig counts increasing by approximately 600 year over year. Over the past decade, a majority of all new oil and gas reserves discovered worldwide were located offshore and we believe that offshore E&P activity will continue to grow in an effort to meet global energy demands. Meanwhile, interest in oil shale opportunities is increasing and developments in the technology to locate and extract oil shale reserves are progressing. Almost 60% of new U.S. onshore natural gas production is now coming from the shale gas plays which exhibit first year decline rates of 65% to 85%. We expect that exploration and production expenditures will continue to recover to the extent E&P companies and seismic contractors continue to see recovery in activity levels related to their business. The land seismic equipment business, particularly INOVA Geophysical’s business in North America and Russia, continues to experience softness. However, our other businesses delivered positive results in 2010, particularly in the third and fourth quarters, and we anticipate that this improvement will continue into 2011. During the fourth quarter, we experienced a significant increase in sales from our data libraries from a diverse range of geographic regions, including East and West Africa, Brazil and the Arctic regions, primarily due to increased capital expenditures by our E&P customers. New venture revenues also improved year over year, primarily related to the completion of the acquisition phase of our projects in the Arctic region during our third quarter. Our data processing and software businesses (with the software business revenues expressed in terms of its local currency, British pounds sterling) generated record levels of revenues in 2009 and again in 2010. Also, the marine side of our systems business delivered 2010 revenues consistent with the prior year primarily due to sales of towed streamer products to BGP and other customers.

We are seeing improvements in demand and believe that our industry's long-term prospects remain favorable because of the decreasing number of new discoveries of significant oil and gas reserves. We believe that technologies that add a competitive advantage through cost reductions or improvements in productivity will continue to be valued in our marketplace. We expect that our new technologies such as DigiFIN™ and Orca®, and INOVA Geophysical's FireFly® will continue to attract interest from our customers because those technologies are designed to deliver improvements in image quality within more productive delivery systems.

In October 2010, the Minerals Management Service (now known as the Bureau of Ocean Energy Management, Regulation and Enforcement, or "BOEMRE") of the U.S. Department of the Interior announced the end of the six-month moratorium on certain drilling activities in the U.S. Gulf of Mexico. The six-month moratorium was the result of the Deepwater Horizon drilling rig explosion and fire in April 2010, which resulted in the release of millions of gallons of hydrocarbons into the Gulf of Mexico. The BOEMRE has issued new safety and environmental guidelines and regulations for offshore operations, is expected to issue new safety or environmental guidelines or regulations for offshore drilling, and may take further steps that could increase the costs of exploration and production or reduce the area of operations and result in permitting delays. The permitting process for exploration and development activities in the U.S. Gulf of Mexico has slowed considerably, resulting in very limited levels of activity there. These new safety and environmental regulations will expose our customers, and could expose us, to significant additional costs and liabilities.

Although it is difficult to predict the ultimate impact of the slowdown in exploration and development activities in the U.S. Gulf of Mexico or the new safety and environmental guidelines and regulations, a prolonged suspension of drilling activity in the Gulf of Mexico and other areas and increased liability for companies operating in this sector could adversely affect many of our customers who operate in the Gulf of Mexico. This could, in turn, adversely affect our business, results of operations and financial condition, particularly regarding sales of our marine seismic equipment and Solutions' seismic survey and data processing activities covering locations in the Gulf of Mexico. While seismic data processing activity in our Solutions segment has continued to remain strong during 2010, we cannot currently predict whether these events will adversely affect our future data processing services business, and if so, the extent and length of time that any such adverse impact will be felt.

### Key Financial Metrics

The following table provides an overview of key financial metrics for our company as a whole and our four business segments during the twelve months ended December 31, 2010, compared to those for 2009 and 2008 (in thousands, except per share amounts):

|   | Years Ended December 31, |                     |                     |
|---|--------------------------|---------------------|---------------------|
|   | 2010                     | 2009                | 2008                |
| Net revenues:                                 |                          |                     |                     |
| Systems:                                      |                          |                     |                     |
| Towed Streamer                                | \$ 83,567                | \$ 83,398           | \$ 123,785          |
| Ocean Bottom                                  | 1,876                    | 4,948               | 42,483              |
| Other   | 28,783                   | 39,943              | 72,657              |
| Total   | <u>\$114,226</u>         | <u>\$ 128,289</u>   | <u>\$ 238,925</u>   |
| Software:                                     |                          |                     |                     |
| Software Systems                              | \$ 34,465                | \$ 31,601           | \$ 34,308           |
| Services                                      | 2,166                    | 2,132               | 2,932               |
| Total   | <u>\$ 36,631</u>         | <u>\$ 33,733</u>    | <u>\$ 37,240</u>    |
| Solutions:                                    |                          |                     |                     |
| Data Processing                               | \$107,997                | \$ 82,330           | \$ 59,550           |
| New Venture                                   | 81,293                   | 71,135              | 116,706             |
| Data Library                                  | 87,664                   | 26,520              | 82,824              |
| Total   | <u>\$276,954</u>         | <u>\$ 179,985</u>   | <u>\$ 259,080</u>   |
| Legacy Land Systems (INOVA)                   | <u>\$ 16,511</u>         | <u>\$ 77,774</u>    | <u>\$ 144,278</u>   |
| Total   | <u>\$444,322</u>         | <u>\$ 419,781</u>   | <u>\$ 679,523</u>   |
| Gross profit:                                 |                          |                     |                     |
| Systems                                       | \$ 48,557                | \$ 52,934           | \$ 90,795           |
| Software                                      | 24,356                   | 21,998              | 24,656              |
| Solutions                                     | 93,804                   | 59,844              | 78,245              |
| Legacy Land Systems (INOVA)                   | (984)                    | (2,638)             | 14,048              |
| Total   | <u>\$165,733</u>         | <u>\$ 132,138</u>   | <u>\$ 207,744</u>   |
| Gross margin:                                 |                          |                     |                     |
| Systems                                       | 43%                      | 41%                 | 38%                 |
| Software                                      | 66%                      | 65%                 | 66%                 |
| Solutions                                     | 34%                      | 33%                 | 30%                 |
| Legacy Land Systems (INOVA)                   | (6)%                     | (3)%                | 10%                 |
| Total   | <u>37%</u>               | <u>31%</u>          | <u>31%</u>          |
| Income (loss) from operations:                |                          |                     |                     |
| Systems                                       | \$ 27,749                | \$ 31,209           | \$ 62,157           |
| Software                                      | 21,936                   | 19,970              | 22,298              |
| Solutions                                     | 60,632                   | 27,746              | 40,534              |
| Legacy Land Systems (INOVA)                   | (9,623)                  | (40,881)            | (23,430)            |
| Corporate and other                           | (47,847)                 | (58,216)            | (62,099)            |
| Impairment of goodwill and intangible assets  | —                        | (38,044)            | (252,283)           |
| Total   | <u>\$ 52,847</u>         | <u>\$ (58,216)</u>  | <u>\$ (212,823)</u> |
| Net income (loss) applicable to common shares | <u>\$ (38,774)</u>       | <u>\$ (113,559)</u> | <u>\$ (293,713)</u> |
| Basic net income (loss) per common share      | <u>\$ (0.27)</u>         | <u>\$ (1.03)</u>    | <u>\$ (3.06)</u>    |
| Diluted net income per (loss) common share    | <u>\$ (0.27)</u>         | <u>\$ (1.03)</u>    | <u>\$ (3.06)</u>    |

We intend that the following discussion of our financial condition and results of operations will provide information that will assist in understanding our consolidated financial statements, the changes in certain key items in those financial statements from year to year, and the primary factors that accounted for those changes. Our results of operations for 2010 have been materially affected by the disposition of our land businesses in forming INOVA Geophysical on March 25, 2010, which affects the comparability of certain of the financial information contained in this Form 10-K. In order to assist with the comparability to our historical results of operations, certain of the financial tables and discussion below exclude the results of operations of our disposed legacy land equipment segment (which we refer to below as our "Legacy Land Systems" segment).

We account for our 49% interest in INOVA Geophysical as an equity method investment and record our share of earnings of INOVA Geophysical on a one fiscal quarter lag basis. Thus, for 2010, we recognized our share of losses in INOVA Geophysical of approximately \$23.7 million which represents joint venture activity for the period from March 26, 2010 through September 30, 2010.

We expect to file an amendment to this Annual Report on Form 10-K on Form 10-K/A within six months after December 31, 2010 in order to file separate consolidated financial statements for INOVA Geophysical for the fiscal year ended December 31, 2010, as required under SEC Regulation S-X.

For a discussion of factors that could impact our future operating results and financial condition, see Item 1A. "Risk Factors" above.

## Results of Operations

### *Year Ended December 31, 2010 Compared to Year Ended December 31, 2009*

|   | Year Ended<br>December 31, 2010 |                  | Year Ended<br>December 31, 2009 |                  |
|---|---------------------------------|------------------|---------------------------------|------------------|
|   | As Reported                     | As Adjusted*     | As Reported                     | As Adjusted*     |
|   | (In thousands)                  |                  |                                 |                  |
| Net revenues . . . . .                          | \$444,322                       | \$427,811        | \$419,781                       | \$342,007        |
| Cost of sales . . . . .                         | <u>278,589</u>                  | <u>261,094</u>   | <u>287,643</u>                  | <u>207,231</u>   |
| Gross profit . . . . .                          | 165,733                         | 166,717          | 132,138                         | 134,776          |
| Gross margin . . . . .                          | 37%                             | 39%              | 31%                             | 39%              |
| Operating expenses:                             |                                 |                  |                                 |                  |
| Research, development and engineering . . . . . | 25,227                          | 21,046           | 44,855                          | 23,496           |
| Marketing and sales . . . . .                   | 30,405                          | 28,846           | 34,945                          | 29,363           |
| General and administrative . . . . .            | 57,254                          | 54,355           | 72,510                          | 61,208           |
| Impairment of intangible assets . . . . .       | —                               | —                | 38,044                          | —                |
| Total operating expenses . . . . .              | <u>112,886</u>                  | <u>104,247</u>   | <u>190,354</u>                  | <u>114,067</u>   |
| Income (loss) from operations . . . . .         | <u>\$ 52,847</u>                | <u>\$ 62,470</u> | <u>\$ (58,216)</u>              | <u>\$ 20,709</u> |

\* Excluding Legacy Land Systems (INOVA).

Our overall total net revenues of \$444.3 million for 2010 increased \$24.5 million, or 6%, compared to total net revenues for 2009. Excluding Legacy Land Systems (INOVA), total net revenues increased \$85.8 million, or 25%, for the same comparative period. Our overall gross profit percentage for 2010 was 39%, as adjusted, comparable to 2009, as adjusted. Total operating expenses as a percentage of net revenues for 2010 and 2009 were, respectively, 24% and 33%, as adjusted. During 2010, we recorded income from operations of \$62.5 million, as adjusted, compared to \$20.7 million, as adjusted, during 2009.

### *Net Revenues, Gross Profits and Gross Margins (excluding Legacy Land Systems)*

*Systems* — Net revenues for 2010 decreased by \$14.1 million to \$114.2 million, compared to \$128.3 million for 2009. This decrease was driven primarily by lower geophone string sales as a result of continued

softness in land seismic activity. Gross profit for 2010 decreased by \$4.3 million to \$48.6 million, representing a 43% gross margin, compared to \$52.9 million, representing a 41% gross margin, for 2009. The increase in gross margins in our Systems segment was primarily due to changes in product mix, with greater sales of marine towed streamer products, which have generally experienced higher margins compared to our other Systems products.

*Software* — Net revenues for 2010 increased by \$2.9 million, or 9%, to \$36.6 million, compared to \$33.7 million for 2009. The increase was primarily due to the continued increased demand for our Orca software systems products. The increase in U.S. Dollars was partially offset by the effect of foreign currency exchange rate fluctuations. Expressed in British pounds sterling (the local currency), net revenues increased by £2.3 million, or 11%. Gross profit increased by \$2.4 million to \$24.4 million compared to \$22.0 million for 2009, while gross margins of 66% remained fairly consistent with prior year margins.

*Solutions* — Net revenues for 2010 increased by \$97.0 million, to \$277.0 million, compared to \$180.0 million for 2009. This increase was primarily due to greater seismic data library sales, particularly during the fourth quarter of 2010, driven by higher capital expenditures from our E&P customers. This increase in data library sales was from many regions across the world, including East and West Africa, Brazil and the Arctic. Our data processing services group delivered record revenues in 2010 while new venture revenues increased primarily due to successful completion of data acquisition for our Arctic programs in the third quarter. Gross profit increased by \$34.0 million to \$93.8 million, or a 34% gross margin, compared to \$59.8 million, or a 33% gross margin, for 2009.

#### ***Operating Expenses (excluding Legacy Land Systems)***

*Research, Development and Engineering* — Research, development and engineering expense was \$21.0 million, as adjusted, or 5% of net revenues, for 2010, a decrease of \$2.5 million compared to \$23.5 million, as adjusted, or 7% of net revenues, for the corresponding period of 2009. This decrease in research and development expense was due to decreased salary and payroll expenses related to our reduced headcount, lower professional fees related to our previously implemented cost reduction measures, and lower supply and equipment costs due to the focus on our cost reduction measures. We continue to strategically invest in our next generation of seismic data acquisition products and services, and we expect this investment will continue in the future.

*Marketing and Sales* — Marketing and sales expense of \$28.8 million, as adjusted, or 7% of net revenues, for 2010 decreased \$0.6 million compared to \$29.4 million, as adjusted, or 9% of net revenues, for the corresponding period of 2009. Even though our 2010 revenues, as adjusted, increased 25%, our 2010 marketing and sales expenses remained flat compared to the prior year due in part to our previously implemented cost reduction measures from 2009.

*General and Administrative* — General and administrative expenses of \$54.4 million, as adjusted, for 2010 decreased \$6.8 million compared to \$61.2 million, as adjusted, for the corresponding period of 2009. General and administrative expenses as a percentage of net revenues for 2010 and 2009 were 13% and 18%, respectively. A portion of this decrease in general and administrative expense was due to a \$3.3 million stock-based compensation expense (with respect to an out-of-period item) recorded in 2009, related to adjustments resulting from certain differences between estimated and actual forfeitures of stock-based compensation awards. The remainder of the decrease was due to lower salary and payroll expenses related to our reduced headcount and by lower bad debt expense compared to the prior year.

#### ***Non-operating Items***

*Interest Expense, net* — Interest expense, net, of \$30.8 million for 2010 decreased \$3.2 million compared to \$34.0 million for 2009. Our interest expense in 2010 included the accretion of approximately \$8.7 million of non-cash debt discount (fully amortized in the first quarter of 2010) associated with two convertible promissory notes payable to Bank of China, New York Branch, that we had executed in October 2009 and a write-off of \$10.1 million of deferred financing charges related to our debt refinancing transactions during the first quarter of 2010. After excluding these two non-cash items, our 2010 interest expense, net, was

\$12.0 million for the year. Because of our March 2010 debt refinancing transactions, we expect that our interest expense will be significantly lower in 2011 than we experienced in 2010 or 2009. For additional information, please refer to “— *Liquidity and Capital Resources — Sources of Capital*” below.

*Loss on Disposition of Land Division* — Due to the formation of INOVA Geophysical, we deconsolidated certain land equipment assets and liabilities from our consolidated financial statements, and recognized a net loss on disposition. The majority of the loss (\$21.2 million) recognized from this transaction related to accumulated foreign currency translation adjustments (effect of exchange rates) of our foreign subsidiaries, mainly in Canada. For additional information, please refer to Note 2 “— *Formation of INOVA Geophysical and Related Financing Transactions.*”

*Fair Value Adjustment of Warrant* — In October 2009, ION issued to BGP a warrant (the “Warrant”). BGP elected not to exercise the Warrant and, on March 25, 2010, BGP terminated the Warrant and surrendered it to ION. Prior to its termination, the Warrant was required to be accounted for as a liability at its fair value. During the fourth quarter of 2009, we recorded a negative non-cash fair value adjustment of \$29.4 million, reflecting the increase in fair value of the Warrant from its issuance through December 31, 2009. During the first quarter of 2010, we recorded a positive non-cash fair value adjustment of \$12.8 million, reflecting the decrease in the fair value of the Warrant from January 1, 2010 through March 25, 2010. For additional information, please refer to Note 2 “— *Formation of INOVA Geophysical and Related Financing Transactions.*”

*Equity in Losses of INOVA Geophysical* — We account for our 49% interest in INOVA Geophysical as an equity method investment and record our share of earnings of INOVA Geophysical on a one fiscal quarter lag basis. Thus, our share of INOVA Geophysical’s loss for the period from March 26, 2010 to September 30, 2010 is included in our financial results for 2010. For 2010, we recorded approximately \$23.7 million representing our 49% share of equity in losses of INOVA Geophysical. Included in the \$23.7 million is \$9.5 million that represents our share of a write-down of excess inventory by INOVA Geophysical. The land operations business continues to be significantly impacted by the economic slow-down, particularly in North America and Russia. These businesses are starting to see an increase in interest and tender activities by its customers, but we do not expect this increase in activity to have any significant impact on INOVA Geophysical’s results of operations in 2011.

*Gain on Legal Settlement* — In 2010, we recorded a gain related to cash received from our legal settlement with Greatbatch, Inc. For additional information, please refer to Note 19 “— *Legal Matters.*”

*Impairment of Cost Method Investments* — In 2010, we recorded a non-cash write-down of \$7.6 million related to an other-than-temporary impairment of our investment in RXT shares. For additional information, please refer to Note 9 “— *Cost Method Investments.*”

*Other Income (Expense)* — Other income for 2010 was \$0.2 million compared to other expense of (\$4.0) million for 2009. This difference primarily related to changes in foreign currency exchange rates associated with our operations in the United Kingdom.

*Income Tax Expense (Benefit)* — Income tax expense for 2010 was \$26.9 million compared to a tax benefit of (\$20.0) million for 2009. Income tax expense for 2010, included \$16.3 million of expense related to the transactions involved in the formation of INOVA Geophysical as well as the establishment of \$11.0 million of valuation allowance related to our share of INOVA Geophysical’s 2010 net loss and the write-down of our investment in RXT. Also included in income tax expense for 2010 was \$3.9 million of benefit related to alternative minimum tax. We continue to maintain a valuation allowance for a significant portion of our U.S. federal net deferred tax assets. In the event our expectations of future operating results change, an additional valuation allowance may be required to be established on our existing unreserved net U.S. deferred tax assets, which total \$7.2 million at December 31, 2010. Our effective tax rates for 2010 and 2009 were 272.2% (provision on a loss) and 15.4% (benefit on a loss), respectively. The change in our effective tax rate for 2010 was due primarily to the transactions involved in the formation of the INOVA Geophysical, the establishment of valuation allowances and changes in the distribution of earnings between U.S. and foreign

jurisdictions, partially offset by recognition of a benefit related to alternative minimum tax. Excluding the impact of these transactions, our effective tax rate would have been 14.5% (provision on income) for 2010.

*Preferred Stock Dividends* — The preferred stock dividend relates to our Series D Preferred Stock. Quarterly dividends must be paid in cash. Dividends are paid at a rate equal to the greater of (i) 5.0% per annum or (ii) the three month LIBOR rate on the last day of the immediately preceding calendar quarter plus 2.5% per annum. The Series D Preferred Stock dividend rate was 5.0% at *December 31, 2010*. The total amount of dividends paid on our preferred stock in 2010 was less than in 2009 due to the conversion of 43,000 shares of preferred stock into 9,659,231 shares of common stock in April 2010.

***Year Ended December 31, 2009 Compared to Year Ended December 31, 2008***

|  | Year Ended<br>December 31, 2009 |                         | Year Ended<br>December 31, 2008 |                           |
|--|---------------------------------|-------------------------|---------------------------------|---------------------------|
|  | As Reported                     | As Adjusted*            | As Reported                     | As Adjusted*              |
|  | (In thousands)                  |                         |                                 |                           |
| Net revenues . . . . .                                 | \$419,781                       | \$342,007               | \$ 679,523                      | \$535,245                 |
| Cost of sales . . . . .                                | <u>287,643</u>                  | <u>207,231</u>          | <u>471,775</u>                  | <u>341,545</u>            |
| Gross profit . . . . .                                 | 132,138                         | 134,776                 | 207,748                         | 193,700                   |
| Gross margin . . . . .                                 | 31%                             | 39%                     | 31%                             | 36%                       |
| Operating expenses:                                    |                                 |                         |                                 |                           |
| Research, development and engineering . . . . .        | 44,855                          | 23,496                  | 49,541                          | 25,498                    |
| Marketing and sales . . . . .                          | 34,945                          | 29,363                  | 47,854                          | 41,961                    |
| General and administrative . . . . .                   | 72,510                          | 61,208                  | 70,893                          | 63,351                    |
| Impairment of goodwill and intangible assets . . . . . | <u>38,044</u>                   | <u>—</u>                | <u>252,283</u>                  | <u>86,910</u>             |
| Total operating expenses . . . . .                     | <u>190,354</u>                  | <u>114,067</u>          | <u>420,571</u>                  | <u>217,720</u>            |
| Income (loss) from operations . . . . .                | <u><u>\$ (58,216)</u></u>       | <u><u>\$ 20,709</u></u> | <u><u>\$ (212,823)</u></u>      | <u><u>\$ (24,020)</u></u> |

\* Excluding Legacy Land Systems (INOVA).

Our overall total net revenues of \$419.8 million for 2009 decreased \$259.7 million, or 38%, compared to total net revenues for 2008 as the global recession and decline in oil and gas prices slowed demand for our products and services. Excluding Legacy Land Systems (INOVA), total net revenues decreased \$193.2 million, or 36%, for the same comparative period. Our overall gross profit percentage for 2009 was 39%, as adjusted, compared to 36% for 2008, as adjusted. Total operating expenses, excluding the impairment of goodwill and intangible assets, as a percentage of net revenues for 2009 and 2008 were, respectively, 33% and 24%, as adjusted. During 2009, we recorded income from operations of \$20.7 million, compared to a loss of \$24.0 million, as adjusted, during 2008.

***Net Revenues, Gross Profits and Gross Margins (excluding Legacy Land Systems)***

*Systems* — Net revenues for 2009 decreased by \$110.6 million to \$128.3 million, compared to \$238.9 million for 2008. This decrease was seen across most of our Systems product lines, most notably in our marine streamer positioning products, our land geophone products and our VectorSeis Ocean (VSO) ocean-bottom system product line. The decline in our marine streamer positioning products was due to the delays in the scheduled completion and commissioning of new marine vessels to be introduced into the market, which would otherwise have been outfitted with our marine products. The decrease in our land geophone products was due to lower sales volumes resulting from the continued land seismic market decline, which greatly impacted our geophone business. The decrease in our VSO revenues was due to deliveries in 2008 of VSO System 4 and System 5, which were not duplicated in 2009. This decrease was partially offset by increased sales of our DigiFIN streamer control systems, compared to 2008 levels. Gross profit decreased by \$37.9 million to \$52.9 million, representing a 41% gross margin, compared to \$90.8 million, representing a 38% gross margin, during 2008. The increase in gross margins in our Systems segment was mainly due to changes in the



product mix, principally attributable to a decrease of \$37.5 million in VSO revenues in 2009 compared to 2008. Sales of our VSO systems have generally experienced lower margins compared to our other marine products.

*Software* — Net revenues for 2009 decreased by \$3.5 million to \$33.7 million, compared to \$37.2 million for 2008. The decrease was due entirely to the effect of foreign currency exchange rate fluctuations. Expressed in British pounds sterling (the local currency), net revenues actually increased by £1.2 million, which was principally due to increased sales of our Orca software product. Gross profit decreased by \$2.7 million to \$22.0 million compared to \$24.7 million during 2008, while gross margins of 65% remained fairly consistent with prior year margins.

*Solutions* — Net revenues for 2009 decreased by \$79.1 million, to \$180.0 million, compared to \$259.1 million for 2008. The results for 2009 reflected decreases in sales from our seismic data library, most notably in the offshore Africa and India regions, and decreased revenues from new multi-client seismic surveys. These decreases were due to decreased spending by our customers as a result of reduced demand caused by the global recession. With the overall market decline, the market focus shifted from the acquisition of new seismic data to utilizing and reprocessing previously acquired seismic data. This shift was evidenced by the decreases in our seismic data library sales and revenues from new multi-client seismic surveys; however, these decreases were partially offset by increases in data processing revenues. Gross profit decreased by \$18.4 million to \$59.8 million, representing a 33% gross margin, compared to \$78.2 million, representing a 30% gross margin, during 2008. The increase in gross margins for our Solutions segment was mainly driven by the increased revenues from our higher-margin data processing services compared to revenues from these services for the prior year. This increase was partially offset by lower gross margins in our multi-client data library sales, which were due to the impact of the straight-line multi-client data library amortization rates, combined with lower revenues from sales from that data library.

#### ***Operating Expenses (excluding Legacy Land Systems)***

*Research, Development and Engineering* — Research, development and engineering expense was \$23.5 million, as adjusted, or 7% of net revenues, for 2009, a decrease of \$2.0 million compared to \$25.5 million, as adjusted, or 5% of net revenues, for 2008. This decrease in research and development expense was due primarily to decreased salary and payroll expenses related to our reduced headcount, partially offset by increased professional fees relating to current projects.

*Marketing and Sales* — Marketing and sales expense of \$29.4 million, as adjusted, or 9% of net revenues, for 2009 decreased \$12.6 million compared to \$42.0 million, as adjusted, or 8% of net revenues, for 2008. This decrease in our marketing and sales expenditures reflected decreased salary and payroll expenses related to reduced headcount, a decrease in travel expenses as part of our cost reduction measures, and a decrease in conventions, exhibits, advertising and office expenses related to cost reduction measures.

*General and Administrative* — General and administrative expenses of \$61.2 million, as adjusted, for 2009 decreased \$2.2 million compared to \$63.4 million, as adjusted, for the corresponding period of 2008. General and administrative expenses as a percentage of net revenues for 2009 and 2008 were 18% and 12%, respectively. A portion of this decrease in general and administrative expense was due to decreased professional legal fees, travel expenses and general office expenses related to cost reduction measures partially offset by \$3.3 million of stock-based compensation expense included in 2009 (with respect to an out-of-period item) related to adjustments resulting from certain differences between estimated and actual forfeitures of stock-based compensation awards.

*Impairment of Goodwill and Intangible Assets* — After excluding the impairments of goodwill and intangible assets related to Legacy Land Systems (INOVA), we had an impairment of goodwill of \$86.9 million related to our Solutions reporting unit in 2008.

## ***Non-operating Items***

*Interest Expense, net* — Interest expense, net, of \$34.0 million for 2009 increased \$22.7 million compared to \$11.3 million for the corresponding period 2008. The increase was due to the higher levels of outstanding indebtedness and the secured equipment financing transaction that occurred during the second and third quarters of 2009 combined with increased revolver borrowings of \$118.0 million and higher prevailing average interest rates in 2009 compared to 2008. Also, during 2009, we amortized to interest expense \$6.7 million of a non-cash debt discount associated with the convertible notes issued to Bank of China in October 2009.

*Fair Value Adjustment of Warrant* — We were required to account for separately and adjust to fair value the Warrant we issued to BGP in October 2009. During the fourth quarter of 2009, we recorded a negative non-cash fair value adjustment of \$29.4 million, reflecting the increase in fair value of the Warrant from its issuance through December 31, 2009. For additional information, please refer to Note 2 “— *Formation of INOVA Geophysical and Related Financing Transactions.*”

*Impairment of Cost Method Investment* — At December 31, 2009, we evaluated our cost method investments for potential impairments. Based upon our evaluation and given the current market conditions related to our investment in Colibrys, Ltd., we determined that the investment was fully impaired and recorded an impairment charge of \$4.5 million.

*Other Income (Expense)* — Other expense for 2009 was (\$4.0) million compared to other income of \$4.2 million for 2008. The other expense for 2009 mainly relates to higher foreign currency exchange losses that primarily resulted from our operations in the United Kingdom and Canada.

*Income Tax (Benefit) Expense* — Income tax benefit for 2009 was (\$20.0) million compared to \$1.1 million of tax expense for 2008. The increase in tax benefits during 2009 primarily relates to reduced consolidated income from operations. We continued to maintain a valuation allowance for a significant portion of our U.S. net deferred tax assets. Our effective tax rate for 2009 was 15.4% as compared to (0.5%) for the similar period during 2008. The increase in our effective tax rate related primarily to the 2008 impairment of goodwill, which has no tax benefit.

*Preferred Stock Dividends* — The preferred stock dividend relates to our Series D Preferred Stock. Quarterly dividends must be paid in cash. Dividends are paid at a rate equal to the greater of (i) 5.0% per annum or (ii) the three month LIBOR rate on the last day of the immediately preceding calendar quarter plus 2.5% per annum. The Series D Preferred Stock dividend rate was 5.0% at December 31, 2009.

## **Liquidity and Capital Resources**

### ***Sources of Capital***

Our cash requirements include our working capital requirements, and cash required for our debt service payments, dividend payments on our preferred stock, seismic data acquisitions and capital expenditures. As of December 31, 2010, we had working capital of \$179.3 million, which included \$84.4 million of cash on hand. Working capital requirements are primarily driven by our continued investment in our multi-client seismic data library (\$64.4 million in fiscal 2010) and, to a lesser extent, our inventory purchase obligations. At December 31, 2010, our outstanding inventory purchase obligations were \$22.0 million. Also, our headcount has traditionally been a significant driver of our working capital needs. Because a significant portion of our business is involved in the planning, processing and interpretation of seismic data services, one of our largest investments is in our employees, which involves cash expenditures for their salaries, bonuses, payroll taxes and related compensation expenses. Our working capital requirements may change from time to time depending upon many factors, including our operating results and adjustments in our operating plan required in response to industry conditions, competition, acquisition opportunities and unexpected events. In recent years, our primary sources of funds have been cash flows generated from our operations, our existing cash balances, debt and equity issuances and borrowings under our revolving credit and term loan facilities (see “— *Revolving Line of Credit and Term Loan Facility*” below)

At December 31, 2010, our principal outstanding credit facility included:

- A revolving line of credit sub-facility providing for borrowings of up to \$100.0 million (no borrowings were outstanding as of that date); and
- A \$103.3 million remaining principal amount of a term loan sub-facility.

*Revolving Line of Credit and Term Loan Facility* — On March 25, 2010, we, our Luxembourg subsidiary, ION International S.à r.l. (“ION Sàrl”), and certain of our other U.S. and foreign subsidiaries entered into a new credit facility (the “Credit Facility”). The terms of the Credit Facility are set forth in a credit agreement dated March 25, 2010 (the “Credit Agreement”), by and among us, ION Sàrl and China Merchants Bank Co., Ltd., New York Branch (“CMB”), as administrative agent and lender. Our obligations under the Credit Facility are guaranteed by certain of our material U.S. subsidiaries and the obligations of ION Sàrl under the Credit Facility are guaranteed by certain of our material U.S. and foreign subsidiaries, in each case that are parties to the Credit Agreement.

The Credit Facility replaces our previous syndicated credit facility under an Amended and Restated Credit Agreement dated as of July 3, 2008, as it had been subsequently amended numerous times (the “Prior Facility”). The terms and conditions of the Credit Facility are similar in many respects to the terms and conditions under the Prior Facility. The Credit Facility provides us with a revolving line of credit of up to \$100.0 million in borrowings (including borrowings for letters of credit), and refinanced our outstanding term loan under the Prior Facility with a new term loan in the original principal amount of \$106.3 million. The Credit Facility, like the Prior Facility, permits direct borrowings by ION Sàrl for use by our foreign subsidiaries.

Under the Credit Facility, up to \$75.0 million is available for revolving line of credit borrowings by us, and up to \$60.0 million (or its equivalent in foreign currencies) is available for revolving line of credit borrowings by ION Sàrl, but the total amounts borrowed may not exceed \$100.0 million. Borrowings under the Credit Facility are not subject to a borrowing base. As of December 31, 2010, and February 18, 2011, we had no indebtedness outstanding under the revolving line of credit.

Revolving credit borrowings under the Credit Facility may be utilized to fund the working capital needs of ION and our subsidiaries, to finance acquisitions and investments and for general corporate purposes. In addition, the Credit Facility includes a \$35.0 million sub-limit for the issuance of documentary and stand-by letters of credit.

The revolving credit indebtedness and term loan indebtedness under the Credit Facility are each scheduled to mature on March 24, 2015. The \$106.3 million original principal amount under the term loan is subject to scheduled quarterly amortization payments of \$1.0 million per quarter until the maturity date, with the remaining unpaid principal amount of the term loan due upon the maturity date. The indebtedness under the Credit Facility may sooner mature on a date that is 18 months after the earlier of (i) any dissolution of INOVA Geophysical, or (ii) the administrative agent determining in good faith that INOVA Geophysical is unable to perform its obligations under an additional guarantee it has provided under the Credit Facility, which is described below.

The interest rate per annum on borrowings under the Credit Facility will be, at our option:

- An alternate base rate equal to the sum of (i) the greatest of (a) the prime rate of CMB, (b) a federal funds effective rate plus 0.50%, or (c) an adjusted LIBOR-based rate plus 1.0%, and (ii) an applicable interest margin of 2.5%; or
- For eurodollar borrowings and borrowings in Euros, Pounds Sterling or Canadian Dollars, the sum of (i) an adjusted LIBOR-based rate, and (ii) an applicable interest margin of 3.5%.

As of December 31, 2010, the \$103.3 million in outstanding term loan indebtedness under the Credit Facility accrues interest at a rate of 3.8% rate per annum.

The parties had originally contemplated that INOVA Geophysical would be an additional guarantor or provider of credit support under the Credit Agreement. However, due to the time required to obtain necessary

Chinese governmental approvals for such credit support from INOVA Geophysical, the Credit Agreement instead required BGP to enter into an agreement to guarantee the indebtedness under the Credit Facility, which INOVA Geophysical's guarantee would replace when the applicable governmental approvals were obtained. We entered into a credit support agreement with BGP whereby ION agreed to indemnify BGP for losses sustained by BGP that arose out of or were a result of the enforcement of BGP's guarantee. In June 2010, the applicable governmental approvals were obtained and BGP was then released from its guarantee obligations and these obligations were assumed by INOVA Geophysical as originally contemplated under the Credit Agreement. In addition, ION's credit support agreement with BGP was terminated.

Our obligations and the guarantee obligations of the U.S. guarantors are secured by a first-priority security interest in 100% of the stock of all U.S. guarantors and 65% of the stock of certain first-tier foreign subsidiaries and by substantially all other assets of ION and the U.S. guarantors. The obligations of ION Sarl and the foreign guarantors are secured by a first-priority security interest in 100% of the stock of the foreign guarantors and the U.S. guarantors and substantially all other assets of the foreign guarantors, the U.S. guarantors and ION.

The agreements governing the Credit Facility contain covenants that restrict the borrowers, the guarantors and their subsidiaries, subject to certain exceptions, from:

- Incurring additional indebtedness (including capital lease obligations), granting or incurring additional liens on our properties, pledging shares of our subsidiaries, entering into certain merger or other change-in-control transactions, entering into transactions with our affiliates, making certain sales or other dispositions of assets, making certain investments, acquiring other businesses and entering into sale-leaseback transactions with respect to our properties;
- Paying cash dividends on our common stock; and
- Repurchasing and acquiring our capital stock, unless there is no event of default under the Credit Agreement and the amount of such repurchases does not exceed an amount equal to (i) 25% of our consolidated net income for the prior fiscal year, less (ii) the amount of any cash dividends paid on our common stock.

The Credit Facility requires compliance with certain financial covenants, including requirements commencing on June 30, 2011 and for each fiscal quarter thereafter for ION and its U.S. subsidiaries to:

- Maintain a minimum fixed charge coverage ratio in an amount equal to at least 1.125 to 1;
- Not exceed a maximum leverage ratio of 3.25 to 1; and
- Maintain a minimum tangible net worth of at least 60% of ION's tangible net worth as of March 31, 2010, as defined.

The fixed charge coverage ratio is defined as the ratio of (i) our consolidated EBITDA less cash income tax expense and non-financed capital expenditures, to (ii) the sum of scheduled payments of lease payments and payments of principal indebtedness, interest expense actually paid and cash dividends, in each case for the four consecutive fiscal quarters most recently ended. The leverage ratio is defined as the ratio of (x) total funded consolidated debt, capital lease obligations and issued letters of credit (net of cash collateral) to (y) our consolidated EBITDA for the four consecutive fiscal quarters most recently ended. Upon commencement of the financial covenants on June 30, 2011, we expect to be in compliance and remain in compliance throughout the remainder of 2011.

The Credit Agreement contains customary event of default provisions similar to those contained in the credit agreement for the Prior Facility (including a "change of control" event affecting us), the occurrence of which could lead to an acceleration of ION's obligations under the Credit Facility. The Credit Agreement also provides that certain acts of bankruptcy, insolvency or liquidation of INOVA Geophysical or BGP would constitute additional events of default under the Credit Facility.

*Interest Rate Caps* — We use derivative financial instruments to manage our exposure to the interest rate risks related to the variable rate debt under our term loan indebtedness. We do not use derivatives for trading

or speculative purposes and only enter into contracts with major financial institutions based on their credit rating and other factors.

In August of 2010, we entered into an interest rate cap agreement and purchased interest rate caps having an initial notional amount of \$103.3 million with a three-month average LIBOR cap of 2.0%. If and when the three-month average LIBOR rate exceeds 2.0%, the LIBOR portion of interest owed by us would be effectively capped at 2.0%. This initial notional amount was set to equal the projected outstanding balance under our term loan facility at December 31, 2010. The notional amount was then set so as not to exceed the outstanding balance of our term loan facility over the period through March 29, 2013. We purchased these interest rate caps for an amount equal to approximately \$0.4 million. We designated the interest rate caps as cash flow hedges. See further discussion regarding these interest rate caps at Note 13 — *Notes Payable, Long-term Debt, Lease Obligations and Interest Rate Caps.*”

*Cumulative Convertible Preferred Stock* — During 2005, we entered into an Agreement dated February 15, 2005 with Fletcher (this Agreement, as amended to the date hereof, is referred to as the “Fletcher Agreement”) and issued to Fletcher 30,000 shares of our Series D-1 Preferred Stock in a privately-negotiated transaction, receiving \$29.8 million in net proceeds. The Fletcher Agreement also provided to Fletcher an option to purchase up to an additional 40,000 shares of additional series of preferred stock from time to time, with each series having a conversion price that would be equal to 122% of an average daily volume-weighted market price of our common stock over a trailing period of days at the time of issuance of that series. In 2007 and 2008, Fletcher exercised this option and purchased 5,000 shares of Series D-2 Preferred Stock for \$5.0 million (in December 2007) and the remaining 35,000 shares of Series D-3 Preferred Stock for \$35.0 million (in February 2008). Fletcher remains the sole holder of all of our outstanding shares of Series D Preferred Stock. Dividends on the shares of Series D Preferred Stock must be paid in cash.

Under the Fletcher Agreement, if a 20-day volume-weighted average trading price per share of our common stock fell below \$4.4517 (the “Minimum Price”), we were required to deliver a notice (the “Reset Notice”) to Fletcher. On November 28, 2008, the 20-day volume-weighted average trading price per share of our common stock on the New York Stock Exchange for the previous 20 trading days was calculated to be \$4.328, and we delivered the Reset Notice to Fletcher in accordance with the terms of the Fletcher Agreement. In the Reset Notice, we elected to reset the conversion prices for the Series D Preferred Stock to the Minimum Price (\$4.4517 per share), and Fletcher’s redemption rights were terminated. The adjusted conversion price resulting from this election was effective on November 28, 2008.

In addition, under the Fletcher Agreement, the aggregate number of shares of common stock issued or issuable to Fletcher upon conversion or redemption of, or as dividends paid on, the Series D Preferred Stock could not exceed a designated maximum number of shares (the “Maximum Number”), and such Maximum Number could be increased by Fletcher providing us with a 65-day notice of increase, but under no circumstance could the total number of shares of common stock issued or issuable to Fletcher with respect to the Series D Preferred Stock ever exceed 15,724,306 shares. The Fletcher Agreement had designated 7,669,434 shares as the original Maximum Number. In November 2008, Fletcher delivered a notice to us to increase the Maximum Number to 9,669,434 shares, effective February 1, 2009. On September 15, 2009, Fletcher delivered a second notice to us, intending to increase the “Maximum Number” of shares of common stock issuable upon conversion of our Series D Preferred Stock from 9,669,434 shares to 11,669,434 shares, to become effective on November 19, 2009. Our interpretation of the agreement with Fletcher was that Fletcher had the right to issue only one notice to increase the Maximum Number (which right Fletcher had exercised in November 2008). On November 6, 2009, we filed an action in the Court of Chancery of the State of Delaware seeking a declaration that, under the Fletcher Agreement, Fletcher is permitted to deliver only one notice to increase the Maximum Number and that its second notice is legally invalid. On November 5, 2010, the Court of Chancery issued its opinion in the matter, and held that Fletcher was entitled to deliver multiple notices to increase the Maximum Number of shares of common stock (but not beyond a total of 15,724,306 shares). On November 8, 2010, Fletcher delivered a notice to us to increase the Maximum Number to the full 15,724,306 shares, effective January 12, 2011.

On April 8, 2010, Fletcher converted 8,000 of its shares of Series D-1 Cumulative Convertible Preferred Stock, and all of the outstanding 35,000 shares of Series D-3 Cumulative Convertible Preferred Stock, into a total of 9,659,231 shares of our common stock. Fletcher continues to own 22,000 shares of Series D-1 Cumulative Convertible Preferred Stock and 5,000 shares of Series D-2 Cumulative Convertible Preferred Stock. As a result of the above ruling by the Court of Chancery, under the terms of the Fletcher Agreement, Fletcher's remaining 27,000 shares of Series D Preferred Stock are convertible into a total of up to 6,065,075 shares of our common stock.

The conversion prices and number of shares of common stock to be acquired upon conversion are also subject to customary anti-dilution adjustments. Converting the shares of Series D Preferred Stock at one time could result in significant dilution to our stockholders that could limit our ability to raise additional capital. Certain rights and obligations of Fletcher and our company pertaining to the Series D Preferred Stock are currently the subject of pending litigation in the Chancery Court of the State of Delaware. See Item 3. "Legal Proceedings" and Item 1A. "Risk Factors".

### **Meeting our Liquidity Requirements**

As of December 31, 2010, our total outstanding indebtedness (including capital lease obligations) was approximately \$108.7 million, consisting of approximately \$103.3 million outstanding under the term loan, \$3.7 million relating to our facility lease obligation and \$1.7 million of capital leases. The repayment in full in March 2010 of the previous \$101.6 million term loan, the \$118.0 million in revolving indebtedness under our former credit facility and the \$35.0 million in outstanding indebtedness under an amended and restated subordinated promissory note instrument delivered in connection with our 2008 acquisition of ARAM Systems Ltd., plus the assumption by INOVA Geophysical of our \$18.4 million (as of March 25, 2010) secured equipment lease financing indebtedness owed to an affiliate of ICON Capital Inc. ("ICON"), represented a significant de-leveraging of our balance sheet and the repayment of the majority of our short-term debt. As of December 31, 2010, we had no amounts drawn on our revolving line of credit under our Credit Facility, and had approximately \$84.4 million of cash on hand.

For 2010, total capital expenditures, including investments in our multi-client data library, were \$71.8 million, and we are projecting capital expenditures for the year 2011 to be between \$100 million to \$120 million. Of the total projected 2011 capital expenditures, we are estimating that approximately \$90 million to \$110 million will be spent on investments in our multi-client data library, but we are anticipating that most of these investments will be underwritten by our customers. To the extent our customers' commitments do not reach an acceptable level of pre-funding, the amount of our anticipated investment in these data libraries could be significantly less.

### **Cash Flow from Operations**

We have historically financed our operations from internally generated cash and funds from equity and debt financings. Cash and cash equivalents were \$84.4 million at December 31, 2010, compared to \$16.2 million at December 31, 2009. Net cash provided by operating activities was \$133.4 million for 2010, compared to \$52.0 million for 2009. The increase in our cash flows from operations was due in part to the increase in our income from operations for 2010 compared to our loss from operations for 2009. Also positively impacting our cash flows was a legal settlement of \$24.5 million cash collected in the fourth quarter. Further positively impacting our cash provided by operations was our cash collections in 2010 related to increased sales of data libraries during the fourth quarter; the investment in these data libraries had been made prior to 2010.

Cash and cash equivalents were \$16.2 million at December 31, 2009, a decrease of \$19.0 million compared to December 31, 2008. Net cash provided by operating activities was \$52.0 million for 2009, compared to \$111.7 million for 2008. The decrease in our cash flows provided by operations was due in part to the decrease in revenues and our results of operations for 2009 compared to our results for 2008. The decline in our revenues, combined with an increase in our receivables collection efforts, resulted in reductions

in our account receivables and unbilled receivables balances. Also, during 2009, we made significant payments to our vendors related to our outstanding inventory purchase obligations.

#### ***Cash Flow from Investing Activities***

Net cash flow provided by investing activities was \$27.5 million for 2010, compared to a net use of cash for investing activities of \$91.6 million for 2009. The principal source of cash in our investing activities during 2010 was \$99.8 million in net proceeds received by us from BGP in exchange for BGP's purchase from us of a 51% equity interest in INOVA Geophysical. This source of cash was partially offset by \$64.4 million of continued investments in our multi-client data library.

Net cash flow used in investing activities was \$91.6 million for 2009, compared to \$354.6 million for 2008. The net cash flow used for investing activities during 2009 were primarily related to a \$89.6 million investment in our multi-client data library and \$3.0 million of equipment and rental equipment purchases.

#### ***Cash Flow from Financing Activities***

Net cash flow used in financing activities was \$92.7 million for 2010, compared to \$19.7 million of net cash flow provided by financing activities for 2009. The net cash flow used in financing activities during 2010 was primarily related to net repayments on our prior revolving credit facility of \$89.4 million and payments on our notes payable and long-term debt of \$145.6 million. This cash outflow was partially offset by proceeds of \$38.0 million from the issuance of shares of our common stock to BGP in March 2010 and net proceeds of \$105.7 million related to the funding of the term loan under the Credit Facility. We also paid \$1.9 million in cash dividends on our outstanding Series D Preferred Stock in 2010.

Net cash flow provided by financing activities was \$19.7 million for 2009, compared to \$244.3 million for 2008. The net cash flow provided by financing activities during 2009 primarily consisted of \$52.0 million in net borrowings under our revolving credit facility, net proceeds from the ICON secured rental equipment financing transaction of \$19.2 million, and the net proceeds of \$38.2 million from a private placement of our common stock in June 2009. This cash inflow was partially offset by scheduled principal payments on our term loan under our Prior Facility, the prepayment of the principal balance on the Jefferies bridge loan indebtedness and payments under our other notes payable and capital lease obligations all totaling \$81.5 million. Additionally, we paid \$3.5 million in cash dividends on our outstanding Series D-1, Series D-2 and Series D-3 Preferred Stock and \$4.6 million in financing costs related to our debt transactions and amendments to our debt facilities during 2009.

#### ***Inflation and Seasonality***

Inflation in recent years has not had a material effect on our costs of goods or labor, or the prices for our products or services. Traditionally, our business has been seasonal, with strongest demand in the fourth quarter of our fiscal year. The fourth quarter of 2009 was not as strong as seen historically because the typical discretionary spending that normally occurs during the fourth quarter was not realized. However, we saw increased demand in the fourth quarter of 2010 driven by increased capital expenditures from our E&P customers, which was more consistent with our historical seasonality.

## Future Contractual Obligations

The following table sets forth estimates of future payments of our consolidated contractual obligations, as of December 31, 2010 (in thousands):

| <u>Contractual Obligations</u>                                     | <u>Total</u>     | <u>Less than 1 Year</u> | <u>1-3 Years</u> | <u>3-5 Years</u> | <u>More than 5 Years</u> |
|--|------------------|-------------------------|------------------|------------------|--------------------------|
| Notes payable and long-term debt . . . .                           | \$106,907        | \$ 4,610                | \$ 9,546         | \$92,751         | \$ —                     |
| Interest on notes payable and long-term debt obligations . . . . . | 16,395           | 4,264                   | 7,829            | 4,302            | —                        |
| Equipment capital lease obligations . . .                          | 1,753            | 1,463                   | 290              | —                | —                        |
| Operating leases . . . . .   | 31,954           | 15,416                  | 13,103           | 2,373            | 1,062                    |
| Product warranty . . . . .   | 784              | 784                     | —                | —                | —                        |
| Purchase obligations . . . . .                                     | <u>22,032</u>    | <u>21,542</u>           | <u>490</u>       | <u>—</u>         | <u>—</u>                 |
| Total . . . . .  | <u>\$179,825</u> | <u>\$48,079</u>         | <u>\$31,258</u>  | <u>\$99,426</u>  | <u>\$1,062</u>           |

The long-term debt and lease obligations at December 31, 2010 included \$103.3 million under our term loan scheduled to mature in 2015 and \$3.7 million of indebtedness related to our Stafford, Texas facility sale-leaseback arrangement. The \$1.7 million of capital lease obligations relates to GXT's financing of computer and other equipment purchases.

The operating lease commitments at December 31, 2010 relate to our leases for certain equipment, offices, processing centers, and warehouse space under non-cancelable operating leases. Our purchase obligations primarily relate to our committed inventory purchase orders for which deliveries are scheduled to be made in 2011.

Dividends on our Series D Preferred Stock are payable quarterly and must be paid in cash. In 2010, we paid \$1.9 million in dividends on our Series D Preferred Stock. The dividend rate was 5.0% at December 31, 2010. See "*Liquidity and Capital Resources*" above.

## Critical Accounting Policies and Estimates

The preparation of consolidated financial statements in conformity with generally accepted accounting principles in the United States requires management to make choices between acceptable methods of accounting and to use judgment in making estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities, and the reported amounts of revenue and expenses. The following accounting policies are based on, among other things, judgments and assumptions made by management that include inherent risk and uncertainties. Management's estimates are based on the relevant information available at the end of each period. We believe that all of the judgments and estimates used to prepare our financial statements were reasonable at the time we made them, but circumstances may change requiring us to revise our estimates in ways that could be materially adverse to our results of operations and financial condition. Management has discussed these critical accounting estimates with the Audit Committee of our Board of Directors and the Audit Committee has reviewed our disclosures relating to the estimates in this Management's Discussion and Analysis.

### *Revenue Recognition*

We derive revenue from the sale of (i) acquisition systems and other seismic equipment within our Systems segment; (ii) multi-client surveys, licenses of "off-the-shelf" data libraries and imaging services, within our Solutions segment; and (iii) navigation, survey and quality control software systems within our Software segment.

*Acquisition Systems and Other Seismic Equipment* — For the sales of acquisition systems and other seismic equipment, we follow the requirements of ASC 605-10 "*Revenue Recognition*" and recognize revenue when (a) evidence of an arrangement exists; (b) the price to the customer is fixed and determinable; (c) collectibility is reasonably assured; and (d) the acquisition system or other seismic equipment is delivered



to the customer and risk of ownership has passed to the customer, or, in the limited case where a substantive customer-specified acceptance clause exists in the contract, the later of delivery or when the customer-specified acceptance is obtained.

*Multi-Client Surveys, Data Libraries and Imaging Services* — Revenues from multi-client surveys are recognized as the seismic data is acquired and/or processed on a proportionate basis as work is performed. Under this method, we recognize revenues based upon quantifiable measures of progress, such as kilometers acquired or days processed. Upon completion of a multi-client seismic survey, the survey data is considered “off-the-shelf” and licenses to the survey data are sold to customers on a non-exclusive basis. The license of a completed multi-client survey is represented by the license of one standard set of data. Revenues on licenses of completed multi-client data surveys are recognized when (a) a signed final master geophysical data license agreement and accompanying supplemental license agreement are returned by the customer; (b) the purchase price for the license is fixed or determinable; (c) delivery or performance has occurred; and (d) no significant uncertainty exists as to the customer’s obligation, willingness or ability to pay. In limited situations, we have provided the customer with a right to exchange seismic data for another specific seismic data set. In these limited situations, we recognize revenue at the earlier of the customer exercising its exchange right or the expiration of the customer’s exchange right.

Revenues from all imaging and other services are recognized when persuasive evidence of an arrangement exists, the price is fixed or determinable, and collectibility is reasonably assured. Revenues from contract services performed on a day-rate basis are recognized as the service is performed.

*Software* — For the sales of navigation, survey and quality control software systems, we follow the requirements for these transactions of ASC 985-605 “*Software Revenue Recognition*.” We recognize revenue from sales of these software systems when (a) evidence of an arrangement exists; (b) the price to the customer is fixed and determinable; (c) collectibility is reasonably assured; and (d) the software is delivered to the customer and risk of ownership has passed to the customer, or, in the limited case where a substantive customer-specified acceptance clause exists, the later of delivery or when the customer-specified acceptance is obtained. These arrangements generally include us providing related services, such as training courses, engineering services and annual software maintenance. We allocate revenue to each element of the arrangement based upon vendor-specific objective evidence (“VSOE”) of fair value of the element or, if VSOE is not available for the delivered element, we apply the residual method.

In addition to perpetual software licenses, we offer certain time-based software licenses. For time-based licenses, we recognize revenue ratably over the contract term, which is generally two to five years.

*Multi-element Arrangements* — When separate elements (such as an acquisition system, other seismic equipment and/or imaging services) are contained in a single sales arrangement, or in related arrangements with the same customer, we follow the requirements of ASC 605-25 “*Accounting for Multiple-Element Revenue Arrangement*” (ASC 605-25). The multiple element arrangements guidance codified in ASC 605-25 was modified as a result of the final consensus reached in Accounting Standards Update (“ASU”) 2009-13, “*Revenue Arrangements with Multiple Deliverables*.” We adopted this new guidance as of January 1, 2010. Accordingly, we applied this guidance to transactions initiated or materially modified on or after January 1, 2010. The new guidance does not apply to software sales accounted for under ASC 985-605. There was no material impact of adopting this guidance to our results for 2010.

This guidance eliminates the residual method of allocation for multiple-deliverable revenue arrangements and requires that arrangement consideration be allocated at the inception of an arrangement to all deliverables using the relative selling price method. Per the provisions of this guidance, we allocate arrangement consideration to each deliverable qualifying as a separate unit of accounting in an arrangement based on its relative selling price. We determine selling price using VSOE, if it exists, and otherwise third-party evidence (“TPE”). If neither VSOE nor TPE of selling price exists for a unit of accounting, we use estimated selling price (“ESP”). We generally expect that we will not be able to establish TPE due to the nature of the markets in which we compete, and, as such, we typically will determine selling price using VSOE or if not available, ESP. VSOE is generally limited to the price charged when the same or similar product is sold on a standalone

basis. If a product is seldom sold on a standalone basis, it is unlikely that we can determine VSOE for the product.

The objective of ESP is to determine the price at which we would transact if the product were sold by us on a standalone basis. Our determination of ESP involves a weighting of several factors based on the specific facts and circumstances of the arrangement. Specifically, we will consider the anticipated margin on the particular deliverable, the selling price and profit margin for similar products and our ongoing pricing strategy and policies.

We believe this new guidance will principally impact our Systems division in which a typical arrangement might involve the sale of various products of our acquisition systems and other seismic equipment. Products under these arrangements are often delivered to the customer within the same period, but in certain situations, depending upon product availability and the customer's delivery requirements, the products could be delivered to the customer at different times. In these situations, we consider our products to be separate units of accounting provided the delivered product has value to the customer on a standalone basis. We consider a deliverable to have standalone value if the product is sold separately by us or another vendor or could be resold by the customer. Further, our revenue arrangements generally do not include a general right of return relative to the delivered products.

In addition, pursuant to the transitional requirements of the new multiple element revenue guidance, we adopted the guidance codified by ASU 2009-14, "*Certain Arrangements That Include Software Elements*," as of January 1, 2010. This guidance amends the accounting model for revenue arrangements that includes both tangible products and software elements, such that tangible products containing both software and non-software components that function together to deliver the tangible product's essential functionality are no longer within the scope of software revenue guidance. There was not a material impact to our financial statements of adopting this guidance.

#### ***Multi-Client Data Library***

Our multi-client data library consists of seismic surveys that are offered for licensing to customers on a non-exclusive basis. The capitalized costs include the costs paid to third parties for the acquisition of data and related activities associated with the data creation activity and direct internal processing costs, such as salaries, benefits, computer-related expenses, and other costs incurred for seismic data project design and management. For 2010, 2009 and 2008, we capitalized, as part of our multi-client data library, \$2.8 million, \$3.8 million, and \$5.4 million, respectively, of direct internal processing costs.

Our method of amortizing the costs of an in-process multi-client data library (the period during which the seismic data is being acquired and/or processed) is the percentage of actual revenue to the total estimated revenue (or ultimate revenue) multiplied by the total cost of the project (the sales forecast method). Once a multi-client data library is complete, the survey data is considered "off-the-shelf" and our method of amortization is then the greater of (i) the sales forecast method or (ii) the straight-line basis over a four-year period. The sales forecast method is our primary method of calculating amortization. We have determined the amortization period of four years based upon our historical experience that indicates that the majority of our revenues from multi-client surveys are derived during the acquisition and processing phases and during four years subsequent to survey completion.

Estimated sales are determined based upon discussions with our customers, our experience, and our knowledge of industry trends. Changes in sales estimates may have the effect of changing the percentage relationship of cost of services to revenue. In applying the sales forecast method, an increase in the projected sales of a survey will result in lower cost of services as a percentage of revenue, and higher earnings when revenue associated with that particular survey is recognized, while a decrease in projected sales will have the opposite effect. Assuming that the overall volume of sales mix of surveys generating revenue in the period was held constant in 2010, an increase in 10% in the sales forecasts of all surveys would have decreased our amortization expense by approximately \$4.4 million.

We estimate the ultimate revenue expected to be derived from a particular seismic data survey over its estimated useful economic life to determine the costs to amortize, if greater than straight-line amortization. That estimate is made by us at the project's initiation. For a completed multi-client survey, we review the estimate quarterly. If during any such review, we determine that the ultimate revenue for a survey is expected to be more or less than the original estimate of total revenue for such survey, we decrease or increase (as the case may be) the amortization rate attributable to the future revenue from such survey. In addition, in connection with such reviews, we evaluate the recoverability of the multi-client data library, and if required under ASC 360 "Accounting for the Impairment and Disposal of Long-Lived Assets," (ASC 360) record an impairment charge with respect to such data. There were no impairment charges during 2010 and 2009.

#### ***Equity Method Investment***

We use the equity method of accounting for investments in entities in which we have an ownership interest between 20% and 50% and exercise significant influence. Under this method, an investment is carried at the acquisition cost, plus our equity in undistributed earnings or losses since acquisition. As provided by ASC 815 "Investments," we record our share of earnings or losses of INOVA Geophysical on a one fiscal quarter lag basis. Thus, our share of INOVA Geophysical's results for the period from March 26, 2010 through September 30, 2010 is included in our financial results for the twelve months-ended December 31, 2010.

#### ***Reserve for Excess and Obsolete Inventories***

Our reserve for excess and obsolete inventories is based on historical sales trends and various other assumptions and judgments, including future demand for our inventory and the timing of market acceptance of our new products. Should these assumptions and judgments not be realized for reasons such as delayed market acceptance of our new products, our valuation allowance would be adjusted to reflect actual results. Our industry is subject to technological change and new product development that could result in obsolete inventory. Our valuation reserve for inventory at December 31, 2010 was \$12.9 million compared to \$30.6 million at December 31, 2009. The majority of the decrease in our reserves for excess and obsolete inventory in 2010 related to the disposition of our land division.

#### ***Goodwill and Other Intangible Assets***

Goodwill is allocated to our reporting units, which is either the operating segment or one reporting level below the operating segment. For purposes of performing the impairment test for goodwill as required by ASC 350 "Intangibles — Goodwill and Other" (ASC 350), we established the following reporting units: Marine Systems, Sensor Geophone, Software, and Solutions. To determine the fair value of our reporting units, we use a discounted future returns valuation method. If we had established different reporting units or utilized different valuation methodologies, our impairment test results could differ.

In accordance with ASC 350, we are required to evaluate the carrying value of our goodwill at least annually for impairment, or more frequently if facts and circumstances indicate that it is more likely than not impairment has occurred. We formally evaluate the carrying value of our goodwill for impairment as of December 31 for each of our reporting units. If the carrying value of a reporting unit of an entity that includes goodwill is determined to be more than the fair value of the reporting unit, there exists the possibility of impairment of goodwill. An impairment loss of goodwill is measured in two steps by first allocating the fair value of the reporting unit to net assets and liabilities including recorded and unrecorded other intangible assets to determine the implied carrying value of goodwill. The next step is to measure the difference between the carrying value of goodwill and the implied carrying value of goodwill, and, if the implied carrying value of goodwill is less than the carrying value of goodwill, an impairment loss is recorded equal to the difference.

We completed our annual goodwill impairment testing as of December 31, 2010 and 2009 noting no impairments. In 2008, we recorded a goodwill impairment charge of \$242.2 million, fully impairing the goodwill in our Legacy Land Systems (INOVA) and Solutions reporting units. Our remaining goodwill as of December 31, 2010 was comprised of \$27.0 million in our Marine Systems and \$24.3 million in our Software reporting units. Our 2010 and 2009 annual impairment tests both indicated that the fair value of these two

reporting units significantly exceeded their carrying values. Our analyses are based upon our internal operating forecasts, which include assumptions about market and economic conditions. However, if our estimates or related projections associated with the reporting units significantly change in the future, we may be required to record further impairment charges. If the operational results of our segments are lower than forecasted or the economic conditions are worse than expected, then the fair value of our segments will be adversely affected.

Our intangible assets other than goodwill relate to proprietary technology, patents, customer relationships and trade names that are amortized over the estimated periods of benefit (ranging from 4 to 20 years). Following the guidance of ASC 360, we review the carrying values of these intangible assets for impairment if events or changes in the facts and circumstances indicate that it is more likely than not their carrying value may not be recoverable. Any impairment determined is recorded in the current period and is measured by comparing the fair value of the related asset to its carrying value. For 2009 and 2008, we determined that certain of the intangible assets (customer relationships, trade names and non-compete agreements) associated with our ARAM acquisition (now part of INOVA Geophysical) were impaired and recorded impairment charges of \$38.0 million and \$10.1 million, respectively.

Similar to our treatment of goodwill, in making these assessments, we rely on a number of factors, including operating results, business plans, internal and external economic projections, anticipated future cash flows and external market data. However, if our estimates or related projections associated with the reporting units significantly change in the future, we may be required to record further impairment charges.

### ***Stock-Based Compensation***

We account for stock-based compensation under the recognition provisions of ASC 718 "*Share-Based Payment*" (ASC 718). We estimate the value of stock option awards on the date of grant using the Black-Scholes option pricing model. The determination of the fair value of stock-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of subjective variables. These variables include, but are not limited to, our expected stock price volatility over the term of the awards, actual and projected employee stock option exercise behaviors, risk-free interest rate, and expected dividends.

The accompanying financial statements for 2009 include approximately \$3.3 million of stock-based compensation expense related to 2008, 2007 and 2006. ASC 718 requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The prior-period stock-based compensation expense relates to adjustments between estimated and actual forfeitures, which should have been recognized over the vesting period of such awards. Such amounts were not deemed material with respect to either the results of prior years or the results and the trend of earnings for 2009 and were therefore recorded in 2009.

In 2010, 2009 and 2008, we recognized \$8.1 million, \$12.7 million and \$8.3 million, respectively, of stock-based compensation expense related to our employees' outstanding stock-based awards. The total expense in 2010 was comprised of \$1.1 million reflected in cost of sales, \$0.5 million in research, development and engineering expense, \$0.8 million in marketing and sales expense, and \$5.7 million in general and administrative expense. In addition to the stock-based compensation expense related to the Company's plans, we recorded less than \$0.1 million of stock-based compensation expense in 2010 related to employee stock appreciation rights. Pursuant to ASC 718, the stock appreciation rights are considered liability awards and, as such, these amounts are accrued in the liability section of the balance sheet.

### **Recent Accounting Pronouncements**

See Note 1 of *Notes to Consolidated Financial Statements*.

### **Credit and Sales Risks**

No single customer represented 10% or more of our consolidated net revenues for 2010, 2009 and 2008; however, our top five customers in total represented approximately 28%, 29% and 30%, respectively of our

consolidated net revenues. The loss of any significant customers or deterioration in our relationship with these customers could have a material adverse effect on our results of operations and financial condition.

For 2010, we recognized \$136.8 million of sales to customers in Europe, \$51.5 million of sales to customers in Asia Pacific, \$18.4 million of sales to customers in Africa, \$10.5 million of sales to customers in the Middle East, \$46.0 million of sales to customers in Latin American countries, and \$3.6 million of sales to customers in the Commonwealth of Independent States, or former Soviet Union (CIS). The majority of our foreign sales are denominated in U.S. dollars. For 2010, 2009 and 2008, international sales comprised 60%, 64% and 60%, respectively, of total net revenues. For a number of years, the CIS and certain Latin American countries have experienced economic problems and uncertainties. However, given the global downturn that commenced in 2008, more countries and areas of the world have also experienced economic problems and uncertainties. To the extent that world events or economic conditions negatively affect our future sales to customers in these and other regions of the world or the collectability of our existing receivables, our future results of operations, liquidity, and financial condition may be adversely affected. We currently require customers in these higher risk countries to provide their own financing and in some cases assist the customer in organizing international financing and Export-Import credit guarantees provided by the United States government. We do not currently extend long-term credit through notes to companies in countries we consider to be inappropriate for credit risk purposes.

### **Certain Relationships and Related Party Transactions**

In April 2010, we advanced \$5.0 million to INOVA Geophysical under a short-term promissory note. The note was scheduled to mature on August 31, 2010 and accrued interest at an annual rate equal to the London Interbank Offered Rate ("LIBOR") plus 350 basis points. INOVA Geophysical repaid the outstanding balance on this note of \$5.0 million in August 2010. Additionally, BGP advanced \$5.0 million to INOVA Geophysical during the second quarter on similar terms, and INOVA Geophysical repaid the amount in full.

In May 2010, we entered into a second promissory note arrangement with INOVA Geophysical providing for potential borrowings up to \$4.5 million, under which INOVA Geophysical borrowed \$1.5 million. This note accrued interest at an annual rate equal to LIBOR plus 350 basis points, and INOVA Geophysical repaid the outstanding balance on this second note of \$1.5 million in July 2010. The purpose of these advances was to provide short-term capital to INOVA Geophysical prior to INOVA Geophysical's obtaining its own line of credit, which it secured in June 2010.

We have also entered into a support and transition agreement to provide INOVA Geophysical with certain administrative services, including tax, legal, information technology, treasury, human resources, bookkeeping, facilities and marketing services. The terms of the arrangement provide for INOVA Geophysical to pay us approximately \$0.3 million per month (beginning in April 2010) for services and to reimburse us for third-party and lease costs we have incurred directly related to the support of INOVA Geophysical. The term of the agreement is for two years and will automatically renew for one-year periods, unless either party provides notice of its intent to terminate the agreement. At December 31, 2010, INOVA Geophysical owed us approximately \$3.0 million that we reflected in the balance of Accounts Receivable, net. The majority of these shared services we provide are reflected as reductions to general and administrative expense.

For 2010, 2009 and 2008, we recorded revenues from BGP for purchases of products and services of \$16.9 million, \$32.2 million and \$17.6 million, respectively. Trade receivables due from BGP were \$3.0 million and \$9.2 million at December 31, 2010 and 2009, respectively. BGP owned approximately 15.6% of our outstanding common stock as of December 31, 2010.

James M. Lapeyre, Jr. is chairman of our board of directors. He is also the chairman and a significant equity owner of Laitram, L.L.C. (Laitram) and has served as president 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 6.0% of our outstanding common stock as of December 31, 2010.

We acquired DigiCourse, Inc., our marine positioning products business, from Laitram in 1998 and have renamed it I/O Marine Systems, Inc. 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. Under a lease of commercial property dated February 1, 2006, between Lapeyre Properties L.L.C. (an affiliate of Laitram) and ION, we agreed to lease certain office and warehouse space from Lapeyre Properties until January 2011. During 2010, we paid Laitram a total of approximately \$3.1 million, which consisted of approximately \$2.3 million for manufacturing services, \$0.7 million for rent and other pass-through third party facilities charges, and \$0.1 million for reimbursement for costs related to providing administrative and other back-office support services in connection with our Louisiana marine operations. During 2009 and 2008, we paid Laitram approximately \$4.0 million and \$4.3 million, respectively, for these services. In the opinion of our management, the terms of these services are fair and reasonable and as favorable to us as those that could have been obtained from unrelated third parties at the time of their performance.

#### **Off-Balance Sheet Arrangements**

As of December 31, 2010, we did not have any off-balance-sheet arrangements, as defined in Item 303(a)(4)(ii) of SEC Regulation S-K.

#### **Indemnification**

In the ordinary course of our business, we enter into contractual arrangements with our customers, suppliers, and other parties under which we may agree to indemnify the other party to such arrangement from certain losses it incurs relating to our products or services or for losses arising from certain events as defined within the particular contract. Some of these indemnification obligations may not be subject to maximum loss limitations. Historically, payments we have made related to these indemnification obligations have been immaterial.

#### **Item 7A. *Quantitative and Qualitative Disclosures about Market Risk***

Market risk is the risk of loss from adverse changes in market prices and rates. Our primary market risks include risks related to interest rates and foreign currency exchange rates.

#### **Interest Rate Risk**

As of December 31, 2010, we had outstanding total indebtedness of approximately \$108.7 million, including capital lease obligations. Of that indebtedness, approximately \$103.3 million accrues interest under rates that fluctuate based upon market rates plus an applicable margin. As of December 31, 2010, the \$103.3 million in term loan indebtedness outstanding under the Credit Facility accrues interest using LIBOR-based interest rate of 3.8% per annum. The average effective interest rate for the quarter ended December 31, 2010 under the LIBOR-based rates for the term loan indebtedness was 4.2%. Each 100 basis point increase in the interest rate would have the effect of increasing the annual amount of interest to be paid by approximately \$1.0 million.

As our outstanding term loan facility and any borrowings under the revolving credit facility are subject to variable interest rates, we are subject to interest rate risk. We are therefore vulnerable to changes in three-month LIBOR interest rates. We use a derivative financial instrument (interest rate caps), to manage our exposure to interest rate risks related to the floating rate of our term loan facility. We do not use derivatives for trading or speculative purposes and only enter into contracts with major financial institutions based on their credit rating and other factors. We have entered into an interest rate cap agreement for our term loan facility with an initial notional amount of \$103.3 million and with a LIBOR cap of 2.0%. At December 31, 2010, the three-month LIBOR rate applicable to us was 0.30% thereby making the cap for the term loan facility out-of-the-money. Subject to the cap, as of December 31, 2010, an increase in market rates of interest

by 0.125% would have increased our annual interest expense related to the term loan facility by \$0.1 million, and a decrease in market interest rates by 0.125% would have decreased our annual interest expense related to the term loan facility by \$0.1 million.

### **Foreign Currency Exchange Rate Risk**

Our operations are conducted in various countries around the world, and we receive revenue from these operations in a number of different currencies with the most significant of our international operations using British pounds sterling. As such, our earnings are subject to movements in foreign currency exchange rates when transactions are denominated in currencies other than the U.S. dollar, which is our functional currency, or the functional currency of many of our subsidiaries, which is not necessarily the U.S. dollar. To the extent that transactions of these subsidiaries are settled in currencies other than the U.S. dollar, a devaluation of these currencies versus the U.S. dollar could reduce the contribution from these subsidiaries to our consolidated results of operations as reported in U.S. dollars.

Through our subsidiaries, we operate in a wide variety of jurisdictions, including United Kingdom, China, Canada, the Netherlands, Brazil, Russia, the United Arab Emirates, and other countries. Our financial results may be affected by changes in foreign currency exchange rates. Our consolidated balance sheet at December 31, 2010 reflected approximately \$15.6 million of net working capital related to our foreign subsidiaries. A majority of our foreign net working capital is within the United Kingdom. The subsidiaries in those countries receive their income and pay their expenses primarily in their local currencies. To the extent that transactions of these subsidiaries are settled in the local currencies, a devaluation of these currencies versus the U.S. dollar could reduce the contribution from these subsidiaries to our consolidated results of operations as reported in U.S. dollars.

### **Item 8. Financial Statements and Supplementary Data**

The financial statements required by this item begin at page F-1 hereof.

### **Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

Not applicable.

### **Item 9A. Controls and Procedures**

(a) *Evaluation of Disclosure Controls and Procedures.* Disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file with or submit to the SEC under the Exchange Act is recorded, processed, summarized and reported within the time period specified by the SEC's rules and forms. Disclosure controls and procedures, include, without limitation, controls and procedures designed to ensure that information required to be disclosed under the Exchange Act is accumulated and communicated to management, including the principal executive officer and the principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Our management carried out an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of December 31, 2010. Based upon that evaluation, our principal executive officer and our principal financial officer concluded that our disclosure controls and procedures were effective as of December 31, 2010.

(b) *Management's Report on Internal Control Over Financial Reporting.* Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) under the Exchange Act. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Our internal control over financial reporting includes those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;

(ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of our management and directors; and

(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we assessed the effectiveness of our internal control over financial reporting as of December 31, 2010 based upon criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based upon their assessment, management concluded that the internal control over financial reporting was effective as of December 31, 2010.

The independent registered public accounting firm that has also audited the Company's consolidated financial statements included in this Annual Report on Form 10-K has issued an audit report on our internal control over financial reporting. This report appears below.

(c) *Changes in Internal Control over Financial Reporting.* There was not any change in our internal control over financial reporting that occurred during the three months ended December 31, 2010, which has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.



## Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of ION Geophysical Corporation and Subsidiaries

We have audited ION Geophysical Corporation and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). The Company's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, ION Geophysical Corporation and subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2010, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of ION Geophysical Corporation and subsidiaries as of December 31, 2010 and 2009 and the related consolidated statements of operations, cash flows, stockholders' equity and comprehensive income (loss) for each of the three years in the period ended December 31, 2010 of ION Geophysical Corporation and subsidiaries and our report dated February 24, 2011 expressed an unqualified opinion thereon.

Ernst and Young LLP

Houston, Texas  
February 24, 2011

**Item 9B. Other Information**

Not applicable.

**PART III**

**Item 10. Directors, Executive Officers and Corporate Governance**

Reference is made to the information appearing in the definitive proxy statement, under "*Item 1 — Election of Directors*," for our annual meeting of stockholders to be held on May 27, 2011 (the "2011 Proxy Statement") to be filed with the SEC with respect to Directors, Executive Officers and Corporate Governance, which is incorporated herein by reference and made a part hereof in response to the information required by Item 10.

**Item 11. Executive Compensation**

Reference is made to the information appearing in the 2011 Proxy Statement, under "*Executive Compensation*," to be filed with the SEC with respect to Executive Compensation, which is incorporated herein by reference and made a part hereof in response to the information required by Item 11.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

Reference is made to the information appearing in the 2011 Proxy Statement, under "*Item 1 — Ownership of Equity Securities of ION*" and "*Equity Compensation Plan Information*," to be filed with the SEC with respect to Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters, which is incorporated herein by reference and made a part hereof in response to the information required by Item 12.

**Item 13. Certain Relationships and Related Transactions, and Director Independence**

Reference is made to the information appearing in the 2011 Proxy Statement, under "*Item 1 — Certain Transactions and Relationships*," to be filed with the SEC with respect to Certain Relationships and Related Transactions and Director Independence, which is incorporated herein by reference and made a part hereof in response to the information required by Item 13.

**Item 14. Principal Accountant Fees and Services**

Reference is made to the information appearing in the 2011 Proxy Statement, under "*Principal Auditor Fees and Services*," to be filed with the SEC with respect to Principal Accountant Fees and Services, which is incorporated herein by reference and made a part hereof in response to the information required by Item 14.

**PART IV**

**Item 15. Exhibits and Financial Statement Schedules**

(a) *List of Documents Filed*

(1) *Financial Statements*

The financial statements filed as part of this report are listed in the "Index to Consolidated Financial Statements" on page F-1 hereof.

(2) *Financial Statement Schedules*

The following financial statement schedule is listed in the "Index to Consolidated Financial Statements" on page F-1 hereof, and is included as part of this Annual Report on Form 10-K:

Schedule II — Valuation and Qualifying Accounts

All other schedules are omitted because they are not applicable or the requested information is shown in the financial statements or noted therein.

(3) *Exhibits*

- 3.1 — Restated Certificate of Incorporation dated September 24, 2007 filed on September 24, 2007 as Exhibit 3.4 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 3.2 — Amended and Restated Bylaws of ION Geophysical Corporation filed on September 24, 2007 as Exhibit 3.5 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 3.3 — Certificate of Ownership and Merger merging ION Geophysical Corporation with and into Input/Output, Inc. dated September 21, 2007, filed on September 24, 2007 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 4.1 — Certificate of Rights and Designations of Series D-1 Cumulative Convertible Preferred Stock, dated February 16, 2005 and filed on February 17, 2005 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 4.2 — Certificate of Elimination of Series B Preferred Stock dated September 24, 2007, filed on September 24, 2007 as Exhibit 3.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 4.3 — Certificate of Elimination of Series C Preferred Stock dated September 24, 2007, filed on September 24, 2007 as Exhibit 3.3 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 4.4 — Certificate of Designation of Series D-2 Cumulative Convertible Preferred Stock dated December 6, 2007, filed on December 6, 2007 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 4.5 — Certificate of Designations of Series A Junior Participating Preferred Stock of ION Geophysical Corporation effective as of December 31, 2008, filed on January 5, 2009 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 4.6 — Form of Senior Indenture, filed on December 19, 2008 as Exhibit 4.3 to the Company's Registration Statement on Form S-3 (Registration No. 333-156362) and incorporated herein by reference.
- 4.7 — Form of Senior Note, filed on December 19, 2008 as Exhibit 4.4 to the Company's Registration Statement on Form S-3 (Registration No. 333-156362) and incorporated herein by reference.
- 4.8 — Form of Subordinated Indenture, filed on December 19, 2008 as Exhibit 4.5 to the Company's Registration Statement on Form S-3 (Registration No. 333-156362) and incorporated herein by reference.
- 4.9 — Form of Subordinated Note, filed on December 19, 2008 as Exhibit 4.6 to the Company's Registration Statement on Form S-3 (Registration No. 333-156362) and incorporated herein by reference.
- \*\*10.1 — Amended and Restated 1990 Stock Option Plan, filed on June 9, 1999 as Exhibit 4.2 to the Company's Registration Statement on Form S-8 (Registration No. 333-80299), and incorporated herein by reference.
- 10.2 — Office and Industrial/Commercial Lease dated June 2005 by and between Stafford Office Park II, LP as Landlord and Input/Output, Inc. as Tenant, filed on March 31, 2006 as Exhibit 10.2 to the Company's Annual Report on Form 10-K for the year ended December 31, 2005, and incorporated herein by reference.
- 10.3 — Office and Industrial/Commercial Lease dated June 2005 by and between Stafford Office Park District as Landlord and Input/Output, Inc. as Tenant, filed on March 31, 2006 as Exhibit 10.3 to the Company's Annual Report on Form 10-K for the year ended December 31, 2005, and incorporated herein by reference.
- \*\*10.4 — Input/Output, Inc. Amended and Restated 1996 Non-Employee Director Stock Option Plan, filed on June 9, 1999 as Exhibit 4.3 to the Company's Registration Statement on Form S-8 (Registration No. 333-80299), and incorporated herein by reference.

- \*\*10.5 — Amendment No. 1 to the Input/Output, Inc. Amended and Restated 1996 Non-Employee Director Stock Option Plan dated September 13, 1999 filed on November 14, 1999 as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended August 31, 1999 and incorporated herein by reference.
- \*\*10.6 — Employment Agreement dated effective as of May 22, 2006 between Input/Output, Inc. and R. Brian Hanson, filed on May 1, 2006 as Exhibit 10.1 to the Company's Form 8-K, and incorporated herein by reference.
- \*\*10.7 — First Amendment to Employment Agreement dated as of August 20, 2007 between Input/Output, Inc. and R. Brian Hanson, filed on August 21, 2007 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- \*\*10.8 — Second Amendment to Employment Agreement, dated as of December 1, 2008, between ION Geophysical Corporation and R. Brian Hanson, filed on January 29, 2009 as Exhibit 10.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- \*\*10.9 — Input/Output, Inc. Employee Stock Purchase Plan, filed on March 28, 1997 as Exhibit 4.4 to the Company's Registration Statement on Form S-8 (Registration No. 333-24125), and incorporated herein by reference.
- \*\*10.10 — Fifth Amended and Restated — 2004 Long-Term Incentive Plan, filed as Appendix A to the definitive proxy statement for the 2010 Annual Meeting of Stockholders of ION Geophysical Corporation, filed on April 21, 2010, and incorporated herein by reference.
- 10.11 — Registration Rights Agreement dated as of November 16, 1998, by and among the Company and The Laitram Corporation, filed on March 12, 2004 as Exhibit 10.7 to the Company's Annual Report on Form 10-K for the year ended December 31, 2003, and incorporated herein by reference.
- \*\*10.12 — Input/Output, Inc. 1998 Restricted Stock Plan dated as of June 1, 1998, filed on June 9, 1999 as Exhibit 4.7 to the Company's Registration Statement on S-8 (Registration No. 333-80297), and incorporated herein by reference.
- \*\*10.13 — Input/Output Inc. Non-qualified Deferred Compensation Plan, filed on April 1, 2002 as Exhibit 10.14 to the Company's Annual Report on Form 10-K for the year ended December 31, 2001, and incorporated herein by reference.
- \*\*10.14 — Input/Output, Inc. 2000 Restricted Stock Plan, effective as of March 13, 2000, filed on August 17, 2000 as Exhibit 10.27 to the Company's Annual Report on Form 10-K for the fiscal year ended May 31, 2000, and incorporated herein by reference.
- \*\*10.15 — Input/Output, Inc. 2000 Long-Term Incentive Plan, filed on November 6, 2000 as Exhibit 4.7 to the Company's Registration Statement on Form S-8 (Registration No. 333-49382), and incorporated by reference herein.
- \*\*10.16 — Employment Agreement dated effective as of March 31, 2003, by and between the Company and Robert P. Peebler, filed on March 31, 2003 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- \*\*10.17 — First Amendment to Employment Agreement dated September 6, 2006, between Input/Output, Inc. and Robert P. Peebler, filed on September 7, 2006, as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- \*\*10.18 — Second Amendment to Employment Agreement dated February 16, 2007, between Input/Output, Inc. and Robert P. Peebler, filed on February 16, 2007 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- \*\*10.19 — Third Amendment to Employment Agreement dated as of August 20, 2007 between Input/Output, Inc. and Robert P. Peebler, filed on August 21, 2007 as Exhibit 10.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- \*\*10.20 — Fourth Amendment to Employment Agreement, dated as of January 26, 2009, between ION Geophysical Corporation and Robert P. Peebler, filed on January 29, 2009 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- \*\*10.21 — Employment Agreement dated effective as of June 15, 2004, by and between the Company and David L. Roland, filed on August 9, 2004 as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2004, and incorporated herein by reference.

- \*\*10.22 — Employment Agreement, dated as of December 1, 2008, between ION Geophysical Corporation and James R. Hollis, filed on January 29, 2009 as Exhibit 10.3 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- \*\*10.23 — GX Technology Corporation Employee Stock Option Plan, filed on August 9, 2004 as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2004, and incorporated herein by reference.
- 10.24 — Concept Systems Holdings Limited Share Acquisition Agreement dated February 23, 2004, filed on March 5, 2004 as Exhibit 2.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- 10.25 — Registration Rights Agreement by and between ION Geophysical Corporation and 1236929 Alberta Ltd. dated September 18, 2008, filed on November 7, 2008 as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q and incorporated herein by reference.
- \*\*10.26 — Form of Employment Inducement Stock Option Agreement for the Input/Output, Inc. — Concept Systems Employment Inducement Stock Option Program, filed on July 27, 2004 as Exhibit 4.1 to the Company's Registration Statement on Form S-8 (Reg. No. 333-117716), and incorporated herein by reference.
- \*\*10.27 — Form of Employee Stock Option Award Agreement for ARAM Systems Employee Inducement Stock Option Program, filed on November 14, 2008 as Exhibit 4.4 to the Company's Registration Statement on Form S-8 (Registration No. 333-155378) and incorporated herein by reference.
- 10.28 — Agreement dated as of February 15, 2005, between Input/Output, Inc. and Fletcher International, Ltd., filed on February 17, 2005 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 10.29 — First Amendment to Agreement, dated as of May 6, 2005, between the Company and Fletcher International, Ltd., filed on May 10, 2005 as Exhibit 10.2 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- \*\*10.30 — Input/Output, Inc. 2003 Stock Option Plan, dated March 27, 2003, filed as Appendix B of the Company's definitive proxy statement filed with the SEC on April 30, 2003, and incorporated herein by reference.
- 10.31 — Amended and Restated Credit Agreement dated as of July 3, 2008, by and among ION Geophysical Corporation, ION International S.À R.L., HSBC Bank USA, N.A., as administrative agent, joint lead arranger and joint bookrunner, ABN AMRO Incorporated, as joint lead arranger and joint bookrunner, and CitiBank, N.A., as syndication agent, filed on July 8, 2008 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 10.32 — First Amendment to Amended and Restated Credit Agreement and Domestic Security Agreement, dated as of September 17, 2008, by and among ION Geophysical Corporation, ION International S.À R.L., HSBC Bank USA, N.A., as administrative agent, joint lead arranger and joint bookrunner, ABN AMRO Incorporated, as joint lead arranger and joint bookrunner, and CitiBank, N.A., as syndication agent, filed on September 23, 2008 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 10.33 — Third Amendment to Amended and Restated Credit Agreement dated as of December 29, 2008, by and among ION Geophysical Corporation, ION International S.À R.L., the Guarantors and Lenders party thereto and HSBC Bank USA, N.A., as administrative agent, filed on January 5, 2009 as Exhibit 10.3 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 10.34 — Fourth Amendment to Amended and Restated Credit Agreement and Foreign Security Agreement, Limited Waiver and Release dated as of December 30, 2008, by and among ION Geophysical Corporation, ION International S.À R.L., the Guarantors and Lenders party thereto and HSBC Bank USA, N.A., as administrative agent, filed on January 5, 2009 as Exhibit 10.4 to the Company's Current Report on Form 8-K and incorporated herein by reference.

- 10.35 — Fifth Amendment to Amended and Restated Credit Agreement dated effective as of June 1, 2009 by and among ION Geophysical Corporation, ION International S.à r.l., certain other foreign and domestic subsidiaries of the ION Geophysical Corporation, HSBC Bank USA, N.A., as administrative agent, joint lead arranger and joint bookrunner, ABN AMRO Incorporated, as joint lead arranger and joint bookrunner, Citibank, N.A., as syndication agent, and the lenders party thereto, filed on August 6, 2009 as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2009, and incorporated herein by reference.
- 10.36 — Sixth Amendment and Waiver to Amended and Restated Credit Agreement dated effective as of October 23, 2009 by and among ION Geophysical Corporation, ION International S.À R.L., the Guarantors and Lenders party thereto and HSBC Bank USA, N.A., as administrative agent filed on March 1, 2010 as Exhibit 10.36 to the Company's Annual Report on Form 10-K for the year ended December 31, 2009, and incorporated herein by reference.
- \*\*10.37 — Form of Employment Inducement Stock Option Agreement for the Input/Output, Inc. — GX Technology Corporation Employment Inducement Stock Option Program, filed on April 4, 2005 as Exhibit 4.1 to the Company's Registration Statement on Form S-8 (Reg. No. 333-123831), and incorporated herein by reference.
- \*\*10.38 — First Amendment to Consulting Services Agreement dated as of January 5, 2007, by and between GX Technology Corporation and Michael K. Lambert, filed on January 8, 2007 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- \*\*10.39 — Letter agreement dated October 19, 2006, by and between the Company and Michael K. Lambert, filed on October 24, 2006 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- \*\*10.40 — Severance Agreement dated as of December 1, 2008, between ION Geophysical Corporation and Charles J. Ledet, filed on December 5, 2008 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 10.41 — Consulting Agreement dated as of December 1, 2008, between ION Geophysical Corporation and Charles J. Ledet, filed on December 5, 2008 as Exhibit 10.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 10.42 — Rights Agreement, dated as of December 30, 2008, between ION Geophysical Corporation and Computershare Trust Company, N.A., as Rights Agent, filed as Exhibit 4.1 to the Company's Form 8-A (Registration No. 001-12691) and incorporated herein by reference.
- \*\*10.43 — ION Stock Appreciation Rights Plan dated November 17, 2008, filed as Exhibit 10.47 to the Company's Annual Report on Form 10-K for the year ended December 31, 2008, and incorporated herein by reference.
- 10.44 — Canadian Master Loan and Security Agreement dated as of June 29, 2009 by and among ICON ION, LLC, as lender, ION Geophysical Corporation and ARAM Rentals Corporation, a Nova Scotia corporation, filed on August 6, 2009 as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2009, and incorporated herein by reference.
- 10.45 — Master Loan and Security Agreement (U.S.) dated as of June 29, 2009 by and among ICON ION, LLC, as lender, ION Geophysical Corporation and ARAM Seismic Rentals, Inc., a Texas corporation, filed on August 6, 2009 as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2009, and incorporated herein by reference.
- 10.46 — Term Sheet dated as of October 23, 2009 by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation filed on March 1, 2010 as Exhibit 10.52 to the Company's Annual Report on Form 10-K for the year ended December 31, 2009, and incorporated herein by reference.
- 10.47 — Warrant Issuance Agreement dated as of October 23, 2009 by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation filed on March 1, 2010 as Exhibit 10.53 to the Company's Annual Report on Form 10-K for the year ended December 31, 2009, and incorporated herein by reference.
- 10.48 — Registration Rights Agreement dated as of October 23, 2009 by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation filed on March 1, 2010 as Exhibit 10.54 to the Company's Annual Report on Form 10-K for the year ended December 31, 2009, and incorporated herein by reference.

- 10.49 — Stock Purchase Agreement dated as of March 19, 2010, by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation, filed on March 31, 2010 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- 10.50 — Investor Rights Agreement dated as of March 25, 2010, by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation, filed on March 31, 2010 as Exhibit 10.2 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- 10.51 — Share Purchase Agreement dated as of March 24, 2010, by and among ION Geophysical Corporation, INOVA Geophysical Equipment Limited and BGP Inc., China National Petroleum Corporation, filed on March 31, 2010 as Exhibit 10.3 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- 10.52 — Joint Venture Agreement dated as of March 24, 2010, by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation, filed on March 31, 2010 as Exhibit 10.4 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- 10.53 — Credit Agreement dated as of March 25, 2010, by and among ION Geophysical Corporation, ION International S.À R.L. and China Merchants Bank Co., Ltd., New York Branch, as administrative agent and lender, filed on March 31, 2010 as Exhibit 10.5 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- \*\*10.54 — Fifth Amendment to Employment Agreement dated June 1, 2010, between ION Geophysical Corporation and Robert P. Peebler, filed on June 1, 2010 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- \*21.1 — Subsidiaries of the Company.
- \*23.1 — Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
- \*24.1 — The Power of Attorney is set forth on the signature page hereof.
- \*31.1 — Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a).
- \*31.2 — Certification of Chief Financial Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a).
- \*32.1 — Certification of Chief Executive Officer Pursuant to 18 U.S.C. §1350.
- \*32.2 — Certification of Chief Financial Officer Pursuant to 18 U.S.C. §1350.

\* Filed herewith.

\*\* Management contract or compensatory plan or arrangement.

(b) *Exhibits required by Item 601 of Regulation S-K.*

Reference is made to subparagraph (a) (3) of this Item 15, which is incorporated herein by reference.

(c) *Not applicable.*

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Houston, State of Texas, on February 24, 2011.

### ION GEOPHYSICAL CORPORATION

By /s/ R. Brian Hanson

R. Brian Hanson  
*Executive Vice President and Chief Financial Officer*

## POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Robert P. Peebler and David L. Roland and each of them, as his or her true and lawful attorneys-in-fact and agents with full power of substitution and re-substitution for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all documents relating to the Annual Report on Form 10-K for the year ended December 31, 2010, including any and all amendments and supplements thereto, and to file the same with all exhibits thereto and other documents in connection therewith with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully as to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or their or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

| <u>Name</u>   | <u>Capacities</u>  | <u>Date</u>       |
|---|--|-------------------|
| <u>/s/ ROBERT P. PEEBLER</u><br>Robert P. Peebler         | Chief Executive Officer and Director<br>(Principal Executive Officer)                    | February 24, 2011 |
| <u>/s/ R. BRIAN HANSON</u><br>R. Brian Hanson             | Executive Vice President and Chief<br>Financial Officer (Principal Financial<br>Officer) | February 24, 2011 |
| <u>/s/ MICHAEL L. MORRISON</u><br>Michael L. Morrison     | Vice President and Corporate Controller<br>(Principal Accounting Officer)                | February 24, 2011 |
| <u>/s/ JAMES M. LAPEYRE, JR.</u><br>James M. Lapeyre, Jr. | Chairman of the Board of Directors and<br>Director                                       | February 24, 2011 |
| <u>/s/ DAVID H. BARR</u><br>David H. Barr                 | Director   | February 24, 2011 |



| <u>Name</u>   | <u>Capacities</u> | <u>Date</u>       |
|---|-------------------|-------------------|
| <u>/s/ HAO HUIMIN</u><br>Hao Huimin                     | Director          | February 24, 2011 |
| <u>/s/ MICHAEL C. JENNINGS</u><br>Michael C. Jennings   | Director          | February 24, 2011 |
| <u>/s/ FRANKLIN MYERS</u><br>Franklin Myers             | Director          | February 24, 2011 |
| <u>/s/ S. JAMES NELSON, JR.</u><br>S. James Nelson, Jr. | Director          | February 24, 2011 |
| <u>/s/ JOHN N. SEITZ</u><br>John N. Seitz               | Director          | February 24, 2011 |

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**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**  
**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

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All other schedules are omitted because they are not applicable or the required information is shown in the financial statements or notes thereto.

## **Report of Independent Registered Public Accounting Firm**

The Board of Directors and Stockholders of ION Geophysical Corporation and Subsidiaries

We have audited the accompanying consolidated balance sheets of ION Geophysical Corporation and subsidiaries as of December 31, 2010 and 2009, and the related consolidated statements of operations, cash flows, stockholders' equity and comprehensive income (loss) for each of the three years in the period ended December 31, 2010. Our audits also included the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of ION Geophysical Corporation and subsidiaries at December 31, 2010 and 2009, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2010, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), ION Geophysical Corporation and subsidiaries' internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 24, 2011, expressed an unqualified opinion thereon.

Ernst and Young LLP

Houston, Texas  
February 24, 2011

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**

|  | December 31,                      |            |
|--|-----------------------------------|------------|
|  | 2010                              | 2009       |
|  | (In thousands, except share data) |            |
| <b>ASSETS</b>  |                                   |            |
| Current assets:  |                                   |            |
| Cash and cash equivalents . . . . .  | \$ 84,419                         | \$ 16,217  |
| Accounts receivable, net . . . . .   | 77,576                            | 111,046    |
| Unbilled receivables . . . . .   | 70,590                            | 21,655     |
| Current portion notes receivable, net . . . . .  | —                                 | 13,367     |
| Inventories . . . . .  | 66,882                            | 202,601    |
| Deferred income tax asset . . . . .  | —                                 | 6,001      |
| Prepaid expenses and other current assets . . . . .  | 13,165                            | 24,614     |
| Total current assets . . . . .   | 312,632                           | 395,501    |
| Deferred income tax asset . . . . .  | 8,998                             | 26,422     |
| Property, plant and equipment, net . . . . .   | 20,145                            | 78,555     |
| Multi-client data library, net . . . . .   | 112,620                           | 130,705    |
| Investment in INOVA Geophysical . . . . .  | 95,173                            | —          |
| Goodwill . . . . .   | 51,333                            | 52,052     |
| Intangible assets, net . . . . .   | 20,317                            | 61,766     |
| Other assets . . . . .   | 3,224                             | 3,185      |
| Total assets . . . . .   | \$ 624,442                        | \$ 748,186 |
| <b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>  |                                   |            |
| Current liabilities:   |                                   |            |
| Notes payable and current maturities of long-term debt . . . . .   | \$ 6,073                          | \$ 271,132 |
| Accounts payable . . . . .   | 30,940                            | 40,189     |
| Accrued expenses . . . . .   | 54,799                            | 65,893     |
| Accrued multi-client data library royalties . . . . .  | 18,667                            | 18,714     |
| Fair value of warrant . . . . .  | —                                 | 44,789     |
| Deferred revenue . . . . .   | 22,887                            | 13,802     |
| Total current liabilities . . . . .  | 133,366                           | 454,519    |
| Long-term debt, net of current maturities . . . . .  | 102,587                           | 6,249      |
| Non-current deferred income tax liability . . . . .  | 688                               | 1,262      |
| Other long-term liabilities . . . . .  | 7,354                             | 3,688      |
| Total liabilities . . . . .  | 243,995                           | 465,718    |
| Commitments and contingencies  |                                   |            |
| Stockholders' equity:  |                                   |            |
| Cumulative convertible preferred stock . . . . .   | 27,000                            | 68,786     |
| Common stock, \$0.01 par value; authorized 200,000,000 shares; outstanding<br>152,870,679 and 118,688,702 shares at December 31, 2010 and 2009,<br>respectively, net of treasury stock . . . . . | 1,529                             | 1,187      |
| Additional paid-in capital . . . . .   | 822,399                           | 666,928    |
| Accumulated deficit . . . . .  | (448,386)                         | (411,548)  |
| Accumulated other comprehensive income (loss) . . . . .  | (15,530)                          | (36,320)   |
| Treasury stock, at cost, 849,539 shares at both December 31, 2010 and 2009 . . . . .   | (6,565)                           | (6,565)    |
| Total stockholders' equity . . . . .   | 380,447                           | 282,468    |
| Total liabilities and stockholders' equity . . . . .   | \$ 624,442                        | \$ 748,186 |

See accompanying Notes to Consolidated Financial Statements.

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

|   | Years Ended December 31,              |                     |                     |
|---|---------------------------------------|---------------------|---------------------|
|   | 2010                                  | 2009                | 2008                |
|   | (In thousands, except per share data) |                     |                     |
| Product revenues .....  | \$165,202                             | \$ 237,664          | \$ 417,511          |
| Service revenues .....  | 279,120                               | 182,117             | 262,012             |
| Total net revenues .....  | <u>444,322</u>                        | <u>419,781</u>      | <u>679,523</u>      |
| Cost of products .....  | 94,658                                | 165,923             | 289,795             |
| Cost of services .....  | 183,931                               | 121,720             | 181,980             |
| Gross profit .....  | <u>165,733</u>                        | <u>132,138</u>      | <u>207,748</u>      |
| Operating expenses:   |                                       |                     |                     |
| Research, development and engineering .....   | 25,227                                | 44,855              | 49,541              |
| Marketing and sales .....   | 30,405                                | 34,945              | 47,854              |
| General and administrative .....  | 57,254                                | 72,510              | 70,893              |
| Impairment of goodwill and intangible assets .....  | —                                     | 38,044              | 252,283             |
| Total operating expenses .....  | <u>112,886</u>                        | <u>190,354</u>      | <u>420,571</u>      |
| Income (loss) from operations .....   | 52,847                                | (58,216)            | (212,823)           |
| Interest expense, net, including an \$18.8 million write-off of debt discount and debt issuance costs in 2010 ..... | (30,770)                              | (33,950)            | (11,284)            |
| Loss on disposition of land division .....  | (38,115)                              | —                   | —                   |
| Fair value adjustment of warrant .....  | 12,788                                | (29,401)            | —                   |
| Equity in losses of INOVA Geophysical .....   | (23,724)                              | —                   | —                   |
| Gain on legal settlement .....  | 24,500                                | —                   | —                   |
| Impairment of cost method investments .....   | (7,650)                               | (4,454)             | —                   |
| Other income (expense) .....  | 228                                   | (4,023)             | 4,200               |
| Income (loss) before income taxes .....   | (9,896)                               | (130,044)           | (219,907)           |
| Income tax expense (benefit) .....  | 26,942                                | (19,985)            | 1,131               |
| Net loss .....  | (36,838)                              | (110,059)           | (221,038)           |
| Preferred stock dividends .....   | 1,936                                 | 3,500               | 3,889               |
| Preferred stock beneficial conversion charge .....  | —                                     | —                   | 68,786              |
| Net loss applicable to common shares .....  | <u>\$ (38,774)</u>                    | <u>\$ (113,559)</u> | <u>\$ (293,713)</u> |
| Net loss per share:   |                                       |                     |                     |
| Basic .....   | \$ (0.27)                             | \$ (1.03)           | \$ (3.06)           |
| Diluted .....   | \$ (0.27)                             | \$ (1.03)           | \$ (3.06)           |
| Weighted average number of common shares outstanding:   |                                       |                     |                     |
| Basic .....   | 144,278                               | 110,516             | 95,887              |
| Diluted .....   | 144,278                               | 110,516             | 95,887              |

See accompanying Notes to Consolidated Financial Statements.

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

|  | <b>Years Ended December 31</b> |                  |                  |
|--|--------------------------------|------------------|------------------|
|  | <b>2010</b>                    | <b>2009</b>      | <b>2008</b>      |
| (In thousands)   |                                |                  |                  |
| <b>Cash flows from operating activities:</b>   |                                |                  |                  |
| Net loss   | \$ (36,838)                    | \$(110,059)      | \$(221,038)      |
| Adjustments to reconcile net loss to net cash provided by operating activities:                          |                                |                  |                  |
| Depreciation and amortization (other than multi-client library)  | 24,795                         | 47,911           | 33,052           |
| Amortization of multi-client data library  | 85,940                         | 48,449           | 80,532           |
| Stock-based compensation expense related to stock options, nonvested stock, and employee stock purchases | 8,147                          | 12,671           | 8,306            |
| Bad debt expense   | 1,689                          | 3,528            | 4,852            |
| Amortization of debt discount  | 8,656                          | 6,732            | 816              |
| Write-off of unamortized debt issuance costs   | 10,121                         | —                | —                |
| Fair value adjustment of warrant   | (12,788)                       | 29,401           | —                |
| Loss on disposition of land division   | 38,115                         | —                | —                |
| Equity in losses of INOVA Geophysical  | 23,724                         | —                | —                |
| Impairment of goodwill and intangible assets   | —                              | 38,044           | 252,283          |
| Impairment of cost method investments  | 7,650                          | 4,454            | —                |
| Deferred income tax  | 22,207                         | (38,150)         | (17,549)         |
| Profit on sale of rental assets  | —                              | (524)            | (3,190)          |
| <b>Change in operating assets and liabilities:</b>   |                                |                  |                  |
| Accounts and notes receivable  | 7,826                          | 41,936           | 37,673           |
| Unbilled receivables   | (48,935)                       | 14,817           | (14,084)         |
| Inventories  | (16,138)                       | 18,582           | (89,998)         |
| Accounts payable, accrued expenses and accrued royalties   | 9,550                          | (72,140)         | 46,160           |
| Deferred revenue   | 7,281                          | (4,188)          | (6,088)          |
| Other assets and liabilities   | (7,634)                        | 10,522           | (12)             |
| Net cash provided by operating activities  | <u>133,368</u>                 | <u>51,986</u>    | <u>111,715</u>   |
| <b>Cash flows from investing activities:</b>   |                                |                  |                  |
| Purchase of property, plant and equipment  | (7,372)                        | (2,966)          | (17,539)         |
| Investment in multi-client data library  | (64,426)                       | (89,635)         | (110,362)        |
| Proceeds from disposition of land division, net of fees paid   | 99,790                         | —                | —                |
| Business acquisition, net of cash of acquired business   | —                              | —                | (232,158)        |
| Proceeds from the sale of fixed assets and rental equipment  | —                              | 1,972            | 5,434            |
| Other investing activities   | (500)                          | (1,009)          | —                |
| Net cash provided by (used in) investing activities  | <u>27,492</u>                  | <u>(91,638)</u>  | <u>(354,625)</u> |
| <b>Cash flows from financing activities:</b>   |                                |                  |                  |
| Borrowings under revolving line of credit  | 104,000                        | 77,000           | 235,000          |
| Repayments under revolving line of credit  | (193,429)                      | (25,000)         | (169,000)        |
| Net proceeds from issuance of debt   | 105,695                        | 19,218           | 160,308          |
| Net proceeds from issuance of stock  | 38,039                         | 38,220           | —                |
| Payments on notes payable and long-term debt   | (145,558)                      | (81,517)         | (18,082)         |
| Costs associated with debt amendments  | —                              | (4,630)          | —                |
| Issuance of preferred stock  | —                              | —                | 35,000           |
| Payment of preferred dividends   | (1,936)                        | (3,500)          | (3,889)          |
| Proceeds from employee stock purchases and exercise of stock options                                     | 1,071                          | 283              | 6,284            |
| Restricted stock cancelled for employee minimum income taxes   | (612)                          | (345)            | (1,660)          |
| Other financing activities   | —                              | —                | 328              |
| Net cash (used in) provided by financing activities  | <u>(92,730)</u>                | <u>19,729</u>    | <u>244,289</u>   |
| Effect of change in foreign currency exchange rates on cash and cash equivalents                         | 72                             | 968              | (2,616)          |
| Net increase (decrease) in cash and cash equivalents   | 68,202                         | (18,955)         | (1,237)          |
| Cash and cash equivalents at beginning of period   | 16,217                         | 35,172           | 36,409           |
| Cash and cash equivalents at end of period   | <u>\$ 84,419</u>               | <u>\$ 16,217</u> | <u>\$ 35,172</u> |
| <b>Non-cash items from investing and financing activities:</b>   |                                |                  |                  |
| Expiration of BGP Warrant  | \$ 32,001                      | \$ —             | \$ —             |
| Conversion of BGP Domestic Convertible Note to equity  | 28,571                         | —                | —                |
| Investment in INOVA Geophysical  | 119,000                        | —                | —                |
| Exchange of Reservoir Exploration Technology receivables into shares                                     | 9,516                          | —                | —                |
| Investment in multi-client data library financed through trade payables                                  | 3,429                          | —                | —                |
| Transfer of inventory to rental equipment  | 3,606                          | 48,560           | —                |
| Issuance of stock for ARAM acquisition   | —                              | —                | 48,958           |
| Issuance of seller notes for ARAM acquisition  | —                              | —                | 45,000           |
| <b>Supplemental disclosure of cash flow information:</b>   |                                |                  |                  |
| Interest paid  | \$ 11,798                      | \$ 24,051        | \$ 5,251         |
| Income taxes paid  | 7,263                          | 22,184           | 14,894           |

See accompanying Notes to Consolidated Financial Statements.

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND**  
**COMPREHENSIVE INCOME (LOSS)**

|   | Cumulative Convertible Preferred Stock |           | Common Stock |          | Additional Paid - In Capital | Accumulated Deficit | Accumulated Other Comprehensive Income (Loss) | Treasury Stock | Total Stockholders' Equity |
|---|--|-----------|--------------|----------|------------------------------|---------------------|---|----------------|----------------------------|
|   | Shares                                 | Amount    | Shares       | Amount   |                              |                     |   |                |                            |
| Balance at January 1, 2008  | —                                      | \$ —      | 93,847,608   | \$ 948   | \$556,867                    | \$ (80,451)         | \$ 5,460                                      | \$ (6,584)     | \$ 476,240                 |
| Comprehensive income (loss):  |  |           |              |          |                              |                     |   |                |                            |
| Net loss  | —                                      | —         | —            | —        | —                            | (221,038)           | —   | —              | (221,038)                  |
| Translation adjustment  | —                                      | —         | —            | —        | —                            | —                   | (61,319)                                      | —              | (61,319)                   |
| Total comprehensive loss  | —                                      | —         | —            | —        | —                            | —                   | —   | —              | (282,357)                  |
| Preferred stock dividends   | —                                      | —         | —            | —        | (3,889)                      | —                   | —   | —              | (3,889)                    |
| Reclassification of preferred stock to equity   | 70,000                                 | 68,786    | —            | —        | —                            | —                   | —   | —              | 68,786                     |
| Stock-based compensation expense  | —                                      | —         | —            | —        | 8,306                        | —                   | —   | —              | 8,306                      |
| Purchase of treasury stock  | —                                      | —         | (2,745)      | —        | —                            | —                   | —   | (39)           | (39)                       |
| Issuance of stock for ARAM acquisition  | —                                      | —         | 3,629,211    | 36       | 48,922                       | —                   | —   | —              | 48,958                     |
| Exercise of stock options   | —                                      | —         | 656,166      | 6        | 4,842                        | —                   | —   | —              | 4,848                      |
| Vesting of restricted stock units/awards  | —                                      | —         | 550,083      | 5        | (5)                          | —                   | —   | —              | —                          |
| Restricted stock cancelled for employee minimum income taxes                                      | —                                      | —         | (101,991)    | —        | (1,660)                      | —                   | —   | —              | (1,660)                    |
| Issuance of stock for the ESPP  | —                                      | —         | 109,943      | 1        | 1,474                        | —                   | —   | —              | 1,475                      |
| Conversion of 5.5% convertible senior notes   | —                                      | —         | 925,926      | 9        | 3,996                        | —                   | —   | —              | 4,005                      |
| Tax benefits from stock-based compensation  | —                                      | —         | —            | —        | 271                          | —                   | —   | —              | 271                        |
| Issuance of treasury stock  | —                                      | —         | 7,725        | —        | 65                           | —                   | —   | 61             | 126                        |
| Other equity adjustments  | —                                      | —         | —            | (9)      | 9                            | —                   | —   | —              | —                          |
| Balance at December 31, 2008  | 70,000                                 | 68,786    | 99,621,926   | 996      | 619,198                      | (301,489)           | (55,859)                                      | (6,562)        | 325,070                    |
| Comprehensive income (loss):  |  |           |              |          |                              |                     |   |                |                            |
| Net loss  | —                                      | —         | —            | —        | —                            | (110,059)           | —   | —              | (110,059)                  |
| Translation adjustment  | —                                      | —         | —            | —        | —                            | —                   | 19,539  | —              | 19,539                     |
| Total comprehensive loss  | —                                      | —         | —            | —        | —                            | —                   | —   | —              | (90,520)                   |
| Preferred stock dividends   | —                                      | —         | —            | —        | (3,500)                      | —                   | —   | —              | (3,500)                    |
| Stock-based compensation expense  | —                                      | —         | —            | —        | 12,671                       | —                   | —   | —              | 12,671                     |
| Purchase of treasury stock  | —                                      | —         | (1,117)      | —        | —                            | —                   | —   | (3)            | (3)                        |
| Issuance of stock   | —                                      | —         | 18,500,000   | 185      | 38,035                       | —                   | —   | —              | 38,220                     |
| Exercise of stock options   | —                                      | —         | 9,837        | —        | 21                           | —                   | —   | —              | 21                         |
| Vesting of restricted stock units/awards  | —                                      | —         | 528,284      | 5        | (5)                          | —                   | —   | —              | —                          |
| Restricted stock cancelled for employee minimum income taxes                                      | —                                      | —         | (79,878)     | —        | (99)                         | —                   | —   | —              | (99)                       |
| Issuance of stock for the ESPP  | —                                      | —         | 109,650      | 1        | 263                          | —                   | —   | —              | 264                        |
| Tax benefits from stock-based compensation  | —                                      | —         | —            | —        | 344                          | —                   | —   | —              | 344                        |
| Balance at December 31, 2009  | 70,000                                 | 68,786    | 118,688,702  | 1,187    | 666,928                      | (411,548)           | (36,320)                                      | (6,565)        | 282,468                    |
| Comprehensive income (loss):  |  |           |              |          |                              |                     |   |                |                            |
| Net loss  | —                                      | —         | —            | —        | —                            | (36,838)            | —   | —              | (36,838)                   |
| Translation adjustment  | —                                      | —         | —            | —        | —                            | —                   | (266)   | —              | (266)                      |
| Change in fair value of effective cash flow hedges (net of taxes)                                 | —                                      | —         | —            | —        | —                            | —                   | (60)  | —              | (60)                       |
| Equity interest in INOVA Geophysical's other comprehensive income                                 | —                                      | —         | —            | —        | —                            | —                   | (103)   | —              | (103)                      |
| Total comprehensive loss  | —                                      | —         | —            | —        | —                            | —                   | —   | —              | (37,267)                   |
| Accumulated translation adjustments recognized through earnings upon disposition of land division | —                                      | —         | —            | —        | —                            | —                   | 21,219  | —              | 21,219                     |
| Preferred stock dividends   | —                                      | —         | —            | —        | (1,936)                      | —                   | —   | —              | (1,936)                    |
| Stock-based compensation expense  | —                                      | —         | —            | —        | 8,147                        | —                   | —   | —              | 8,147                      |
| Modification of stock awards (disposed of land division)  | —                                      | —         | —            | —        | 1,713                        | —                   | —   | —              | 1,713                      |
| Issuance of stock to BGP  | —                                      | —         | 23,789,536   | 238      | 105,406                      | —                   | —   | —              | 105,644                    |
| Exercise of stock options   | —                                      | —         | 323,610      | 3        | 1,068                        | —                   | —   | —              | 1,071                      |
| Vesting of restricted stock units/awards  | —                                      | —         | 486,168      | 5        | (5)                          | —                   | —   | —              | —                          |
| Restricted stock cancelled for employee minimum income taxes                                      | —                                      | —         | (76,568)     | (1)      | (611)                        | —                   | —   | —              | (612)                      |
| Conversion of cumulative convertible preferred stock  | (43,000)                               | (41,786)  | 9,659,231    | 97       | 41,689                       | —                   | —   | —              | —                          |
| Balance at December 31, 2010  | 27,000                                 | \$ 27,000 | 152,870,679  | \$ 1,529 | \$822,399                    | \$(448,386)         | \$(15,530)                                    | \$(6,565)      | \$ 380,447                 |

See accompanying Notes to Consolidated Financial Statements.



**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(1) Summary of Significant Accounting Policies**

*General Description and Principles of Consolidation*

ION Geophysical Corporation and its wholly-owned subsidiaries offer a full suite of related products and services for seismic data acquisition and processing. The consolidated financial statements include the accounts of ION Geophysical Corporation and its wholly-owned subsidiaries (collectively referred to as the "Company" or "ION"). Inter-company balances and transactions have been eliminated. Certain reclassifications were made to previously reported amounts in the consolidated financial statements and notes thereto to make them consistent with the current presentation format.

*Overview of Joint Venture with BGP*

On March 25, 2010, the Company completed the disposition of most of its land seismic equipment businesses in connection with its formation of a land equipment joint venture with BGP, Inc., China National Petroleum Corporation ("BGP"). BGP is a subsidiary of China National Petroleum Corporation ("CNPC") and is a leading global geophysical services contracting company. The resulting joint venture company, organized under the laws of the People's Republic of China, is named INOVA Geophysical Equipment Limited ("INOVA Geophysical"). BGP owns a 51% interest in INOVA Geophysical, and the Company owns a 49% interest. INOVA Geophysical is managed through a Board of Directors consisting of four members appointed by BGP and three members appointed by the Company. The results of operations and financial condition of the Company as of and for the twelve months ended December 31, 2010 have been materially affected by this disposition, which affects the comparability of certain of the financial information contained in this Annual Report on Form 10-K. The Company accounts for its 49% interest in INOVA Geophysical as an equity method investment. As provided by Accounting Standards Codification ("ASC") 815 "Investments," the Company accounts for its share of earnings in INOVA Geophysical on a one fiscal quarter lag basis. Thus, the Company's share of INOVA Geophysical's results for the period from March 26, 2010 through September 30, 2010, are included in the Company's financial results for the twelve months ended December 31, 2010. See further discussion regarding the summarized financial information of INOVA Geophysical at Note 3 "*Equity Method Investment in INOVA Geophysical.*"

*Use of Estimates*

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates are made at discrete points in time based on relevant market information. These estimates may be subjective in nature and involve uncertainties and matters of judgment and, therefore, cannot be determined with precision. Areas involving significant estimates include, but are not limited to, accounts and unbilled receivables, inventory valuation, sales forecasts related to multi-client data libraries, goodwill and intangible asset valuation and deferred taxes. Actual results could materially differ from those estimates.

*Cash and Cash Equivalents*

The Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents. At December 31, 2010 and 2009, there was \$2.5 million and \$1.5 million, respectively, of short-term restricted cash used to secure standby and commercial letters of credit, which is included within Other Current Assets.

### ***Accounts and Unbilled Receivables***

Accounts and unbilled receivables are recorded at cost, less the related allowance for doubtful accounts. The Company considers current information and events regarding the customers' ability to repay their obligations, such as the length of time the receivable balance is outstanding, the customers' credit worthiness and historical experience. Unbilled receivables relate to revenues recognized on multi-client surveys and imaging services on a proportionate basis and on licensing of multi-client data libraries for which invoices have not yet been presented to the customer.

### ***Inventories***

Inventories are stated at the lower of cost (primarily first-in, first-out method) or market. The Company provides reserves for estimated obsolescence or excess inventory equal to the difference between cost of inventory and its estimated market value based upon assumptions about future demand for the Company's products and market conditions.

### ***Property, Plant and Equipment***

Property, plant and equipment are stated at cost. Depreciation expense is provided straight-line over the following estimated useful lives:

|                                  | <u>Years</u> |
|----------------------------------|--------------|
| Machinery and equipment .....    | 3-7          |
| Buildings .....                  | 5-25         |
| Rental equipment .....           | 2-5          |
| Leased equipment and other ..... | 1-10         |

Expenditures for renewals and betterments are capitalized; repairs and maintenance are charged to expense as incurred. The cost and accumulated depreciation of assets sold or otherwise disposed of are removed from the accounts and any gain or loss is reflected in operating expenses.

The Company evaluates the recoverability of long-lived assets, including property, plant and equipment, when indicators of impairment exist, relying on a number of factors including operating results, business plans, economic projections, and anticipated future cash flows. Impairment in the carrying value of an asset held for use is recognized whenever anticipated future cash flows (undiscounted) from an asset are estimated to be less than its carrying value. The amount of the impairment recognized is the difference between the carrying value of the asset and its fair value. There were no significant impairment charges with respect to the Company's property, plant and equipment during 2010, 2009 and 2008.

### ***Multi-Client Data Library***

The multi-client data library consists of seismic surveys that are offered for licensing to customers on a non-exclusive basis. The capitalized costs include costs paid to third parties for the acquisition of data and related activities associated with the data creation activity and direct internal processing costs, such as salaries, benefits, computer-related expenses, and other costs incurred for seismic data project design and management. For 2010, 2009, and 2008, the Company capitalized, as part of its multi-client data library, \$2.8 million, \$3.8 million, and \$5.4 million, respectively, of direct internal processing costs. At December 31, 2010 and 2009, multi-client data library costs and accumulated amortization consisted of the following:

|   | <u>December 31,</u> |                   |
|---|---------------------|-------------------|
|   | <u>2010</u>         | <u>2009</u>       |
| Gross costs of multi-client data creation ..... | \$ 405,371          | \$ 337,516        |
| Less accumulated amortization .....             | (292,751)           | (206,811)         |
| Total .....                                     | <u>\$ 112,620</u>   | <u>\$ 130,705</u> |

The Company's method of amortizing the costs of an in-process multi-client data library (the period during which the seismic data is being acquired and/or processed) is the percentage of actual revenue to the total estimated revenue (or ultimate revenue) multiplied by the total cost of the project (the sales forecast method). Once a multi-client data library is complete, the survey data is considered "off-the-shelf" and the Company's method of amortization is then the greater of (i) the sales forecast method or (ii) the straight-line basis over a four-year period. The greater of the sales forecast method or the straight-line amortization policy is applied on a cumulative basis at the individual survey level. Under this policy, the Company first records amortization using the sales forecast method. The cumulative amortization recorded for each survey is then compared with the cumulative straight-line amortization. If the cumulative straight-line amortization is higher for any specific survey, additional amortization expense is recorded, resulting in accumulated amortization being equal to the cumulative straight-line amortization for such survey.

The Company estimates the ultimate revenue expected to be derived from a particular seismic data survey over its estimated useful economic life to determine the costs to amortize, if greater than straight-line amortization. That estimate is made by the Company at the project's initiation. For a completed multi-client survey, the Company reviews the estimate quarterly. If during any such review, the Company determines that the ultimate revenue for a survey is expected to be more or less than the original estimate of ultimate revenue for such survey, the Company decreases or increases (as the case may be) the amortization rate attributable to the future revenue from such survey. In addition, in connection with such reviews, the Company evaluates the recoverability of the multi-client data library, and, if required under ASC 360 "*Accounting for the Impairment and Disposal of Long-Lived Assets*," (ASC 360) records an impairment charge with respect to such data. There were no significant impairment charges associated with the Company's multi-client data library during 2010, 2009 and 2008.

#### ***Computer Software***

In February 2004, the Company acquired Concept Systems Holding Limited (Concept Systems). A portion of the purchase price was allocated to software available-for-sale and included within Other Assets. The capitalized costs of computer software are charged to costs of products in the period sold, using the greater of (i) the percentage of actual sales to the total estimated sales multiplied by the total costs of the software or (ii) a straight-line amortization rate equal to the software costs divided by its remaining estimated economic life. At December 31, 2010, the total costs of software were \$11.3 million, less accumulated amortization of \$11.1 million. Amortization expense was \$1.6 million, \$1.6 million and \$2.0 million, respectively, for 2010, 2009 and 2008.

#### ***Cost Method Investments***

Certain of the Company's investments are accounted for under the cost method. The Company's cost method investments that have quoted prices from active markets are classified as "available-for-sale" and revalued at each reporting date, with all unrealized gains or losses, net of taxes, included in accumulated other comprehensive income (outside of earnings) until realized or until such time that a decline in fair value below cost is deemed to be other-than-temporary. The Company's cost method investments for which quoted market prices are not available are recorded at cost and reviewed periodically if there are events or changes in circumstances that may have a significant adverse effect on the fair value of the investments. See further discussion below, including the impairment of a cost method investment, at Note 9 "*Cost Method Investments*." The aggregate carrying amount of cost method investments was \$2.4 million and \$0.5 million at December 31, 2010 and 2009, respectively, and included within Other Current Assets or Other Assets, as applicable.

#### ***Equity Method Investments***

The Company uses the equity method of accounting for investments in entities in which the Company has an ownership interest between 20% and 50% and exercises significant influence. Under this method, an investment is carried at the acquisition cost, plus the Company's equity in undistributed earnings or losses

since acquisition, less distributions received. See further discussion regarding the Company's equity method investment in INOVA Geophysical at Note 3 "*Equity Method Investment in INOVA Geophysical.*"

### ***Financial Instruments***

Fair value estimates are made at discrete times based on relevant market information. These estimates may be subjective in nature and involve uncertainties and matters of significant judgment and, therefore, cannot be determined with precision. The Company believes that the carrying amount of its cash and cash equivalents, accounts and unbilled receivables, and accounts payable approximate the fair values at those dates. The fair market value of the Company's outstanding notes payable and long-term debt was determined to be \$103.2 million at December 31, 2010 compared to a carrying value of \$108.7 million. The difference in the carrying value and fair value of the Company's outstanding notes payable and long-term debt relates to the term loan under the Credit Facility. As described in Note 13 "*Notes Payable, Long-term debt, Lease Obligations and Interest Rate Caps,*" INOVA Geophysical is an additional guarantor under the Credit Agreement. The fair value of the term loan was calculated using an estimated interest rate for non-guaranteed debt.

### ***Derivative Instruments (Interest Rate Caps)***

The Company records all derivatives on the balance sheet at fair value. Derivatives used to hedge the exposure to variability in expected future cash flows, or other types of forecasted transactions, are considered cash flow hedges. For derivatives designated as cash flow hedges, the effective portion of changes in the fair value of the derivative is initially reported in other comprehensive income (outside of earnings) and subsequently reclassified to earnings when the hedged transaction affects earnings, and the ineffective portion of changes in the fair value of the derivative is recognized directly in earnings.

The Company assesses the effectiveness of each hedging relationship under the hypothetical derivative method, which means that the Company compares the cumulative change in fair value of the actual cap to the cumulative change in fair value of a hypothetical cap having terms that exactly match the critical terms of the hedged transaction. For derivatives that do not qualify for hedge accounting or when hedge accounting is discontinued, the changes in fair value of the derivative instrument are recognized directly in earnings.

The Company's objective in using derivative instruments is to add stability to its interest expense and to manage its exposure to interest rate movements or other identified risks. To accomplish this objective, the Company is using interest rate caps, designated as cash flow hedges, which involve the receipt of fixed-rate payments in exchange for variable-rate amounts over the life of the agreement. See further discussion at Note 13 "*Notes Payable, Long-term Debt, Lease Obligations and Interest Rate Caps.*"

Additionally, in 2008, 2009 and 2010, the Company periodically entered into economic cash flow and fair value hedges designed to minimize the risks associated with exchange rate fluctuations. The impact to the financial statements is insignificant for all periods with any gains and losses included in the income statement.

### ***Goodwill and Other Intangible Assets***

Goodwill is allocated to reporting units, which are either the operating segment or one reporting level below the operating segment. For purposes of performing the impairment test for goodwill as required by ASC 350 "*Intangibles — Goodwill and Other,*" (ASC 350) the Company established the following reporting units: Marine Systems, Sensor Geophone, Software, and Solutions. To determine the fair value of these reporting units, the Company uses a discounted future returns valuation method.

In accordance with ASC 350, the Company is required to evaluate the carrying value of its goodwill at least annually for impairment, or more frequently if facts and circumstances indicate that it is more likely than not impairment has occurred. The Company formally evaluates the carrying value of its goodwill for impairment as of December 31 for each of its reporting units. If the carrying value of a reporting unit of an entity that includes goodwill is determined to be more than the fair value of the reporting unit, there exists the possibility of impairment of goodwill. An impairment loss of goodwill is measured in two steps by first

allocating the fair value of the reporting unit to net assets and liabilities including recorded and unrecorded other intangible assets to determine the implied carrying value of goodwill. The next step is to measure the difference between the carrying value of goodwill and the implied carrying value of goodwill, and, if the implied carrying value of goodwill is less than the carrying value of goodwill, an impairment loss is recorded equal to the difference. See further discussion, including the impairment of goodwill in 2008, below at Note 10 “— *Goodwill*.”

The intangible assets other than goodwill relate to proprietary technology, patents, customer relationships and trade names that are amortized over the estimated periods of benefit (ranging from 4 to 20 years). Following the guidance of ASC 360, the Company reviews the carrying values of these intangible assets for impairment if events or changes in the facts and circumstances indicate that their carrying value may not be recoverable. Any impairment determined is recorded in the current period and is measured by comparing the fair value of the related asset to its carrying value. See further discussion, including the impairment of intangible assets in 2008 and 2009, below at Note 11 “— *Intangible Assets*.”

Intangible assets amortized on a straight-line basis are:

|                                    | <u>Estimated Useful Life<br/>(Years)</u> |
|------------------------------------|--|
| Proprietary technology .....       | 4-7                                      |
| Patents .....                      | 5-20                                     |
| Trade names .....                  | 5  |
| Intellectual property rights ..... | 5  |

The Company amortizes its customer relationship intangible assets on an accelerated basis over a 15-year period, using the undiscounted cash flows of the initial valuation models. The Company uses an accelerated basis as these intangible assets were initially valued using an income approach, with an attrition rate that resulted in a pattern of declining cash flows over a 15-year period.

#### ***Fair Value Measurements***

ASC 820-10, “*Fair Value Measurements*,” defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. This standard establishes a fair value hierarchy based on whether the inputs to valuation techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Company’s own assumptions about the assumptions market participants would use, which are broken out into three levels. Level 1 inputs are quoted prices from active markets for identical assets and liabilities at the measurement date, while Level 2 inputs are inputs other than quoted prices that are observable, either directly or indirectly. Level 3 inputs are unobservable and relate to assets and liabilities whose value is determined using pricing models, discounted cash flow methodologies, or similar techniques reflecting the Company’s own assumptions and requiring significant management judgment.

*Investment in INOVA Geophysical* — As part of the formation of INOVA Geophysical, the Company estimated the fair value of its 49% interest in INOVA Geophysical. The fair value was determined on a discounted cash flow basis based upon operating forecasts, which included assumptions about future market and economic conditions. The valuation utilized Level 3 inputs, and the main drivers in the calculation were INOVA Geophysical’s operational five-year forecast, which included revenues, operating expenses and capital expenditures. The Company corroborated its discounted cash flow analysis with a fair value analysis of the cash and other assets contributed by BGP for its 51% interest in INOVA Geophysical. On March 25, 2010, the Company recognized an asset of \$119.0 million, which represented the fair value of 49% of INOVA Geophysical.

*Goodwill and Intangible Assets* — In 2010, the Company performed a valuation of its goodwill and in 2009 and 2008 a valuation on both its goodwill and intangible asset balances. The valuations were performed using Level 3 inputs. The fair value of these assets was estimated using a discounted cash flow model, which included a variety of inputs. The key inputs for the model included the operational five-year forecast for the

Company, the then-current market discount factor and the forecasted cash flows related to each intangible asset. The forecasted operational and cash flow amounts were determined using the current activity levels in the Company as well as the current and expected short-term market conditions. For further information, see Note 10 “— Goodwill” and Note 11 “— Intangible Assets.”

*Cost Method Investments* — In 2010, the Company performed a fair value analysis of its “available-for-sale” investment in RXT based upon Level 1 inputs, utilizing quoted prices from active markets. In 2009, the Company performed a fair value analysis for its cost method investment for which quoted market prices were not available based on Level 3 inputs, utilizing current financial data and operational forecasts with the main drivers in the calculation being the investment’s forecasted cash flows and its current obligations. For further information, see Note 9 “— Cost Method Investments.”

*Interest Rate Caps* — In 2010, the Company performed a valuation of its interest rate caps based on Level 2 inputs, such as interest rates and yield curves that are observable at commonly quoted intervals.

*Warrant* — In October 2009, the Company issued to BGP a warrant (the “Warrant”), which had an initial fair value of \$15.4 million. On December 31, 2009 and on March 25, 2010 (its termination date), the Warrant was re-valued at approximately \$44.8 million and 32.0 million, respectively. The fair value of the Warrant was based on Level 2 inputs, using a Black-Scholes model. The key inputs for the Black-Scholes model included the current market price of the Company’s common stock, the yield on the common stock dividend payments (0%), risk-free interest rates, the expected term (March 2010) and the Company stock’s historical and implied volatility. For further information, see Note 2 “— Formation of INOVA Geophysical and Related Financing Transactions.”

### ***Revenue Recognition***

The Company derives revenue from the sale of (i) acquisition systems and other seismic equipment within its Systems segment; (ii) multi-client surveys, licenses of “off-the-shelf” data libraries and imaging services within its Solutions segment; and (iii) navigation, survey and quality control software systems within its Software segment.

*Acquisition Systems and Other Seismic Equipment* — For the sales of acquisition systems and other seismic equipment, the Company follows the requirements of ASC 605-10 “Revenue Recognition” and recognizes revenue when (a) evidence of an arrangement exists; (b) the price to the customer is fixed and determinable; (c) collectibility is reasonably assured; and (d) the acquisition system or other seismic equipment is delivered to the customer and risk of ownership has passed to the customer, or, in the limited case where a substantive customer-specified acceptance clause exists in the contract, the later of delivery or when the customer-specified acceptance is obtained.

*Multi-Client Surveys, Data Libraries and Imaging Services* — Revenues from multi-client surveys are recognized as the seismic data is acquired and/or processed on a proportionate basis as work is performed. Under this method, the Company recognizes revenues based upon quantifiable measures of progress, such as kilometers acquired or days processed. Upon completion of a multi-client seismic survey, the survey data is considered “off-the-shelf” and licenses to the survey data are sold to customers on a non-exclusive basis. The license of a completed multi-client survey is represented by the license of one standard set of data. Revenues on licenses of completed multi-client data surveys are recognized when (a) a signed final master geophysical data license agreement and accompanying supplemental license agreement are returned by the customer; (b) the purchase price for the license is fixed or determinable; (c) delivery or performance has occurred; (d) and no significant uncertainty exists as to the customer’s obligation, willingness or ability to pay. In limited situations, the Company has provided the customer with a right to exchange seismic data for another specific seismic data set. In these limited situations, the Company recognizes revenue at the earlier of the customer exercising its exchange right or the expiration of the customer’s exchange right.

Revenues from all imaging and other services are recognized when persuasive evidence of an arrangement exists, the price is fixed or determinable, and collectibility is reasonably assured. Revenues from contract services performed on a day-rate basis are recognized as the service is performed.

*Software* — For the sales of navigation, survey and quality control software systems, the Company follows the requirements of ASC 985-605 “*Software Revenue Recognition*.” The Company recognizes revenue from sales of these software systems when (a) evidence of an arrangement exists; (b) the price to the customer is fixed and determinable; (c) collectibility is reasonably assured; and (d) the software is delivered to the customer and risk of ownership has passed to the customer, or, in the limited case where a substantive customer-specified acceptance clause exists, the later of delivery or when the customer-specified acceptance is obtained. These arrangements generally include the Company providing related services, such as training courses, engineering services and annual software maintenance. The Company allocates revenue to each element of the arrangement based upon vendor-specific objective evidence (“VSOE”) of fair value of the element or, if VSOE is not available for the delivered element, the Company applies the residual method.

In addition to perpetual software licenses, the Company offers certain time-based software licenses. For time-based licenses, the Company recognizes revenue ratably over the contract term, which is generally two to five years.

*Multi-element Arrangements* — When separate elements (such as an acquisition system, other seismic equipment and/or imaging services) are contained in a single sales arrangement, or in related arrangements with the same customer, the Company follows the requirements of ASC 605-25 “*Accounting for Multiple-Element Revenue Arrangement*” (ASC 605-25). The multiple element arrangements guidance codified in ASC 605-25 was modified as a result of the final consensus reached in Accounting Standards Update (“ASU”) 2009-13, “*Revenue Arrangements with Multiple Deliverables*.” The Company adopted this new guidance as of January 1, 2010. Accordingly, the Company applied this guidance to transactions initiated or materially modified on or after January 1, 2010. The new guidance does not apply to software sales accounted for under ASC 985-605. There was not a material impact of adopting this guidance to the Company’s results for the twelve months ended December 31, 2010.

This guidance eliminated the residual method of allocation for multiple-deliverable revenue arrangements and requires that arrangement consideration be allocated at the inception of an arrangement to all deliverables using the relative selling price method. Per the provisions of this guidance, the Company allocates arrangement consideration to each deliverable qualifying as a separate unit of accounting in an arrangement based on its relative selling price. The Company determines its selling price using VSOE, if it exists, or otherwise third-party evidence (“TPE”). If neither VSOE nor TPE of selling price exists for a unit of accounting, the Company uses estimated selling price (“ESP”). The Company generally expects that it will not be able to establish TPE due to the nature of the markets in which the Company competes, and, as such, the Company typically will determine its selling price using VSOE or, if not available, ESP. VSOE is generally limited to the price charged when the same or similar product is sold on a standalone basis. If a product is seldom sold on a standalone basis, it is unlikely that the Company can determine VSOE for the product.

The objective of ESP is to determine the price at which the Company would transact if the product were sold by the Company on a standalone basis. The Company’s determination of ESP involves a weighting of several factors based on the specific facts and circumstances of the arrangement. Specifically, the Company will consider the anticipated margin on the particular deliverable, the selling price and profit margin for similar products and the Company’s ongoing pricing strategy and policies.

The Company believes this new guidance will principally impact its Systems segment. A typical arrangement within the Systems segment might involve the sale of various products of the Company’s acquisition systems and other seismic equipment. Products under these arrangements are often delivered to the customer within the same period, but in certain situations, depending upon product availability and the customer’s delivery requirements, the products could be delivered to the customer at different times. In these situations, the Company considers its products to be separate units of accounting provided the delivered product has value to the customer on a standalone basis. The Company considers a deliverable to have standalone value if the product is sold separately by the Company or another vendor or could be resold by the customer. Further, the Company’s revenue arrangements generally do not include a general right of return relative to the delivered products.

In addition, pursuant to the transitional requirements of the new multiple element revenue guidance, the Company adopted the guidance codified by ASU 2009-14, "*Certain Arrangements That Include Software Elements*," as of January 1, 2010. This guidance amends the accounting model for revenue arrangements that includes both tangible products and software elements, such that tangible products containing both software and non-software components that function together to deliver the tangible product's essential functionality are no longer within the scope of software revenue guidance. There was not a material impact to the Company's financial statements of adopting this guidance.

*Product Warranty* — The Company generally warrants that its manufactured equipment will be free from defects in workmanship, materials and parts. Warranty periods generally range from 30 days to three years from the date of original purchase, depending on the product. The Company provides for estimated warranty as a charge to costs of sales at the time of sale.

### ***Research, Development and Engineering***

Research, development and engineering costs primarily relate to activities that are designed to improve the quality of the subsurface image and overall acquisition economics of the Company's customers. The costs associated with these activities are expensed as incurred. These costs include prototype material and field testing expenses, along with the related salaries and stock-based compensation, facility costs, consulting fees, tools and equipment usage, and other miscellaneous expenses associated with these activities.

### ***Income Taxes***

Income taxes are accounted for under the liability method. Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, and operating loss and tax credit carry-forwards. Deferred income tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The Company reserves for a significant portion of U.S. deferred tax assets and will continue to reserve for a significant portion of U.S. deferred tax assets until there is sufficient evidence to warrant reversal (see Note 16 "*Income Taxes*"). The effect on deferred income tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

### ***Comprehensive Net Income (Loss)***

Comprehensive net income (loss), consisting of net income (loss), foreign currency translation adjustments, changes in fair value of effective cash flow hedges, equity interest in INOVA Geophysical's other comprehensive income and unrealized gains or losses on available-for-sale securities, is presented in the Consolidated Statements of Stockholders' Equity and Comprehensive Income (Loss). The balance in Accumulated Other Comprehensive Income (Loss) as shown in the Consolidated Balance Sheets as of December 31, 2010 and 2009, consists of foreign currency translation adjustments, changes in fair value of effective cash flow hedges, equity interest in INOVA Geophysical's other comprehensive income and unrealized gains or losses on available-for-sale securities.

### ***Foreign Currency Gains and Losses***

Assets and liabilities of the Company's subsidiaries operating outside the United States that account in a functional currency other than U.S. dollars have been translated to U.S. dollars using the exchange rate in effect at the balance sheet date. Results of foreign operations have been translated using the average exchange rate during the periods of operation. Resulting translation adjustments have been recorded as a component of Accumulated Other Comprehensive Income (Loss). Foreign currency transaction gains and losses are included in the Consolidated Statements of Operations as they occur. Total foreign currency transaction gains (losses) were \$1.1 million, \$(3.8) million and \$3.1 million for 2010, 2009 and 2008, respectively.



### ***Concentration of Credit and Foreign Sales Risks***

No single customer represented 10% or more of the Company's consolidated net revenues for 2010, 2009 and 2008; however, the Company's top five customers in total represented approximately 28%, 29% and 30%, respectively, of the Company's consolidated net revenues. The loss of any significant customers or deterioration in the Company's relationship with these customers could have a material adverse effect on the Company's results of operations and financial condition.

For 2010, the Company recognized \$136.8 million of sales to customers in Europe, \$51.5 million of sales to customers in Asia Pacific, \$18.4 million of sales to customers in Africa, \$10.5 million of sales to customers in the Middle East, \$46.0 million of sales to customers in Latin American countries and \$3.6 million of sales to customers in the Commonwealth of Independent States, or former Soviet Union (CIS). The majority of the Company's foreign sales are denominated in U.S. dollars. For 2010, 2009 and 2008, international sales comprised 60%, 64% and 60%, respectively, of total net revenues. For a number of years, the CIS and certain Latin American countries have experienced economic problems and uncertainties. However, given the global downturn that commenced in 2008, more countries and areas of the world have also experienced economic problems and uncertainties. To the extent that world events or economic conditions negatively affect the Company's future sales to customers in these and other regions of the world or the collectability of the Company's existing receivables, the Company's future results of operations, liquidity, and financial condition would be adversely affected.

### ***Stock-Based Compensation***

The Company accounts for stock based compensation under the recognition provisions of ASC 718, "Share-Based Payment" (ASC 718). The Company estimates the value of stock option awards on the date of grant using the Black-Scholes option pricing model. The determination of the fair value of stock-based payment awards on the date of grant using an option-pricing model is affected by the Company's stock price as well as assumptions regarding a number of subjective variables. These variables include, but are not limited to, expected stock price volatility over the term of the awards, actual and projected employee stock option exercise behaviors, risk-free interest rate, and expected dividends. The Company recognizes stock-based compensation on the straight-line basis over the service period of each award (generally the award's vesting period).

The accompanying financial statements for 2009 included approximately \$3.3 million of stock-based compensation expense related to 2008, 2007 and 2006. ASC 718 requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The prior-period stock-based compensation expense relates to adjustments between estimated and actual forfeitures that should have been recognized over the vesting period of such awards. Such amounts were not deemed material with respect to either the results of prior years or the results and the trend of earnings for 2009 and were therefore recorded in 2009.

### ***Recent Accounting Pronouncements***

In January 2010, the Financial Accounts Standards Board (FASB) issued ASU No. 2010-02, "Consolidation (Topic 810): Accounting and Reporting for Decreases in Ownership of a Subsidiary — a Scope Clarification" (ASU 2010-02). ASU 2010-02 amends ASC 810-10 "Consolidation — Overall" (ASC 810-10) and provides clarification on the entities and activities required to follow more specific guidance included in ASC 810-10. ASU 2010-02 clarifies that the scope of the decrease in ownership provisions of ASC 810-10 applies to (1) a subsidiary or groups of assets that is a business; (2) a subsidiary that is a business that is transferred to an equity method investee or joint venture; or (3) an exchange of a group of assets that constitutes a business for a non-controlling interest in an entity. This amendment affects entities that have previously adopted ASC 810-10. ASU 2010-02 is effective for fiscal years beginning on or after December 15, 2009. The adoption of ASU 2010-02 did not have a material impact to the Company's financial position, results of operation or cash flows.

In January 2010, the FASB issued ASU No. 2010-06, "Fair Value Measurements and Disclosures (Topic 820): Improving Disclosures about Fair Value Measurements" (ASU 2010-06). ASU 2010-06 amends the disclosure guidance with respect to fair value measurements. Specifically, the new guidance requires disclosure of amounts transferred in and out of Levels 1 and 2 fair value measurements, a reconciliation presented on a gross basis rather than a net basis of activity in Level 3 fair value measurements, greater disaggregation of the assets and liabilities for which fair value measurements are presented and more robust disclosure of the valuation techniques and inputs used to measure Level 2 and 3 fair value measurements. ASU 2010-06 is effective for interim and annual reporting periods beginning after December 15, 2009, with the exception of the new guidance around the Level 3 activity reconciliations, which is effective for fiscal years beginning after December 15, 2010. The adoption of ASU 2010-06 did not have a material impact to the Company's financial position, results of operation or cash flows.

## **(2) Formation of INOVA Geophysical and Related Financing Transactions**

On March 25, 2010, the Company completed the transactions contemplated under two definitive agreements relating to its proposed joint venture and related transactions with BGP:

- A Stock Purchase Agreement with BGP dated as of March 19, 2010 (the "Stock Purchase Agreement"), under which ION agreed to sell 23,789,536 shares of ION's common stock to BGP; and
- A Share Purchase Agreement with BGP dated as of March 24, 2010 (the "Share Purchase Agreement"), under which ION agreed to sell to BGP a 51% equity interest in INOVA Geophysical, thereby forming the joint venture with BGP.

The transactions under the Stock Purchase Agreement and the Share Purchase Agreement had been contemplated under the terms of a binding Term Sheet (the "Term Sheet") dated as of October 23, 2009 between ION and BGP.

### ***Proceeds from the Sales of ION Common Stock and Equity Interests in INOVA Geophysical***

As provided in the Stock Purchase Agreement, on March 25, 2010, ION issued to BGP 23,789,536 shares of ION's common stock in a privately-negotiated transaction at an effective purchase price of \$2.80 per share. The \$2.80 price per share had been agreed to by the parties in the Term Sheet.

The 23,789,536 shares of ION common stock issued by ION to BGP consisted of (i) 10,204,082 shares acquired upon BGP's conversion of the approximately \$28.6 million principal balance of indebtedness outstanding under a Convertible Promissory Note dated as of October 23, 2009 (the "Domestic Convertible Note") issued by the Company to Bank of China, New York Branch ("Bank of China") and (ii) 13,585,454 shares BGP purchased for \$2.80 cash per share under the Stock Purchase Agreement, resulting in total gross cash proceeds to ION from this sale of approximately \$38.0 million.

The Domestic Convertible Note, along with a Convertible Promissory Note made by the Company's subsidiary, ION International S.à r.l., to the order of Bank of China on October 23, 2009 (the "Foreign Convertible Note" and together with the Domestic Convertible Note, the "Convertible Notes") had been held by Bank of China in connection with bridge loan financing provided to ION by Bank of China in October 2009. On March 19, 2010, Bank of China assigned the Convertible Notes to BGP. On March 24, 2010, BGP delivered a notice to ION of its election to convert the entire outstanding principal amount under the Domestic Convertible Note into 10,204,082 shares of ION's common stock at the \$2.80 per share conversion price, simultaneously with and conditioned upon the closing of the transactions under the Stock Purchase Agreement. BGP did not convert any of the outstanding amount under the Foreign Convertible Note. The total outstanding indebtedness owed by the Company under the Foreign Convertible Note and all unpaid interest and fees on the Domestic Convertible Note were repaid by the Company, along with the other revolving credit loans under the Company's existing bank credit facility, using amounts borrowed under the Company's new Credit Facility and the \$38.0 million proceeds from the sale of 13,585,454 shares of ION common stock to BGP.

In October 2009, ION issued to BGP the Warrant. BGP elected not to exercise the Warrant and, on March 25, 2010, BGP terminated the Warrant and surrendered it to ION. After giving effect to the issuance of

the 23,789,536 shares of common stock of ION, BGP beneficially owned as of March 25, 2010, approximately 16.6% of the outstanding shares of ION common stock.

As part of the re-financing of the Company's debt, the Company, contemporaneously with the formation of INOVA Geophysical, entered into a new credit facility, which provided the Company with approximately \$106.3 million under a new five-year term loan and approximately \$100.0 million under a new revolving line of credit (the "Credit Facility"). In connection with the approximately \$38.0 million in cash received from BGP for BGP's purchase of 13,585,454 shares of ION common stock, the Company borrowed approximately \$191.3 million in new borrowings under ION's new Credit Facility, consisting of approximately \$106.3 million under a new five-year term loan and approximately \$85.0 million under a new revolving line of credit. These funds, along with certain cash on hand, were applied to repay a total of approximately \$226.0 million in indebtedness, including (i) approximately \$89.4 million in outstanding revolving indebtedness under ION's prior bank senior credit facility, (ii) approximately \$101.6 million in outstanding indebtedness under a five-year term loan under ION's prior bank senior credit facility and (iii) approximately \$35.0 million of outstanding indebtedness under an amended and restated subordinated promissory note dated December 30, 2008 that was payable to one of the selling shareholders in connection with ION's acquisition of ARAM Systems Ltd. in 2008.

ION then applied a portion of the \$108.5 million in cash proceeds (\$99.8 million, net of transaction and professional fees and cash balances, which were part of the disposed land divisions contributed to INOVA Geophysical) it received for BGP's purchase of the 51% equity interest in INOVA Geophysical (see "*Formation of ION Geophysical*" below) to repay the \$85.0 million of revolving loans that ION had borrowed to pay off the revolving indebtedness under ION's prior bank senior credit facility.

In connection with the Stock Purchase Agreement transactions, the Company entered into an Investor Rights Agreement with BGP that provides that, among other items:

- for so long as BGP owns as least 10% of the Company's outstanding shares of common stock, BGP will have the right to nominate one director to serve on the Board of Directors;
- subject to customary exceptions, BGP will have certain pre-emptive rights to subscribe for a number of shares of the Company's common stock or other securities that the Company is then offering as may be necessary to retain BGP's proportionate ownership of common stock that exists before that issuance; and
- BGP will have certain demand and piggyback registration rights with respect to resales of its shares.

#### *Formation of INOVA Geophysical*

On March 25, 2010, ION and BGP formed the INOVA Geophysical joint venture as contemplated under the Share Purchase Agreement. The business of INOVA Geophysical is to design, develop, manufacture and sell land-based seismic data acquisition equipment for the petroleum industry worldwide. The joint venture was formed to combine ION's land seismic equipment business and technology with BGP's expertise and experience in land seismic operations and thereby create a new enterprise that would have the resources, technology and experience required to provide advanced products and services on a global basis.

The assets of each party contributed to the joint venture included land seismic recording systems, inventory, certain intellectual property rights and contract rights necessary to or principally used in the conduct or operation of the land equipment businesses as conducted or operated by BGP or ION prior to closing. Under the Share Purchase Agreement, the Company sold BGP a 51% equity interest in INOVA Geophysical for total consideration of \$108.5 million cash (\$99.8 million net of fees and contributed cash balances) and BGP's transfer to the Company of a 49% equity interest in a Chinese subsidiary that held land seismic equipment assets and related liabilities. The Company and BGP then contributed their respective interests in the Chinese subsidiary to INOVA Geophysical.

INOVA Geophysical also assumed certain liabilities related to the transferred businesses. Among these liabilities was approximately \$18.4 million (as of March 25, 2010) in indebtedness under the rental land

equipment secured financing that ION and its rental equipment subsidiaries had entered into in June 2009 with a subsidiary of ICON Capital Inc. ION remains liable on its guarantee of this indebtedness, but ION has received a back-up guaranty from INOVA Geophysical with respect to any defaults on this transferred indebtedness for which ION is called upon to remedy. INOVA Geophysical has also assumed approximately \$2.3 million in capital lease liabilities related to certain equipment contributed to the joint venture.

#### ***Accounting Impact to the Formation of INOVA Geophysical and Related Financing Transactions***

At the closing of the joint venture, the Company recorded a loss on disposition of its land division of approximately \$38.1 million in the first quarter of 2010. The following components comprise this loss on disposition:

- The Company received cash proceeds from BGP of \$99.8 million, net of \$5.6 million of transaction and professional fees and \$3.1 million of cash balances, which were part of the disposed land divisions contributed to INOVA Geophysical.
- The Company retained a 49% interest in INOVA Geophysical, which was recorded at its fair value of \$119.0 million.
- The Company deconsolidated \$221.7 million of net assets associated with its land division.
- The Company recognized \$21.2 million of accumulated foreign currency translation losses, primarily related to its Canada land operations.
- The Company recognized \$7.0 million of expense resulting from the sale of ION common stock to BGP at a discount to market under BGP's equity purchase commitment as an inducement for BGP to enter into the transaction.
- The Company recognized \$5.0 million of expense related to its permanently ceasing the use of certain leased facilities previously occupied by its land division. See further discussion at Note 20 "*— Restructuring Activities*".
- The Company recognized \$2.0 million of other expenses associated with the formation of INOVA Geophysical.

The following represents the impact of the other related financing transactions in the first quarter of 2010:

- The Company recorded a non-cash fair value adjustment of \$12.8 million, reflecting the decrease in the fair value of the Warrant issued to BGP in October 2009, from January 1, 2010 through March 25, 2010, the date of the formation of INOVA Geophysical. At that date, the remaining \$32.0 million liability representing the Warrant's fair value was reclassified to additional paid-in-capital.
- The Company recognized in interest expense the remaining non-cash debt discount of \$8.7 million, which was associated with the Company's execution and delivery of the Convertible Notes to BGP in October 2009.
- As part of the repayment of the previous revolving line of credit and term loan, the Company wrote-off to interest expense, \$10.1 million of unamortized debt issuance costs.

The following represents the impact of the related financing transaction in the fourth quarter of 2009:

- At issuance of the Warrant to BGP in October 2009, the Company determined that the Warrant was not considered indexed to the Company's own stock and was required to be accounted for as a liability at its fair value. As a result, the Company recorded a \$15.4 million non-cash discount on the Convertible Notes. This non-cash discount was associated with the day-one fair value of the Warrant, which was being amortized over the expected term of the Convertible Notes (March 2010). Approximately \$6.7 million of the non-cash debt discount was recognized to interest expense during the fourth quarter of 2009. The Company also recorded a subsequent non-cash fair value adjustment of \$29.4 million, reflecting the increase in the fair value of the Warrant from its issuance through December 31, 2009.

### (3) Equity Method Investment in INOVA Geophysical

The Company accounts for its 49% interest in INOVA Geophysical as an equity method investment and records its share of earnings in INOVA Geophysical on a one fiscal quarter lag basis. As of September 30, 2010, the allocation of the purchase price by INOVA Geophysical was based upon a preliminary fair value study. Estimates and assumptions are subject to change upon the completion of the final valuation. The following table reflects summarized, unaudited financial information for INOVA Geophysical as of September 30, 2010 and for the period from March 26, 2010 through September 30, 2010 (in thousands):

|                               | <u>September 30, 2010</u> |
|-------------------------------|---------------------------|
| Current assets .....          | \$132,438                 |
| Non-current assets .....      | 124,665                   |
| Current liabilities .....     | 35,231                    |
| Non-current liabilities ..... | <u>28,869</u>             |
| Equity .....                  | <u>\$193,003</u>          |

|                            | <u>March 26, 2010<br/>through<br/>September 30, 2010</u> |
|----------------------------|--|
| Total net revenues .....   | \$ 47,609  |
| Gross profit (loss) .....  | \$(21,574)(A)  |
| Loss from operations ..... | \$(45,423)   |
| Net loss .....             | \$(48,416)   |

(A) Includes approximately \$19.3 million of excess inventory reserve reflected in the third quarter of 2010.

### (4) Segment and Geographic Information

The Company evaluates and reviews its results based on four segments: Systems, Software (formerly referred to as Data Management Solutions), Solutions (formerly referred to as ION Solutions) and its Legacy Land Systems which is now part of INOVA Geophysical. The Company measures segment operating results based on income from operations. The Legacy Land Systems (INOVA) segment represents the disposed land division operations through March 25, 2010, the date of the closing of INOVA Geophysical. The Systems segment includes all seismic acquisition systems businesses that are wholly-owned by the Company and its consolidated subsidiaries. The Company has reclassified its previously reported results to reflect these segment changes.

A summary of segment information is as follows (in thousands):

|  | Years Ended December 31, |                    |                     |
|--|--------------------------|--------------------|---------------------|
|  | 2010                     | 2009               | 2008                |
| Net revenues:  |                          |                    |                     |
| Systems:   |                          |                    |                     |
| Towed Streamer . . . . .   | \$ 83,567                | \$ 83,398          | \$ 123,785          |
| Ocean Bottom . . . . .   | 1,876                    | 4,948              | 42,483              |
| Other . . . . .  | 28,783                   | 39,943             | 72,657              |
| Total . . . . .  | <u>\$114,226</u>         | <u>\$128,289</u>   | <u>\$ 238,925</u>   |
| Software:  |                          |                    |                     |
| Software Systems . . . . .   | \$ 34,465                | \$ 31,601          | \$ 34,308           |
| Services . . . . .   | 2,166                    | 2,132              | 2,932               |
| Total . . . . .  | <u>\$ 36,631</u>         | <u>\$ 33,733</u>   | <u>\$ 37,240</u>    |
| Solutions:   |                          |                    |                     |
| Data Processing . . . . .  | \$107,997                | \$ 82,330          | \$ 59,550           |
| New Venture . . . . .  | 81,293                   | 71,135             | 116,706             |
| Data Library . . . . .   | 87,664                   | 26,520             | 82,824              |
| Total . . . . .  | <u>\$276,954</u>         | <u>\$179,985</u>   | <u>\$ 259,080</u>   |
| Legacy Land Systems (INOVA) . . . . .                                | <u>\$ 16,511</u>         | <u>\$ 77,774</u>   | <u>\$ 144,278</u>   |
| Total . . . . .  | <u>\$444,322</u>         | <u>\$419,781</u>   | <u>\$ 679,523</u>   |
| Gross profit:  |                          |                    |                     |
| Systems . . . . .  | \$ 48,557                | \$ 52,934          | \$ 90,795           |
| Software . . . . .   | 24,356                   | 21,998             | 24,656              |
| Solutions . . . . .  | 93,804                   | 59,844             | 78,245              |
| Legacy Land Systems (INOVA) . . . . .                                | (984)                    | (2,638)            | 14,048              |
| Total . . . . .  | <u>\$165,733</u>         | <u>\$132,138</u>   | <u>\$ 207,744</u>   |
| Gross margin:  |                          |                    |                     |
| Systems . . . . .  | 43%                      | 41%                | 38%                 |
| Software . . . . .   | 66%                      | 65%                | 66%                 |
| Solutions . . . . .  | 34%                      | 33%                | 30%                 |
| Legacy Land Systems (INOVA) . . . . .                                | (6)%                     | (3)%               | 10%                 |
| Total . . . . .  | <u>37%</u>               | <u>31%</u>         | <u>31%</u>          |
| Income (loss) from operations:                                       |                          |                    |                     |
| Systems . . . . .  | \$ 27,749                | \$ 31,209          | \$ 62,157           |
| Software . . . . .   | 21,936                   | 19,970             | 22,298              |
| Solutions . . . . .  | 60,632                   | 27,746             | 40,534              |
| Legacy Land Systems (INOVA) . . . . .                                | (9,623)                  | (40,881)           | (23,430)            |
| Corporate and other . . . . .  | (47,847)                 | (58,216)           | (62,099)            |
| Impairment of goodwill and intangible assets . . . . .               | —                        | (38,044)           | (252,283)           |
| Total . . . . .  | <u>\$ 52,847</u>         | <u>\$ (58,216)</u> | <u>\$ (212,823)</u> |
| Depreciation and amortization (including multi-client data library): |                          |                    |                     |
| Systems . . . . .  | \$ 2,992                 | \$ 2,572           | \$ 2,457            |
| Software . . . . .   | 2,461                    | 2,665              | 3,145               |
| Solutions . . . . .  | 96,271                   | 62,930             | 96,995              |
| Legacy Land Systems (INOVA) . . . . .                                | 6,367                    | 25,136             | 8,244               |
| Corporate and other . . . . .  | 2,644                    | 3,057              | 2,743               |
| Total . . . . .  | <u>\$110,735</u>         | <u>\$ 96,360</u>   | <u>\$ 113,584</u>   |

|                                   | December 31,     |                  |
|-----------------------------------|------------------|------------------|
|                                   | 2010             | 2009             |
| Total assets:                     |                  |                  |
| Systems .....                     | \$139,844        | \$126,252        |
| Software .....                    | 41,888           | 40,133           |
| Solutions .....                   | 255,528          | 221,596          |
| Legacy Land Systems (INOVA) ..... | —                | 259,476          |
| Corporate and other .....         | <u>187,182</u>   | <u>100,729</u>   |
| Total .....                       | <u>\$624,442</u> | <u>\$748,186</u> |

|                                  | December 31,     |                  |
|----------------------------------|------------------|------------------|
|                                  | 2010             | 2009             |
| Total assets by geographic area: |                  |                  |
| North America .....              | \$440,600        | \$520,454        |
| Europe .....                     | 56,507           | 56,413           |
| Middle East .....                | 75,351           | 111,056          |
| Latin America .....              | 43,363           | 50,374           |
| Other .....                      | <u>8,621</u>     | <u>9,889</u>     |
| Total .....                      | <u>\$624,442</u> | <u>\$748,186</u> |

Intersegment sales are insignificant for all periods presented. Corporate assets include all assets specifically related to corporate personnel and operations, a majority of cash and cash equivalents, and the investment in INOVA Geophysical. Depreciation and amortization expense is allocated to segments based upon use of the underlying assets.

A summary of net revenues by geographic area follows (in thousands):

|  | Years Ended December 31, |                  |                  |
|--|--------------------------|------------------|------------------|
|  | 2010                     | 2009             | 2008             |
| North America .....                            | \$177,480                | \$152,995        | \$272,567        |
| Europe .....                                   | 136,846                  | 92,760           | 202,170          |
| Asia Pacific .....                             | 51,496                   | 67,199           | 57,470           |
| Latin America .....                            | 45,954                   | 34,250           | 52,700           |
| Africa .....                                   | 18,417                   | 25,435           | 31,693           |
| Middle East .....                              | 10,536                   | 42,403           | 32,872           |
| Commonwealth of Independent States (CIS) ..... | <u>3,593</u>             | <u>4,739</u>     | <u>30,051</u>    |
| Total .....                                    | <u>\$444,322</u>         | <u>\$419,781</u> | <u>\$679,523</u> |

Net revenues are attributed to geographical locations on the basis of the ultimate destination of the equipment or service, if known, or the geographical area imaging services are provided. If the ultimate destination of such equipment is not known, net revenues are attributed to the geographical location of initial shipment.

##### (5) Net Loss per Common Share

Basic net loss per common share is computed by dividing net loss applicable to common shares by the weighted average number of common shares outstanding during the period. Diluted net income (loss) per common share is determined based on the assumption that dilutive restricted stock and restricted stock unit awards have vested and outstanding dilutive stock options have been exercised and the aggregate proceeds were used to reacquire common stock using the average price of such common stock for the period. Because

the Company had a net loss applicable to common shares for all periods presented, all restricted stock and unit awards and stock options were anti-dilutive. The total number of shares issuable under anti-dilutive options at December 31, 2010, 2009 and 2008 were 7,721,792, 7,766,188 and 7,893,275, respectively.

There are 27,000 outstanding shares of Series D Cumulative Convertible Preferred Stock, which may currently be converted, at the holder's election, into up to 6,065,075 shares of common stock. See further discussion of the Series D Preferred Stock conversion provisions at Note 14 "*Cumulative Convertible Preferred Stock*" and Note 19 "*Legal Matters*." The outstanding shares of all Series D Preferred Stock were anti-dilutive for all periods presented.

The Convertible Notes and Warrant entered into on October 23, 2009 were anti-dilutive. See further discussion of these transactions at Note 2 "*Formation of INOVA Geophysical and Related Financing Transactions*."

**(6) Accounts Receivable**

A summary of accounts receivable is as follows (in thousands):

|  | <u>December 31,</u> |                  |
|--|---------------------|------------------|
|  | <u>2010</u>         | <u>2009</u>      |
| Accounts receivable, principally trade ..... | \$78,421            | \$116,720        |
| Less allowance for doubtful accounts .....   | (845)               | (5,674)          |
| Accounts receivable, net .....               | <u>\$77,576</u>     | <u>\$111,046</u> |

**(7) Inventories**

A summary of inventories is as follows (in thousands):

|   | <u>December 31,</u> |                  |
|---|---------------------|------------------|
|   | <u>2010</u>         | <u>2009</u>      |
| Raw materials and subassemblies .....             | \$ 39,412           | \$111,022        |
| Work-in-process .....                             | 4,605               | 10,129           |
| Finished goods .....                              | 35,741              | 112,068          |
| Reserve for excess and obsolete inventories ..... | (12,876)            | (30,618)         |
| Total .....                                       | <u>\$ 66,882</u>    | <u>\$202,601</u> |

The Company provides for estimated obsolescence or excess inventory equal to the difference between the cost of inventory and its estimated market value based upon assumptions about future demand for the Company's products and market conditions. For 2010, 2009 and 2008, the Company recorded inventory obsolescence and excess inventory charges of approximately \$1.6 million, \$9.0 million, and \$14.0 million, respectively. The decrease in the reserves for excess and obsolete inventory, principally related to the disposition of the land division in the first quarter of 2010.



## (8) Property, Plant and Equipment

A summary of property, plant and equipment is as follows (in thousands):

|  | December 31,     |                  |
|--|------------------|------------------|
|  | 2010             | 2009             |
| Land .....                               | \$ —             | \$ 25            |
| Buildings .....                          | 13,963           | 15,710           |
| Machinery and equipment .....            | 73,663           | 90,656           |
| Lease and seismic rental equipment ..... | 3,721            | 65,856           |
| Furniture and fixtures .....             | 3,810            | 4,735            |
| Other .....                              | 738              | 1,187            |
| Total .....                              | 95,895           | 178,169          |
| Less accumulated depreciation .....      | (75,750)         | (99,614)         |
| Property, plant and equipment, net ..... | <u>\$ 20,145</u> | <u>\$ 78,555</u> |

Total depreciation expense, including amortization of assets recorded under capital leases, for 2010, 2009 and 2008 was \$15.7 million, \$32.6 million and \$19.1 million, respectively.

## (9) Cost Method Investments

In April 2010, the Company received in satisfaction of its trade receivables with Reservoir Exploration Technology, ASA ("RXT"), 351,096,180 shares (3,510,960 shares after RXT's reverse stock split effective on December 22, 2010) of RXT common stock having a fair value of approximately \$9.5 million. The shares have since declined to a fair value of approximately \$1.9 million at December 31, 2010. The Company accounts for its shares in RXT as "available-for-sale." As of December 31, 2010, the Company determined that the decline in the fair value of the RXT shares was other-than-temporary, which resulted in a write-down of the investment to a fair value of \$1.9 million with a charge to earnings of \$7.6 million.

In 2009, as part of its periodic cost method investment impairment review, the Company identified its investment in Colibrys, Ltd. as meeting impairment indicators. The Company then calculated the fair value of its investments and based upon the Company's analysis, the Company determined that its investment was fully impaired from its original cost of \$4.5 million.

## (10) Goodwill

On December 31, 2010 and 2009, the Company completed the annual reviews of the carrying value of goodwill in the Marine Systems and Software reporting units and noted no impairments. The annual impairment tests for 2010 and 2009 both indicated that the fair value of these two reporting units significantly exceeded their carrying values. However, if the estimates or related projections associated with the reporting units significantly change in the future, the Company may be required to record impairment charges.

In 2008, the Company recorded an impairment charge of \$242.2 million, fully impairing the goodwill related to its Legacy Land Systems and Solutions reporting units.

The following is a summary of the changes in the carrying amount of goodwill for the years ended December 31, 2010 and 2009 (in thousands):

|  | Systems         | Software        | Total           |
|--|-----------------|-----------------|-----------------|
| Balance at January 1, 2009 .....                         | \$26,984        | \$22,788        | \$49,772        |
| Impact of foreign currency translation adjustments ..... | —               | 2,280           | 2,280           |
| Balance at December 31, 2009 .....                       | 26,984          | 25,068          | 52,052          |
| Impact of foreign currency translation adjustments ..... | —               | (719)           | (719)           |
| Balance at December 31, 2010 .....                       | <u>\$26,984</u> | <u>\$24,349</u> | <u>\$51,333</u> |

## (11) Intangible Assets

A summary of intangible assets, net, is as follows (in thousands):

|                                    | December 31, 2010 |                          |                 |
|------------------------------------|-------------------|--------------------------|-----------------|
|                                    | Gross Amount      | Accumulated Amortization | Net             |
| Proprietary technology .....       | \$14,242          | \$(13,384)               | \$ 858          |
| Customer relationships .....       | 40,211            | (22,115)                 | 18,096          |
| Trade names .....                  | 4,043             | (4,043)                  | —               |
| Patents .....                      | 702               | (702)                    | —               |
| Intellectual property rights ..... | 3,350             | (1,987)                  | 1,363           |
| Total .....                        | <u>\$62,548</u>   | <u>\$(42,231)</u>        | <u>\$20,317</u> |

|                                    | December 31, 2009 |                          |                   |                 |
|------------------------------------|-------------------|--------------------------|-------------------|-----------------|
|                                    | Gross Amount      | Accumulated Amortization | Impairments       | Net             |
| Proprietary technology .....       | \$ 84,864         | \$(19,907)               | \$(33,311)        | \$31,646        |
| Customer relationships .....       | 45,415            | (18,833)                 | (4,733)           | 21,849          |
| Trade names .....                  | 11,389            | (6,164)                  | —                 | 5,225           |
| Patents .....                      | 3,689             | (2,964)                  | —                 | 725             |
| Intellectual property rights ..... | 4,550             | (2,871)                  | —                 | 1,679           |
| Non-compete agreements .....       | 919               | (277)                    | —                 | 642             |
| Total .....                        | <u>\$150,826</u>  | <u>\$(51,016)</u>        | <u>\$(38,044)</u> | <u>\$61,766</u> |

In the first quarter of 2009, the Company recorded an impairment charge of \$38.0 million, before tax, associated with a portion of its proprietary technology and the remainder of its customer relationships related to the ARAM acquisition. This impairment was the result of the continued overall economic and financial crisis, which continued to adversely affect the demand for the Company's products and services, especially for its land analog acquisition products within North America and Russia.

In the fourth quarter of 2008, the Company recorded an intangible asset impairment charge of \$10.1 million, before tax, related to ARAM's customer relationships, trade name and non-compete agreements.

Total amortization expense for intangible assets for 2010, 2009 and 2008 was \$7.4 million, \$13.7 million, and \$12.1 million, respectively. A summary of the estimated amortization expense for the next five years is as follows (in thousands):

| <u>Years Ended December 31,</u> |         |
|---------------------------------|---------|
| 2011 .....                      | \$4,946 |
| 2012 .....                      | \$3,331 |
| 2013 .....                      | \$2,879 |
| 2014 .....                      | \$2,373 |
| 2015 .....                      | \$1,964 |

## (12) Accrued Expenses

A summary of accrued expenses is as follows (in thousands):

|  | December 31,    |                 |
|--|-----------------|-----------------|
|  | 2010            | 2009            |
| Compensation, including compensation-related taxes and commissions . . . . . | \$28,024        | \$20,144        |
| Accrued multi-client data library acquisition costs . . . . .                | 15,434          | 13,890          |
| Accrued taxes (primarily income taxes) . . . . .                             | 3,238           | 11,159          |
| Product warranty . . . . .   | 784             | 5,088           |
| Other . . . . .  | <u>7,319</u>    | <u>15,612</u>   |
| Total accrued expenses . . . . .   | <u>\$54,799</u> | <u>\$65,893</u> |

The Company generally warrants that all manufactured equipment will be free from defects in workmanship, materials, and parts. Warranty periods generally range from 30 days to three years from the date of original purchase, depending on the product. The Company provides for estimated warranty as a charge to cost of sales at time of sale, which is when estimated future expenditures associated with such contingencies become probable and reasonably estimable. However, new information may become available, or circumstances (such as applicable laws and regulations) may change, thereby resulting in an increase or decrease in the amount required to be accrued for such matters (and therefore a decrease or increase in reported net income in the period of such change). A summary of warranty activity is as follows (in thousands):

|  | Years Ended December 31, |                 |                 |
|--|--------------------------|-----------------|-----------------|
|  | 2010                     | 2009            | 2008            |
| Balance at beginning of period . . . . .   | \$ 5,088                 | \$10,526        | \$13,439        |
| Reduction of warranties for disposal of land division . . . . .                  | (3,821)                  | —               | —               |
| Opening balance for accruals for warranties for acquired entity . . . . .        | —                        | —               | 845             |
| Accruals (expirations) for warranties issued/expired during the period . . . . . | 443                      | (2,121)         | 4,624           |
| Settlements made (in cash or in kind) during the period . . . . .                | <u>(926)</u>             | <u>(3,317)</u>  | <u>(8,382)</u>  |
| Balance at end of period . . . . .   | <u>\$ 784</u>            | <u>\$ 5,088</u> | <u>\$10,526</u> |

## (13) Notes Payable, Long-term Debt, Lease Obligations and Interest Rate Caps

| Obligations (In thousands)   | December 31,     |                  |
|--|------------------|------------------|
|  | 2010             | 2009             |
| \$100.0 million revolving line of credit . . . . .                                   | \$ —             | \$ 118,000       |
| Term loan facility . . . . .   | 103,250          | 101,563          |
| Secured equipment financing . . . . .  | —                | 19,080           |
| Amended and restated subordinated seller note . . . . .                              | —                | 35,000           |
| Facility lease obligation . . . . .  | 3,657            | 4,174            |
| Equipment capital leases and other notes payable . . . . .                           | 1,753            | 8,220            |
| Unamortized non-cash debt discount . . . . .   | —                | <u>(8,656)</u>   |
| Total . . . . .  | 108,660          | 277,381          |
| Current portion of notes payable, long-term debt and lease obligations . . . . .     | <u>(6,073)</u>   | <u>(271,132)</u> |
| Non-current portion of notes payable, long-term debt and lease obligations . . . . . | <u>\$102,587</u> | <u>\$ 6,249</u>  |

### ***Revolving Line of Credit and Term Loan Facility***

On March 25, 2010, ION, its Luxembourg subsidiary, ION International S.à r.l. ("ION Sàrl"), and certain of its other U.S. and foreign subsidiaries entered into the Credit Facility. The terms of the Credit Facility are set forth in a credit agreement dated as of March 25, 2010 (the "Credit Agreement"), by and among ION, ION Sàrl and China Merchants Bank Co., Ltd., New York Branch ("CMB"), as administrative agent and lender. The obligations of ION under the Credit Facility are guaranteed by certain of ION's material U.S. subsidiaries and the obligations of ION Sàrl under the Credit Facility are guaranteed by certain of ION's material U.S. and foreign subsidiaries, in each case that are parties to the credit agreement.

The Credit Facility replaced ION's previous syndicated credit facility under an amended and restated credit agreement dated as of July 3, 2008, as subsequently amended numerous times (the "Prior Facility"). The terms and conditions of the Credit Facility are similar in many respects to the terms and conditions under the Prior Facility. The Credit Facility provides ION with a revolving line of credit of up to \$100.0 million in borrowings (including borrowings for letters of credit) and refinanced ION's outstanding term loan under the Prior Facility with a new term loan in the original principal amount of \$106.3 million. The Credit Facility, like the Prior Facility, permits direct borrowings by ION Sàrl for use by ION's foreign subsidiaries.

Under the Credit Facility, up to \$75.0 million is available for revolving line of credit borrowings by ION, and up to \$60.0 million (or its equivalent in foreign currencies) is available for revolving line of credit borrowings by ION Sàrl, but the total amounts borrowed may not exceed \$100.0 million. Borrowings under the Credit Facility are not subject to a borrowing base. As of December 31, 2010, ION had no indebtedness outstanding under the revolving line of credit.

Revolving credit borrowings under the Credit Facility may be utilized to fund the working capital needs of ION and its subsidiaries, and to finance acquisitions and investments and for general corporate purposes. In addition, the Credit Facility includes a \$35.0 million sub-limit for the issuance of documentary and stand-by letters of credit.

The revolving credit indebtedness and term loan indebtedness under the Credit Facility are each scheduled to mature on March 24, 2015. The \$106.3 million original principal amount under the term loan is subject to scheduled quarterly amortization payments, commencing on June 30, 2010, of \$1.0 million per quarter until the maturity date, with the remaining unpaid principal amount of the term loan due upon the maturity date. The indebtedness under the Credit Facility may sooner mature on a date that is 18 months after the earlier of (i) any dissolution of INOVA Geophysical, or (ii) the administrative agent determining in good faith that INOVA Geophysical is unable to perform its obligations under its guarantee, which is described below.

The interest rate per annum on borrowings under the Credit Facility will be, at ION's option:

- An alternate base rate equal to the sum of (i) the greatest of (a) the prime rate of CMB, (b) a federal funds effective rate plus 0.50%, or (c) an adjusted LIBOR-based rate plus 1.0%, and (ii) an applicable interest margin of 2.5%; or
- For eurodollar borrowings and borrowings in Euros, Pounds Sterling or Canadian Dollars, the sum of (i) an adjusted LIBOR-based rate, and (ii) an applicable interest margin of 3.5%.

As of December 31, 2010, the \$103.3 million in outstanding term loan indebtedness under the Credit Facility accrues interest at a rate of 3.8% rate per annum.

The parties had originally contemplated that INOVA Geophysical would be an additional guarantor or provider of credit support under the Credit Agreement. However, due to the time required to obtain necessary Chinese governmental approvals for such credit support from INOVA Geophysical, the Credit Agreement instead provided that BGP enter into an agreement to guarantee the indebtedness under the Credit Facility, which INOVA Geophysical's guarantee would replace when the applicable governmental approvals were obtained. ION also entered into a credit support agreement with BGP whereby ION agreed to indemnify BGP for any losses sustained by BGP that arose out of or were a result of the enforcement of BGP's guarantee. In June 2010, the applicable governmental approvals were obtained and BGP was then released from its

guarantee obligations, and these obligations were assumed by INOVA Geophysical as originally contemplated under the Credit Agreement. In addition, ION's credit support agreement with BGP was terminated.

The obligations of ION and the guarantee obligations of the U.S. guarantors are secured by a first-priority security interest in 100% of the stock of all U.S. guarantors and 65% of the stock of certain first-tier foreign subsidiaries and by substantially all other assets of ION and the U.S. guarantors. The obligations of ION Sarl and the foreign guarantors are secured by a first-priority security interest in 100% of the stock of the foreign guarantors and the U.S. guarantors and substantially all other assets of the foreign guarantors, the U.S. guarantors and ION.

The agreements governing the Credit Facility contain covenants that restrict the borrowers, the guarantors and their subsidiaries, subject to certain exceptions, from:

- Incurring additional indebtedness (including capital lease obligations), granting or incurring additional liens on ION's properties, pledging shares of ION's subsidiaries, entering into certain merger or other change-in-control transactions, entering into transactions with ION's affiliates, making certain sales or other dispositions of assets, making certain investments, acquiring other businesses and entering into sale-leaseback transactions with respect to ION's properties;
- Paying cash dividends on ION's common stock; and
- Repurchasing and acquiring ION capital stock, unless there is no event of default under the Credit Agreement and the amount of such repurchases does not exceed an amount equal to (i) 25% of ION's consolidated net income for the prior fiscal year, less (ii) the amount of any cash dividends paid on ION's common stock.

The Credit Facility requires compliance with certain financial covenants, including requirements commencing on June 30, 2011 and for each fiscal quarter thereafter for ION and its U.S. subsidiaries to:

- Maintain a minimum fixed charge coverage ratio in an amount equal to at least 1.125 to 1;
- Not exceed a maximum leverage ratio of 3.25 to 1; and
- Maintain a minimum tangible net worth of at least 60% of ION's tangible net worth as of March 31, 2010, as defined.

The fixed charge coverage ratio is defined as the ratio of (i) ION's consolidated EBITDA less cash income tax expense and non-financed capital expenditures, to (ii) the sum of scheduled payments of lease payments and payments of principal indebtedness, interest expense actually paid and cash dividends, in each case for the four consecutive fiscal quarters most recently ended. The leverage ratio is defined as the ratio of (x) total funded consolidated debt, capital lease obligations and issued letters of credit (net of cash collateral) to (y) consolidated EBITDA of ION for the four consecutive fiscal quarters most recently ended. Upon commencement of the financial covenants on June 30, 2011, the Company expects to be in compliance and remain in compliance throughout the remainder of 2011.

The Credit Agreement contains customary event of default provisions similar to those contained in the credit agreement for the Prior Facility (including a "change of control" event affecting ION), the occurrence of which could lead to an acceleration of ION's obligations under the Credit Facility. The Credit Agreement also provides that certain acts of bankruptcy, insolvency or liquidation of INOVA Geophysical would constitute additional events of default under the Credit Facility.

### ***Interest Rate Caps***

In August 2010, the Company entered into an interest rate cap agreement and purchased interest rate caps having an initial notional amount of \$103.3 million with a three-month average LIBOR cap of 2.0%. If and when the three-month average LIBOR rate exceeds 2.0%, the LIBOR portion of interest owed by the Company would be capped at 2.0%. The initial notional amount was set to equal the projected outstanding balance under the Company's term loan facility at December 31, 2010. The notional amount was then set so as not to exceed

the Company's outstanding balance of its term loan facility over the period through March 29, 2013. The Company purchased these interest rate caps for approximately \$0.4 million.

As of December 31, 2010, the Company held interest rate caps as follows (amounts in thousands):

| <u>Notional Amount</u> | <u>Payment Date</u> | <u>Cap Rate</u> |
|------------------------|---------------------|-----------------|
| \$103,250              | March 29, 2011      | 2.0%            |
| \$ 92,025              | June 29, 2011       | 2.0%            |
| \$ 91,125              | September 29, 2011  | 2.0%            |
| \$ 90,225              | December 29, 2011   | 2.0%            |
| \$ 89,325              | March 29, 2012      | 2.0%            |
| \$ 68,775              | June 29, 2012       | 2.0%            |
| \$ 68,075              | September 28, 2012  | 2.0%            |
| \$ 67,375              | December 31, 2012   | 2.0%            |
| \$ 66,675              | March 29, 2013      | 2.0%            |

These interest rate caps have been designated as cash flow hedges according to ASC 815 ("*Derivatives and Hedging*") and, accordingly, the effective portion of the change in fair value of these interest rate caps are recognized in other comprehensive income in the Company's consolidated financial statements. As of December 31, 2010, the total fair value of these interest rate caps was \$0.3 million. Therefore, there was \$0.1 million, net of tax, related to the change in fair value included in other comprehensive income for 2010. Gains or losses on derivative instruments are reported in the same line item as the underlying hedged transaction in the consolidated statements of operations. For 2010, no gains or losses have been reclassified from other comprehensive income into the consolidated statements of operations.

#### ***Facility Lease Obligation***

In 2001, the Company sold its facilities, located in Stafford, Texas. Simultaneously with the sale, the Company entered into a non-cancelable twelve-year lease with the purchaser of the property. Because the Company retained a continuing involvement in the property that precluded sale-leaseback treatment for financial accounting purposes, the sale-leaseback transaction was accounted for as a financing transaction.

In June 2005, the owner sold the facilities to two parties, which were unrelated to each other as well as unrelated to the seller. In conjunction with the sale of the facilities, the Company entered into two separate lease arrangements for each of the facilities with the new owners. One lease, which was classified as an operating lease, has a twelve-year lease term. The second lease continues to be accounted for as a financing transaction due to the Company's continuing involvement in the property as a lessee, and has a ten-year lease term. The Company recorded the commitment under the second lease as a \$5.5 million lease obligation at an implicit rate of 11.7% per annum, of which \$3.7 million was outstanding at December 31, 2010. Both leases have renewal options allowing the Company to extend the leases for up to an additional twenty-year term, which the Company does not expect to renew.

#### ***Equipment Capital Leases***

The Company has entered into a series of capital leases that are due in installments for the purpose of financing the purchase of computer equipment through 2012. Interest charged under these leases ranges from 4.0% to 8.0%, and the leases are collateralized by liens on the computer equipment. The assets are amortized over the lesser of their related lease terms or their estimated productive lives and such charges are reflected within depreciation expense.

A summary of future principal obligations under the notes payable, long-term debt and equipment capital lease obligations are as follows (in thousands):

| <u>Years Ended December 31,</u>                                | <u>Notes Payable and<br/>Long-Term Debt</u> | <u>Capital Lease<br/>Obligations</u> |
|--|---|--------------------------------------|
| 2011 .....   | \$ 4,610                                    | \$1,513                              |
| 2012 .....   | 4,714                                       | 203                                  |
| 2013 .....   | 4,832                                       | 101                                  |
| 2014 .....   | 4,966                                       | —                                    |
| 2015 .....   | 87,785                                      | —                                    |
| 2016 and thereafter .....                                      | —   | —                                    |
| Total .....  | <u>\$106,907</u>                            | 1,817                                |
| Imputed interest .....   |   | <u>(64)</u>                          |
| Net present value of equipment capital lease obligations ..... |   | 1,753                                |
| Current portion of equipment capital lease obligations .....   |   | <u>1,463</u>                         |
| Long-term portion of equipment capital lease obligations ..... |   | <u>\$ 290</u>                        |

#### (14) Cumulative Convertible Preferred Stock

During 2005, the Company entered into an Agreement with Fletcher International, Ltd. (this Agreement, as amended to the date hereof, is referred to as the “Fletcher Agreement”) and issued to Fletcher 30,000 shares of Series D-1 Cumulative Convertible Preferred Stock (“Series D-1 Preferred Stock”) in a privately-negotiated transaction, receiving \$29.8 million in net proceeds. The Fletcher Agreement also provided to Fletcher an option to purchase up to an additional 40,000 shares of additional series of preferred stock from time to time, with each series having a conversion price that would be equal to 122% of an average daily volume-weighted market price of the Company’s common stock over a trailing period of days at the time of issuance of that series. In 2007 and 2008, Fletcher exercised this option and purchased 5,000 shares of Series D-2 Cumulative Convertible Preferred Stock (“Series D-2 Preferred Stock”) for \$5.0 million (in December 2007) and 35,000 shares of Series D-3 Cumulative Convertible Preferred Stock (“Series D-3 Preferred Stock”) for \$35.0 million (in February 2008). The shares of Series D-1 Preferred Stock, Series D-2 Preferred Stock and Series D-3 Preferred Stock are sometimes referred to herein as the “Series D Preferred Stock.”

Dividends on the shares of Series D Preferred Stock must be paid in cash on a quarterly basis. Dividends are payable at a rate equal to the greater of (i) 5.0% per annum or (ii) the three month LIBOR rate on the last day of the immediately preceding calendar quarter plus 2.5% per annum. The Series D Preferred Stock dividend rate was 5.0% at December 31, 2010.

Under the Fletcher Agreement, if a 20-day volume-weighted average trading price per share of the Company’s common stock fell below \$4.4517 (the “Minimum Price”), the Company was required to deliver a notice (the “Reset Notice”) to Fletcher. On November 28, 2008, the volume-weighted average trading price per share of the Company’s common stock on the New York Stock Exchange for the previous 20 trading days was calculated to be \$4.328, and the Company delivered the Reset Notice to Fletcher in accordance with the terms of the Fletcher Agreement. In the Reset Notice, the Company elected to reset the conversion prices for the Series D Preferred Stock to the Minimum Price (\$4.4517 per share), and Fletcher’s rights to redeem the Series D Preferred Stock were terminated. The adjusted conversion price resulting from this election was effective on November 28, 2008.

In addition, under the Fletcher Agreement, the aggregate number of shares of common stock issued or issuable to Fletcher upon conversion or redemption of, or as dividends paid on, the Series D Preferred Stock could not exceed a designated maximum number of shares (the “Maximum Number”), and such Maximum Number could be increased by Fletcher providing the Company with a 65-day notice of increase, but under no circumstance could the total number of shares of common stock issued or issuable to Fletcher with respect to

the Series D Preferred Stock ever exceed 15,724,306 shares. The Fletcher Agreement had designated 7,669,434 shares as the original Maximum Number. On November 28, 2008, Fletcher delivered a notice to the Company to increase the Maximum Number to 9,669,434 shares, effective February 1, 2009.

On September 15, 2009, Fletcher delivered a second notice to the Company, intending to increase the Maximum Number of shares of common stock issuable upon conversion of the Series D Preferred Stock from 9,669,434 shares to 11,669,434 shares, to become effective on November 19, 2009. The Company's interpretation of the Fletcher Agreement was that Fletcher had the right to issue only one notice to increase the Maximum Number, which Fletcher had exercised when it delivered its notice to the Company in November 2008. As a result, on November 6, 2009, the Company filed an action in the Court of Chancery of the State of Delaware, styled *ION Geophysical Corporation v. Fletcher International, Ltd.*, seeking a declaration that, under the Fletcher Agreement, Fletcher is permitted to deliver only one notice to increase the Maximum Number and that its second notice is legally invalid. On November 5, 2010, the Court of Chancery issued its opinion in the matter, and held that Fletcher was entitled to deliver multiple notices to increase the Maximum Number of shares of common stock (but not beyond a total of 15,724,306 shares). On November 8, 2010, Fletcher delivered a notice to the Company to increase the Maximum Number to the full 15,724,306 shares, effective January 12, 2011. See further discussion of this action and other legal actions between Fletcher and the Company at Note 19 "*— Legal Matters.*"

On April 8, 2010, Fletcher converted 8,000 of its shares of the outstanding Series D-1 Cumulative Convertible Preferred Stock and all of the outstanding 35,000 shares of the Series D-3 Cumulative Convertible Preferred Stock into a total of 9,659,231 shares of the Company's common stock. The conversion price for these shares was \$4.4517 per share, in accordance with the terms of these series of preferred stock. Fletcher continues to own 22,000 shares of the Series D-1 Cumulative Convertible Preferred Stock and 5,000 shares of the Series D-2 Cumulative Convertible Preferred Stock. As a result of the above ruling by the Court of Chancery, under the terms of the Fletcher Agreement, Fletcher's remaining 27,000 shares of Series D Preferred Stock are convertible into 6,065,075 shares of the Company's common stock. The conversion prices and number of shares of common stock to be acquired upon conversion are also subject to customary anti-dilution adjustments. Fletcher remains the sole holder of all of the outstanding shares of Series D Preferred Stock.

## **(15) Stockholders' Equity and Stock-Based Compensation**

### ***Stockholder Rights Plan***

In December 2008, the Company's Board of Directors adopted a stockholder rights plan. The stockholder rights plan was adopted to give the Company's Board increased power to negotiate in the Company's best interests and to discourage appropriation of control of the Company at a price that was unfair to its stockholders. The stockholder rights plan involved the distribution of one preferred share purchase "right" as a dividend on each outstanding share of the Company's common stock to all holders of record on January 9, 2009. Each right entitles the holder to purchase one one-thousandth of a share of the Company's Series A Junior Participating Preferred Stock at a purchase price of \$21.00 per one one-thousandth of a share of Series A Preferred Stock, subject to adjustment. The rights trade in tandem with the Company's common stock until, and will become exercisable beginning upon a "distribution date" that will occur shortly following, among other things, the acquisition of 20% or more of the Company's common stock by an acquiring person. The rights plan and the rights will expire in accordance with the terms of the plan on December 29, 2011.

### ***Stock Option Plans***

The Company has adopted stock option plans for eligible employees, directors, and consultants, which provide for the granting of options to purchase shares of common stock. As of December 31, 2010, there were 7,721,792 shares issued or committed for issuance under outstanding options under the Company's stock option plans, and 1,648,700 shares available for future grant and issuance.

The options under these plans generally vest in equal annual installments over a four-year period and have a term of ten years. These options are typically granted with an exercise price per share equal to or greater than the current market price and, upon exercise, are issued from the Company's unissued common



shares. In August 2006, the Compensation Committee of the Board of Directors of the Company approved fixed pre-established quarterly grant dates for all future grants of options.

Transactions under the stock option plans are summarized as follows:

|   | <u>Option Price<br/>per Share</u> | <u>Outstanding</u> | <u>Vested</u>    | <u>Available<br/>for Grant</u> |
|---|-----------------------------------|--------------------|------------------|--------------------------------|
| January 1, 2008   | \$1.73-\$24.63                    | 6,839,641          | 4,200,442        | 1,611,044                      |
| Increase in shares authorized   | —                                 | —                  | —                | 1,000,000                      |
| Granted   | 3.00-16.39                        | 1,886,950          | —                | (1,886,950)                    |
| Vested  | —                                 | —                  | 913,915          | —                              |
| Exercised   | 1.73-13.52                        | (656,166)          | (656,166)        | —                              |
| Cancelled/forfeited   | 3.35-24.63                        | (587,150)          | (308,850)        | 378,800                        |
| Restricted stock granted out of option plans  | —                                 | —                  | —                | (454,983)                      |
| Issuance of inducement stock options in acquisition   | 14.10                             | 410,000            | —                | —                              |
| Restricted stock forfeited or cancelled for employee minimum income taxes and returned to the plans | —                                 | —                  | —                | 187,496                        |
| December 31, 2008   | 1.73-16.39                        | 7,893,275          | 4,149,341        | 835,407                        |
| Granted   | 1.07-5.44                         | 635,750            | —                | (635,750)                      |
| Vested  | —                                 | —                  | 1,089,478        | —                              |
| Exercised   | 1.73-3.00                         | (9,837)            | (9,837)          | —                              |
| Cancelled/forfeited   | 3.00-16.39                        | (753,000)          | (186,300)        | 564,950                        |
| Restricted stock granted out of option plans  | —                                 | —                  | —                | (568,874)                      |
| Restricted stock forfeited or cancelled for employee minimum income taxes and returned to the plans | —                                 | —                  | —                | 215,140                        |
| December 31, 2009   | 1.07-16.39                        | 7,766,188          | 5,042,682        | 410,873                        |
| Increase in shares authorized   | —                                 | —                  | —                | 2,500,000                      |
| Granted   | 3.42-7.19                         | 1,249,900          | —                | (1,249,900)                    |
| Vested  | —                                 | —                  | 1,370,897        | —                              |
| Exercised   | 1.07-7.31                         | (323,610)          | (323,610)        | —                              |
| Cancelled/forfeited   | 1.07-16.12                        | (970,686)          | (700,561)        | 674,363                        |
| Restricted stock granted out of option plans  | —                                 | —                  | —                | (762,680)                      |
| Restricted stock forfeited or cancelled for employee minimum income taxes and returned to the plans | —                                 | —                  | —                | 76,044                         |
| December 31, 2010   | \$2.49-\$16.39                    | <u>7,721,792</u>   | <u>5,389,408</u> | <u>1,648,700</u>               |

Stock options outstanding at December 31, 2010 are summarized as follows:

| <u>Option Price per Share</u> | <u>Outstanding</u> | <u>Weighted<br/>Average Exercise<br/>Price of<br/>Outstanding<br/>Options</u> | <u>Weighted<br/>Average<br/>Remaining<br/>Contract Life</u> | <u>Vested</u>    | <u>Weighted<br/>Average Exercise<br/>Price of Vested<br/>Options</u> |
|-------------------------------|--------------------|---|---|------------------|--|
| \$2.49 - \$3.85               | 1,557,517          | \$ 2.99   | 6.6   | 883,142          | \$ 2.97  |
| 4.11 - 6.42                   | 2,316,250          | \$ 5.63   | 4.6   | 1,741,813        | \$ 5.79  |
| 6.75 - 10.50                  | 2,449,725          | \$ 8.11   | 6.5   | 1,551,825        | \$ 8.64  |
| 10.81 - 16.39                 | <u>1,398,300</u>   | \$14.25   | 6.4   | <u>1,212,628</u> | \$14.10  |
| Totals                        | <u>7,721,792</u>   | \$ 7.44   | 6.1   | <u>5,389,408</u> | \$ 8.01  |

Additional information related to the Company's stock options is as follows:

|   | Number of<br>Shares | Weighted Average<br>Exercise Price | Weighted Average<br>Grant Date Fair<br>Value | Weighted Average<br>Remaining<br>Contractual Life in<br>Years | Aggregate<br>Intrinsic<br>Value (000's) |
|---|---------------------|------------------------------------|--|---|---|
| Total outstanding at  |                     |                                    |  |   |   |
| January 1, 2010 . . . . .   | 7,766,188           | \$7.65                             |  | 6.3   |   |
| Options granted . . . . .   | 1,249,900           | \$6.41                             | \$3.81                                       |   |   |
| Options exercised . . . . .   | (323,610)           | \$3.31                             |  |   |   |
| Options cancelled . . . . .   | (700,561)           | \$9.49                             |  |   |   |
| Options forfeited . . . . .   | <u>(270,125)</u>    | \$8.30                             |  |   |   |
| Total outstanding at  |                     |                                    |  |   |   |
| December 31, 2010 . . . . .   | <u>7,721,792</u>    | \$7.44                             |  | 6.1   | \$17,144                                |
| Options exercisable and<br>vested at December 31,<br>2010 . . . . . | <u>5,389,408</u>    | \$8.01                             |  | 4.8   | \$10,375                                |

The total intrinsic value of options exercised during 2010, 2009 and 2008 was \$0.9 million, less than \$0.1 million, and approximately \$4.8 million, respectively. Cash received from option exercises under all share-based payment arrangements for 2010, 2009 and 2008 was \$1.1 million, less than \$0.1 million and \$6.3 million, respectively. The weighted average grant date fair value for stock option awards granted during 2010, 2009 and 2008 was \$3.81, \$3.17, and \$3.02 per share, respectively.

#### ***Restricted Stock and Restricted Stock Unit Plans***

The Company has adopted restricted stock plans which provide for the award of up to 300,000 shares of common stock to key officers and employees. In addition, the Company has issued restricted stock and restricted stock units under the Company's 2004 Long-Term Incentive Plan, 2000 Restricted Stock Plan (which expired in 2010), 1998 Restricted Stock Plan (which expired in 2008) and other applicable plans. Restricted stock units are awards that obligate the Company to issue a specific number of shares of common stock in the future if continued service vesting requirements are met. Non-forfeitable ownership of the common stock will vest over a period as determined by the Company in its sole discretion, generally in equal annual installments over a three-year period. Shares of restricted stock awarded may not be sold, assigned, transferred, pledged or otherwise encumbered by the grantee during the vesting period.

The status of the Company's restricted stock and restricted stock unit awards for 2010 is as follows:

|  | Number of Shares/Units |
|--|------------------------|
| Total nonvested at January 1, 2010 . . . . .   | 778,005                |
| Granted . . . . .                              | 772,680                |
| Vested . . . . .                               | (490,961)              |
| Forfeited . . . . .                            | <u>(82,546)</u>        |
| Total nonvested at December 31, 2010 . . . . . | <u>977,178</u>         |

At December 31, 2010, the intrinsic value of restricted stock and restricted stock unit awards was approximately \$8.3 million. The weighted average grant date fair value for restricted stock and restricted stock unit awards granted during 2010, 2009 and 2008 was \$6.30, \$4.79, and \$5.79 per share. The total fair value of shares vested during 2010, 2009 and 2008 was \$3.3 million, \$4.7 million, and \$5.3 million, respectively.

#### ***Employee Stock Purchase Plan***

In June 2010, the Company adopted an Employee Stock Purchase Plan ("ESPP") to replace the prior ESPP, which terminated on December 31, 2008. The ESPP allows all eligible employees to authorize payroll

deductions at a rate of 1% to 10% of base compensation (or a fixed amount per pay period) for the purchase of the Company's common stock. Each participant is limited to purchase no more than 500 shares per offering period or 1,000 shares annually. Additionally, no participant may purchase shares in any calendar year that exceeds \$10,000 in fair market value based on the fair market value of the stock on the offering commencement date. The purchase price of the common stock is the lesser of 85% of the closing price on the first day of the applicable offering period (or most recently preceding trading day) or 85% of the closing price on the last day of the offering period (or most recently preceding trading day). Each offering period is six months and commences on February 1 and August 1 of each year. The ESPP is considered a compensatory plan under ASC 718, and the Company recorded compensation expense of approximately \$0.1 million during 2010. The expense represents the estimated fair value of the look-back purchase option. The fair value was determined using the Black-Scholes option pricing model and was recognized over the purchase period. The total number of shares of common stock authorized and available for issuance under ESPP is 1,500,000. The maximum number of shares of common stock that may be purchased for each offering period is 100,000 (200,000 annually).

### ***Stock Appreciation Rights Plan***

The Company has adopted a stock appreciation rights plan which provides for the award of stock appreciation rights ("SARs") to directors and selected key employees and consultants. The awards under this plan are subject to the terms and conditions set forth in agreements between the Company and the holders. The exercise price per SAR is not to be less than one hundred percent (100%) of the fair market value of a share of common stock on the date of grant of the SAR. The term of each SAR shall not exceed ten years from the grant date. Upon exercise of a SAR, the holder shall receive a cash payment in an amount equal to the spread specified in the SAR agreement for which the SAR is being exercised. In no event will any shares of common stock be issued, transferred or otherwise distributed under the plan.

As of December 31, 2010, the Company had outstanding 375,000 SAR awards to two individuals with a weighted average exercise price of \$7.98. The Company recorded less than \$0.1 million, \$0.8 million and \$0.2 million, respectively, of share-based compensation expense during 2010, 2009 and 2008 related to employee stock appreciation rights. Pursuant to ASC 718, the stock appreciation rights are considered liability awards and as such, these amounts are accrued in the liability section of the balance sheet.

### ***Valuation Assumptions***

The Company calculated the fair value of each option and SAR award on the date of grant using the Black-Scholes option pricing model. The following assumptions were used for each respective period:

|                                     | Years Ended December 31 |               |               |
|-------------------------------------|-------------------------|---------------|---------------|
|                                     | 2010                    | 2009          | 2008          |
| Risk-free interest rates . . . . .  | 1.5% – 2.5%             | 1.6% – 2.4%   | 1.5% – 3.4%   |
| Expected lives (in years) . . . . . | 5.5                     | 3.6 – 5.5     | 4.7 – 5.0     |
| Expected dividend yield . . . . .   | 0%                      | 0%            | 0%            |
| Expected volatility . . . . .       | 67.4% – 71.6%           | 75.0% – 91.9% | 44.7% – 83.2% |

The computation of expected volatility during 2010, 2009 and 2008 was based on an equally weighted combination of historical volatility and market-based implied volatility. Historical volatility was calculated from historical data for a period of time approximately equal to the expected term of the option award, starting from the date of grant. Market-based implied volatility was derived from traded options on the Company's common stock having a term of six months. The Company's computation of expected life in 2010, 2009 and 2008 was determined based on historical experience of similar awards, giving consideration to the contractual terms of the stock-based awards, vesting schedules, and expectations of future employee behavior. The risk-free interest rate assumption is based upon the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the expected life of the option.

**(16) Income Taxes**

The sources of income (loss) before income taxes are as follows (in thousands):

|                | Years Ended December 31, |                    |                    |
|----------------|--------------------------|--------------------|--------------------|
|                | 2010                     | 2009               | 2008               |
| Domestic ..... | \$(55,547)               | \$ (91,646)        | \$ (82,811)        |
| Foreign .....  | 45,651                   | (38,398)           | (137,096)          |
| Total .....    | <u>\$ (9,896)</u>        | <u>\$(130,044)</u> | <u>\$(219,907)</u> |

Components of income taxes are as follows (in thousands):

|  | Years Ended December 31, |                   |                 |
|--|--------------------------|-------------------|-----------------|
|  | 2010                     | 2009              | 2008            |
| Current:                                 |                          |                   |                 |
| Federal .....                            | \$ (3,489)               | \$ 526            | \$ 58           |
| State and local .....                    | 665                      | 74                | 208             |
| Foreign .....                            | 7,559                    | 17,565            | 18,414          |
| Deferred (U.S. and foreign) .....        | 22,207                   | (38,150)          | (17,549)        |
| Total income tax expense (benefit) ..... | <u>\$26,942</u>          | <u>\$(19,985)</u> | <u>\$ 1,131</u> |

A reconciliation of the expected income tax expense on income (loss) before income taxes using the statutory federal income tax rate of 35% for 2010, 2009 and 2008 to income tax expense is as follows (in thousands):

|  | Years Ended December 31, |                   |                 |
|--|--------------------------|-------------------|-----------------|
|  | 2010                     | 2009              | 2008            |
| Expected income tax benefit at 35% .....   | \$ (3,464)               | \$(45,515)        | \$(76,967)      |
| Alternate minimum tax provision .....  | 67                       | 526               | 58              |
| Foreign taxes (tax rate differential and foreign tax differences) ..                     | (11,914)                 | 4,288             | 2,367           |
| Formation of INOVA Geophysical .....   | 10,507                   | —                 | —               |
| Nondeductible financings .....   | 1,015                    | 12,646            | —               |
| Nondeductible goodwill .....   | —                        | —                 | 84,756          |
| State and local taxes .....  | 665                      | 74                | 269             |
| Nondeductible expenses .....   | 492                      | 1,465             | 261             |
| Deferred tax asset valuation allowance:  |                          |                   |                 |
| Deferred tax asset valuation allowance on formation of<br>INOVA Geophysical .....        | 20,213                   | —                 | —               |
| Deferred tax asset valuation allowance on equity in losses of<br>INOVA Geophysical ..... | 8,303                    | —                 | —               |
| Deferred tax asset valuation allowance on write-down of RXT<br>shares .....              | 2,677                    | —                 | —               |
| Deferred tax asset valuation allowance on operations .....                               | (1,619)                  | 6,531             | (9,613)         |
| Total income tax expense (benefit) .....   | <u>\$ 26,942</u>         | <u>\$(19,985)</u> | <u>\$ 1,131</u> |

The tax effects of the cumulative temporary differences resulting in the net deferred income tax asset (liability) are as follows (in thousands):

|   | <u>December 31,</u> |                  |
|---|---------------------|------------------|
|   | <u>2010</u>         | <u>2009</u>      |
| Current deferred:   |                     |                  |
| Deferred income tax assets:                                 |                     |                  |
| Accrued expenses . . . . .                                  | \$ 8,600            | \$ 5,428         |
| Allowance accounts . . . . .                                | 3,725               | 10,965           |
| Inventory . . . . .   | 483                 | (257)            |
| Total current deferred income tax asset . . . . .           | 12,808              | 16,136           |
| Valuation allowance . . . . .                               | (2,101)             | (5,405)          |
| Net current deferred income tax asset . . . . .             | <u>10,707</u>       | <u>10,731</u>    |
| Deferred income tax liabilities:                            |                     |                  |
| Unbilled receivables . . . . .                              | (15,723)            | (4,945)          |
| Net current deferred income tax (liability) asset . . . . . | <u>\$ (5,016)</u>   | <u>\$ 5,786</u>  |
| Non-current deferred:                                       |                     |                  |
| Deferred income tax assets:                                 |                     |                  |
| Net operating loss carryforward . . . . .                   | \$ 6,849            | \$ 26,268        |
| Capital loss carryforward . . . . .                         | 19,005              | 520              |
| Equity method investment . . . . .                          | 25,407              | —                |
| Cost method investments . . . . .                           | 3,384               | 707              |
| Basis in research and development . . . . .                 | 2,804               | 26,087           |
| Basis in property, plant and equipment . . . . .            | 2,271               | 3,492            |
| Tax credit carryforwards and other . . . . .                | 9,770               | 10,609           |
| Total non-current deferred income tax asset . . . . .       | 69,490              | 67,683           |
| Valuation allowance . . . . .                               | (60,599)            | (27,721)         |
| Net non-current deferred income tax asset . . . . .         | <u>8,891</u>        | <u>39,962</u>    |
| Deferred income tax liabilities:                            |                     |                  |
| Basis in identified intangibles . . . . .                   | (601)               | (14,802)         |
| Net non-current deferred income tax asset . . . . .         | <u>\$ 8,290</u>     | <u>\$ 25,160</u> |

In 2002, the Company established a valuation allowance for substantially all of its deferred tax assets. Since that time, the Company has continued to record a valuation allowance. In 2010, additional valuation allowance was established on certain U.S. deferred tax assets related to the Company's investment in INOVA Geophysical and the write-down of RXT shares. The valuation allowance was calculated in accordance with the provisions of ASC 740-10, "Accounting for Income Taxes," which requires that a valuation allowance be established or maintained when it is "more likely than not" that all or a portion of deferred tax assets will not be realized. The Company will continue to reserve for a significant portion of U.S. net deferred tax assets of \$7.2 million until there is sufficient evidence to warrant reversal. In the event the Company's expectations of future operating results change, an additional valuation allowance may be required to be established on the Company's existing unreserved net U.S. deferred tax assets. At December 31, 2010, the Company had net operating loss carry-forwards of approximately \$23.2 million, the majority of which expires beyond 2027.

As of December 31, 2010, the Company has no significant unrecognized tax benefits and does not expect to recognize any significant increases in unrecognized tax benefits during the next twelve month period. Interest and penalties, if any, related to unrecognized tax benefits are recorded in income tax expense.

The Company's U.S. federal tax returns for 2007 and subsequent years remain subject to examination by tax authorities. The Company is no longer subject to IRS examination for periods prior to 2007, although carryforward attributes that were generated prior to 2007 may still be adjusted upon examination by the IRS if they either have been or will be used in a future period. In the Company's foreign tax jurisdictions, tax returns for 2008 and subsequent years generally remain open to examination.

United States income taxes have not been provided on the cumulative undistributed earnings of the Company's foreign subsidiaries in the amount of approximately \$132.5 million as it is the Company's intention to reinvest such earnings indefinitely. These foreign earnings could become subject to additional tax if remitted, or deemed remitted, to the United States as a dividend; however, it is not practicable to estimate the additional amount of taxes payable.

**(17) Operating Leases**

*Lessee.* The Company leases certain equipment, offices, and warehouse space under non-cancelable operating leases. Rental expense was \$17.2 million, \$16.7 million, and \$14.8 million for 2010, 2009 and 2008, respectively.

A summary of future rental commitments over the next five years under non-cancelable operating leases is as follows (in thousands):

| <u>Years Ended December 31,</u> |                 |
|---------------------------------|-----------------|
| 2011 .....                      | \$15,416        |
| 2012 .....                      | 9,693           |
| 2013 .....                      | 3,410           |
| 2014 .....                      | 1,273           |
| 2015 .....                      | <u>1,100</u>    |
| Total .....                     | <u>\$30,892</u> |

**(18) Benefit Plans**

*401(k)*

The Company has a 401(k) retirement savings plan, which covers substantially all employees. Employees may voluntarily contribute up to 60% of their compensation, as defined, to the plan. Effective June 1, 2000, the Company adopted a company matching contribution to the 401(k) plan. The Company matched the employee contribution at a rate of 50% of the first 6% of compensation contributed to the plan. In April 2009, the Company suspended its match to employee's 401(k) plan contributions, but reinstated its matching contributions in April 2010. Company contributions to the plans were \$0.9 million, \$0.7 million, and \$1.6 million, during 2010, 2009 and 2008, respectively.

*Supplemental executive retirement plan*

The Company previously had maintained a non-qualified, supplemental executive retirement plan ("SERP") for its executives. The SERP provided for certain compensation to become payable on the participants' death, retirement or total disability as set forth in the plan. The only remaining obligations under this plan are the scheduled benefit payments to the spouse of a deceased former executive. The present value of the expected obligation to the spouse has been provided for in the Company's balance sheet.

## (19) Legal Matters

### *WesternGeco*

On June 12, 2009, WesternGeco L.L.C. ("WesternGeco") filed a lawsuit against the Company in the United States District Court for the Southern District of Texas, Houston Division. In the lawsuit, styled *WesternGeco L.L.C. v. ION Geophysical Corporation*, WesternGeco alleges that the Company has infringed several United States patents regarding marine seismic streamer steering devices that are owned by WesternGeco. WesternGeco is seeking unspecified monetary damages and an injunction prohibiting the Company from making, using, selling, offering for sale or supplying any infringing products in the United States. Based on the Company's review of the lawsuit filed by WesternGeco and the WesternGeco patents at issue, the Company believes that its products do not infringe any WesternGeco patents, that the claims asserted against the Company by WesternGeco are without merit and that the ultimate outcome of the claims against it will not result in a material adverse effect on the Company's financial condition or results of operations. The Company intends to defend the claims against it vigorously.

On June 16, 2009, the Company filed an answer and counterclaims against WesternGeco, in which the Company denies that it has infringed WesternGeco's patents and asserts that the WesternGeco patents are invalid or unenforceable. The Company also asserted that WesternGeco's Q-Marine system, components and technology infringe upon a United States patent owned by the Company related to marine seismic streamer steering devices. The claims by the Company also assert that WesternGeco tortiously interfered with the Company's relationship with its customers. In addition, the Company claims that the lawsuit by WesternGeco is an illegal attempt by WesternGeco to control and restrict competition in the market for marine seismic surveys performed using laterally steerable streamers. In its counterclaims, the Company is requesting various remedies and relief, including a declaration that the WesternGeco patents are invalid or unenforceable, an injunction prohibiting WesternGeco from making, using, selling, offering for sale or supplying any infringing products in the United States, a declaration that the WesternGeco patents should be co-owned by the Company, and an award of unspecified monetary damages.

In June 2010, WesternGeco filed a lawsuit against various subsidiaries and affiliates of Fugro N.V. ("Fugro"), a seismic contractor customer of the Company, accusing the defendants of infringing the same United States patents regarding marine seismic streamer steering devices by planning to use certain equipment purchased from the Company on a survey located outside of U.S. territorial waters. The court approved the consolidation of the Fugro case with the case against the Company. The defendants in the Fugro case have filed a motion to dismiss the lawsuit.

### *Fletcher*

The Company is involved in two lawsuits filed in Delaware involving Fletcher, the holder of shares of the Series D Preferred Stock.

Under the Company's February 2005 agreement with Fletcher, the aggregate number of shares of common stock issued or issuable to Fletcher upon conversion of the Series D Preferred Stock could not exceed a designated maximum number of shares (the "Maximum Number"), and such Maximum Number could be increased by Fletcher providing the Company with a 65-day notice of increase. In November 2008, Fletcher exercised its right to increase the "Maximum Number" from 7,669,434 shares to 9,669,434 shares. On September 15, 2009, Fletcher delivered a second notice to the Company, intending to increase the "Maximum Number" of shares of common stock issuable upon conversion of the Series D Preferred Stock from 9,669,434 shares to 11,669,434 shares. The Company's interpretation of the agreement with Fletcher was that Fletcher had the right to issue only one notice to increase the Maximum Number, which Fletcher had exercised in November 2008. As a result, on November 6, 2009, the Company filed an action in the Court of Chancery of the State of Delaware, styled *ION Geophysical Corporation v. Fletcher International, Ltd.*, seeking a declaration that, under the agreement, Fletcher was permitted to deliver only one notice to increase the Maximum Number and that its second notice was legally invalid. Fletcher filed an answer and counterclaim, seeking specific performance and reimbursement and indemnification for its costs and expenses that it claimed it was entitled to under the 2005 agreement. On November 5, 2010, the Court of Chancery issued its opinion

in the matter, and held that Fletcher was entitled to deliver multiple notices to increase the Maximum Number of shares of common stock (but not beyond a total of 15,724,306 shares). The Court also ruled that the Company is not required to indemnify Fletcher for its fees, costs and expenses incurred in connection with the proceedings. On November 8, 2010, Fletcher sent the Company a notice to increase the Maximum Number of shares to 15,724,306 shares, effective January 12, 2011. Currently, Fletcher's remaining outstanding shares of Series D Preferred Stock are convertible into up to 6,065,075 shares of ION common stock.

On November 25, 2009, Fletcher filed a lawsuit against the Company and certain of its directors in the Delaware Court of Chancery. In the lawsuit, styled *Fletcher International, Ltd. v. ION Geophysical Corporation, f/k/a Input/Output, Inc., ION International S.à r.l., James M. Lapeyre, Bruce S. Appelbaum, Theodore H. Elliott, Jr., Franklin Myers, S. James Nelson, Jr., Robert P. Peebler, John Seitz, G. Thomas Marsh And Nicholas G. Vlahakis*, Fletcher alleged, among other things, that the Company violated Fletcher's consent rights contained in the Series D Preferred Stock Certificates of Designation, by having ION Sàrl issuing a convertible promissory note to the Bank of China, New York Branch, in connection with a bridge loan funded in October 2009 by Bank of China, and that the directors violated their fiduciary duty to the Company by allowing ION Sàrl to issue the convertible note without Fletcher's consent. Fletcher sought a court order requiring ION Sàrl to repay the \$10 million advanced to ION Sàrl under the bridge loan and unspecified monetary damages. On March 24, 2010, the presiding judge in the case denied Fletcher's request for the court order. In a Memorandum Opinion issued on May 28, 2010 in response to a motion for partial summary judgment, the judge dismissed all of Fletcher's claims against the named Company directors but also concluded that, because the bridge loan note issued by ION Sàrl was convertible into ION common stock, Fletcher had the right to consent to the issuance of the note and that the Company violated Fletcher's consent right by ION Sàrl issuing the note without Fletcher's consent. In December 2010, the presiding judge in the case recused himself from the case without explanation and a new presiding judge was appointed to the case. The holder of the convertible note issued by ION Sàrl never exercised its right to convert the note, and the note was paid in full in March 2010. The Company believes that the remaining claims asserted by Fletcher in the lawsuit are without merit. The Company further believes that the monetary damages suffered by Fletcher as a result of ION Sàrl issuing the bridge loan note without Fletcher's consent are nonexistent or nominal, and that the ultimate outcome of the lawsuit will not result in a material adverse effect on the Company's financial condition or results of operations. The Company intends to defend the remaining claims against it in this lawsuit vigorously.

### ***Greatbatch***

In 2002, the Company filed a lawsuit against operating subsidiaries of battery manufacturer Greatbatch, Inc., including its Electrochem division (collectively "Greatbatch"), in the 24th Judicial District Court for the Parish of Jefferson in the State of Louisiana. In the lawsuit, styled *Input/Output, Inc. and I/O Marine Systems, Inc. v. Wilson Greatbatch Technologies, Inc., Wilson Greatbatch, Ltd. d/b/a Electrochem Lithium Batteries, and WGL Intermediate Holdings, Inc., Civil Action No. 578-881, Division "A"*, the Company alleged that Greatbatch had fraudulently misappropriated the Company's product designs and other trade secrets related to the batteries and battery pack used in the Company's DigiBIRD® marine towed streamer vertical control device and used the Company's confidential information to manufacture and market competing batteries and battery packs. After a trial, on October 1, 2009 the jury concluded that Greatbatch had committed fraud, violated the Louisiana Unfair Trade Practices Act and breached a trust and nondisclosure agreement between Greatbatch and the Company, and awarded the Company approximately \$21.7 million in compensatory damages. A judgment was entered consistent with the jury verdict. In December 2010, the Company and Greatbatch settled the lawsuit, pursuant to which Greatbatch paid the Company \$25.0 million in full satisfaction of the judgment. Upon the cash receipt, the Company recorded a gain on legal settlement of \$24.5 million, net of fees paid to attorneys.

### ***Sercel***

On January 29, 2010, the jury in a patent infringement lawsuit filed by the Company against seismic equipment provider Sercel, Inc. in the United States District Court for the Eastern District of Texas returned a



verdict in the Company's favor. In the lawsuit, styled *Input/Output, Inc. et al v. Sercel, Inc.*, (5-06-cv-00236), the Company alleged that Sercel's 408, 428 and SeaRay digital seismic sensor units infringe the Company's United States Patent No. 5,852,242, which is incorporated in the Company's VectorSeis® sensor technology. Products of the Company or INOVA Geophysical that use the VectorSeis technology include the System Four®, Scorpion®, FireFly®, and VectorSeis Ocean seismic acquisition systems. After a two-week trial, the jury concluded that Sercel infringed the Company's patent and that the Company's patent was valid, and the jury awarded the Company \$25.2 million in compensatory past damages. In response to post-verdict motions made by the parties, on September 16, 2010, the presiding judge issued a series of rulings that (a) granted the Company's motion for a permanent injunction to be issued prohibiting the manufacture, use or sale of the infringing Sercel products, (b) confirmed that the Company's patent was valid, (c) confirmed that the jury's finding of infringement was supported by the evidence and (d) disallowed \$5.4 million of lost profits that were based on infringing products that were manufactured and delivered by Sercel outside of the United States, but were offered for sale by Sercel in the United States and involved underlying orders and payments received by Sercel in the United States. In addition, the judge concluded that the evidence supporting the jury's finding that the Company was entitled to be awarded \$9.0 million in lost profits associated with certain infringing pre-verdict marine sales by Sercel was too speculative and therefore disallowed that award of lost profits. As a result of the judge's ruling, the Company is now entitled to be awarded an additional amount of damages equal to a reasonable royalty on the infringing pre-verdict Sercel marine sales. After the Company learned that Sercel continued to make sales of infringing products after the January 2010 jury verdict was rendered, the Company filed motions with the court to seek additional compensatory damages for the post-verdict infringing sales and enhanced damages as a result of the willful nature of Sercel's post-verdict infringement. On February 16, 2011, the Court entered a final judgment and permanent injunction in the case. The final judgment awarded the Company \$10.7 million in damages, plus interest, and the permanent injunction prohibits Sercel and parties acting in concert with Sercel from making, using, offering to sell, selling, or importing in the United States (which includes territorial waters of the United States) Sercel's 408UL, 428XL and SeaRay digital sensor units, and all other products that are only colorably different from those products. The Court ordered that the additional damages to be paid by Sercel as a reasonable royalty on the infringing pre-verdict Sercel marine sales and the additional damages to be paid by Sercel resulting from post-verdict infringing sales be determined in a separate future proceeding. The Company has not recorded any amounts related to this gain contingency as of December 31, 2010.

### ***Other***

The Company has been named in various other lawsuits or threatened actions that are incidental to its ordinary business. Litigation is inherently unpredictable. Any claims against the Company, whether meritorious or not, could be time-consuming, cause the Company to incur costs and expenses, require significant amounts of management time and result in the diversion of significant operational resources. The results of these lawsuits and actions cannot be predicted with certainty. Management currently believes that the ultimate resolution of these matters will not have a material adverse impact on the financial condition, results of operations or liquidity of the Company.

### **(20) Restructuring Activities**

Due to the formation of INOVA Geophysical, the Company consolidated certain of its Stafford-based operations, which resulted in the Company permanently ceasing to use certain leased facilities as of March 31, 2010. The Company determined that the fair value of its remaining costs to be incurred under its lease of these facilities was approximately \$8.2 million. After considering all deferred items on the Company's balance sheet associated with this lease, the Company recorded a charge to its loss on disposition of land division of \$5.0 million. For the nine months from April 1, 2010 through December 31, 2010, the Company had a beginning liability of \$8.2 million, accrued approximately \$0.4 million related to accretion expense and made cash payments of \$1.9 million, resulting in a remaining liability of \$6.7 million as of December 31, 2010.



## **(22) Certain Relationships and Related Party Transactions**

In April 2010, the Company advanced \$5.0 million to INOVA Geophysical for its short-term capital purposes under a short-term promissory note. The note was scheduled to mature on August 31, 2010 and accrued interest at an annual rate equal to the London Interbank Offered Rate ("LIBOR") plus 350 basis points. INOVA Geophysical repaid the outstanding balance on this note of \$5.0 million in August 2010. Additionally, BGP advanced \$5.0 million to INOVA Geophysical during the second quarter on similar terms and INOVA Geophysical repaid the amount in full.

In May 2010, the Company entered into a second promissory note arrangement with INOVA Geophysical providing for potential borrowings up to \$4.5 million, under which INOVA Geophysical borrowed \$1.5 million. This note matured on July 30, 2010 and accrued interest at an annual rate equal to LIBOR plus 350 basis points. INOVA Geophysical repaid the outstanding balance on this second note of \$1.5 million in July 2010. The purpose of these advances was to provide short-term capital to INOVA Geophysical prior to INOVA Geophysical's obtaining its own line of credit, which it obtained in June 2010.

The Company has also entered into a support and transition agreement to provide INOVA Geophysical with certain administrative services including tax, legal, information technology, treasury, human resources, bookkeeping, facilities and marketing services. The terms of the arrangement provide for INOVA Geophysical to pay approximately \$0.3 million per month (beginning in April 2010) for services and to reimburse the Company for third-party and lease costs incurred by the Company directly related to the administrative support of INOVA Geophysical. The term of the agreement is for two years and will automatically renew for one-year periods, unless either party provides notice of its intent to terminate the agreement. At December 31, 2010, approximately \$3.0 million was owed by INOVA Geophysical to the Company and reflected in the balance of Accounts Receivable, net. The majority of these shared services provided by the Company are reflected as reductions to general and administrative expense.

For 2010, 2009 and 2008, the Company recorded revenues from BGP of \$16.9 million, \$32.2 million and \$17.6 million, respectively. Receivables due from BGP were \$3.0 million and \$9.2 million at December 31, 2010 and 2009, respectively. BGP owned approximately 15.6% of the Company's outstanding common stock as of December 31, 2010.

Mr. James M. Lapeyre, Jr. is the chairman and a significant equity owner of Laitram, L.L.C. (Laitram) and has served as president 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 6.0% of the Company's outstanding common stock as of December 31, 2010.

The Company acquired DigiCourse, Inc., the Company's marine positioning products business, from Laitram in 1998 and renamed it I/O Marine Systems, Inc. In connection with that acquisition, the Company entered into a Continued Services Agreement with Laitram under which Laitram agreed to provide the Company certain accounting, software, manufacturing, and maintenance services. Manufacturing services consist primarily of machining of parts for the Company's marine positioning systems. The term of this agreement expired in September 2001 but the Company continues to operate under its terms. In addition, when the Company requests, the legal staff of Laitram advises the Company on certain intellectual property matters with regard to the Company's marine positioning systems. Under a lease of commercial property dated February 1, 2006, between Lapeyre Properties L.L.C. (an affiliate of Laitram) and ION, the Company agreed to lease certain office and warehouse space from Lapeyre Properties until January 2011. During 2010, the Company paid Laitram a total of approximately \$3.1 million, which consisted of approximately \$2.3 million for manufacturing services, \$0.7 million for rent and other pass-through third party facilities charges, and \$0.1 million for other services. During 2009 and 2008, the Company paid Laitram a total of approximately \$4.0 million and \$4.3 million, respectively, for these services. In the opinion of the Company's management, the terms of these services are 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.

**SCHEDULE II**

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES  
VALUATION AND QUALIFYING ACCOUNTS**

| <u>Year Ended December 31, 2008</u>                  | <u>Balance at<br/>Beginning<br/>of Year</u> | <u>Acquired<br/>Reserves<br/>during the<br/>period</u>      | <u>Charged<br/>(Credited)<br/>to Costs and<br/>Expenses</u> | <u>Deductions</u>                 | <u>Balance at<br/>End of Year</u> |
|--|---|---|---|-----------------------------------|-----------------------------------|
|  |   |   | (In thousands)  |                                   |                                   |
| Allowances for doubtful accounts . . . . .           | \$ 2,675                                    | \$ —  | \$ 4,852  | \$(1,842)                         | \$ 5,685                          |
| Allowances for doubtful notes . . . . .              | 3,351                                       | —   | —   | (3,351)                           | —                                 |
| Warranty . . . . .                                   | 13,439                                      | 845   | 4,624   | (8,382)                           | 10,526                            |
| Valuation allowance on deferred tax assets . . .     | 37,413                                      | —   | (9,613)   | 1,298                             | 29,098                            |
|  |   |   |   |                                   |                                   |
| <u>Year Ended December 31, 2009</u>                  | <u>Balance at<br/>Beginning<br/>of Year</u> | <u>Charged<br/>(Credited)<br/>to Costs and<br/>Expenses</u> | <u>Deductions</u>   | <u>Balance at<br/>End of Year</u> |                                   |
|  |   |   | (In thousands)  |                                   |                                   |
| Allowances for doubtful accounts . . . . .           | \$ 5,685                                    | \$ 3,457  | \$(3,468)   | \$ 5,674                          |                                   |
| Allowances for doubtful notes . . . . .              | —   | 71  | —   | 71                                |                                   |
| Warranty . . . . .                                   | 10,526                                      | (2,121)   | (3,317)   | 5,088                             |                                   |
| Valuation allowance on deferred tax assets . . . . . | 29,098                                      | 6,531   | (2,503)   | 33,126                            |                                   |
|  |   |   |   |                                   |                                   |
| <u>Year Ended December 31, 2010</u>                  | <u>Balance at<br/>Beginning<br/>of Year</u> | <u>Disposed<br/>Reserves<br/>During the<br/>Period</u>      | <u>Charged<br/>(Credited)<br/>to Costs and<br/>Expenses</u> | <u>Deductions</u>                 | <u>Balance at<br/>End of Year</u> |
|  |   |   | (In thousands)  |                                   |                                   |
| Allowances for doubtful accounts . . . . .           | \$ 5,674                                    | \$ (4,273)  | \$ 1,689  | \$(2,245)                         | \$ 845                            |
| Allowances for doubtful notes . . . . .              | 71  | (71)  | —   | —                                 | —                                 |
| Warranty . . . . .                                   | 5,088                                       | (3,821)   | 443   | (926)                             | 784                               |
| Valuation allowance on deferred tax assets . . .     | 33,126                                      | (15,897)  | 45,471  | —                                 | 62,700                            |

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# [ CORPORATE INFORMATION ]

## → Executive Officers

**Robert P. (Bob) Peebler**  
Chief Executive Officer and Director

**R. Brian Hanson**  
Executive Vice President and  
Chief Financial Officer

**Nikolaos Bernitsas**  
Senior Vice President,  
GXT Imaging Solutions

**David Moffat**  
Senior Vice President,  
Marine Imaging Systems Division

**David L. Roland**  
Senior Vice President, General Counsel  
and Corporate Secretary

**Ken Williamson**  
Senior Vice President,  
Integrated Seismic Solutions

**Michael L. Morrison**  
Vice President and Corporate Controller

## → Board of Directors

**James M. (Jay) Lapeyre, Jr.**  
Chairman of the Board  
President, Laitram L.L.C.

**David H. Barr**  
Retired Group President-Eastern Hemisphere  
Baker Hughes Incorporated

**Hao Huimin**  
Chief Geophysicist  
BGP Inc.,  
China National Petroleum Corporation

**Michael C. Jennings**  
President, Chief Executive Officer  
and Chairman of the Board  
Frontier Oil Corporation

**Franklin Myers**  
Operating Advisor  
Paine & Partners, LLC

**S. James Nelson, Jr.**  
Retired Vice Chairman, Cal Dive International, Inc.  
(now Helix Energy Solutions Group, Inc.)

**Robert P. (Bob) Peebler**  
Chief Executive Officer  
ION Geophysical Corporation

**John N. Seitz**  
Founder and Vice Chairman of the Board  
Endeavour International Corporation

## → Investor Relations

Shareholders, securities analysts, portfolio managers, or brokers seeking information about the Company are welcome to call Investor Relations at +1.281.933.3339. If you prefer, you may send your requests to the Investor Relations e-mail address: [ir@iongeo.com](mailto:ir@iongeo.com). Recent news releases, financial information, and SEC filings can be downloaded from the Company's website at [iongeo.com](http://iongeo.com).

## → Annual Report on Form 10-K

ION Geophysical Corporation's Annual Report on Form 10-K for the fiscal year ended December 31, 2010, which is furnished as part of this Annual Report to Shareholders, is also available upon request without charge from:

ION Geophysical Corporation  
Attn: Investor Relations  
2105 CityWest Blvd., Suite 400  
Houston, Texas 77042-2839

## → Annual Meeting

The Annual Meeting of Stockholders of ION Geophysical Corporation will be held at the offices of the Company located at 2105 CityWest Blvd., Suite 400, Houston, Texas, on May 27, 2011, at 10:30 AM CST.

## → Stock Transfer Agent

Computershare Investor Service  
2 North LaSalle St.  
Chicago, Illinois 60602

## → Independent Auditors

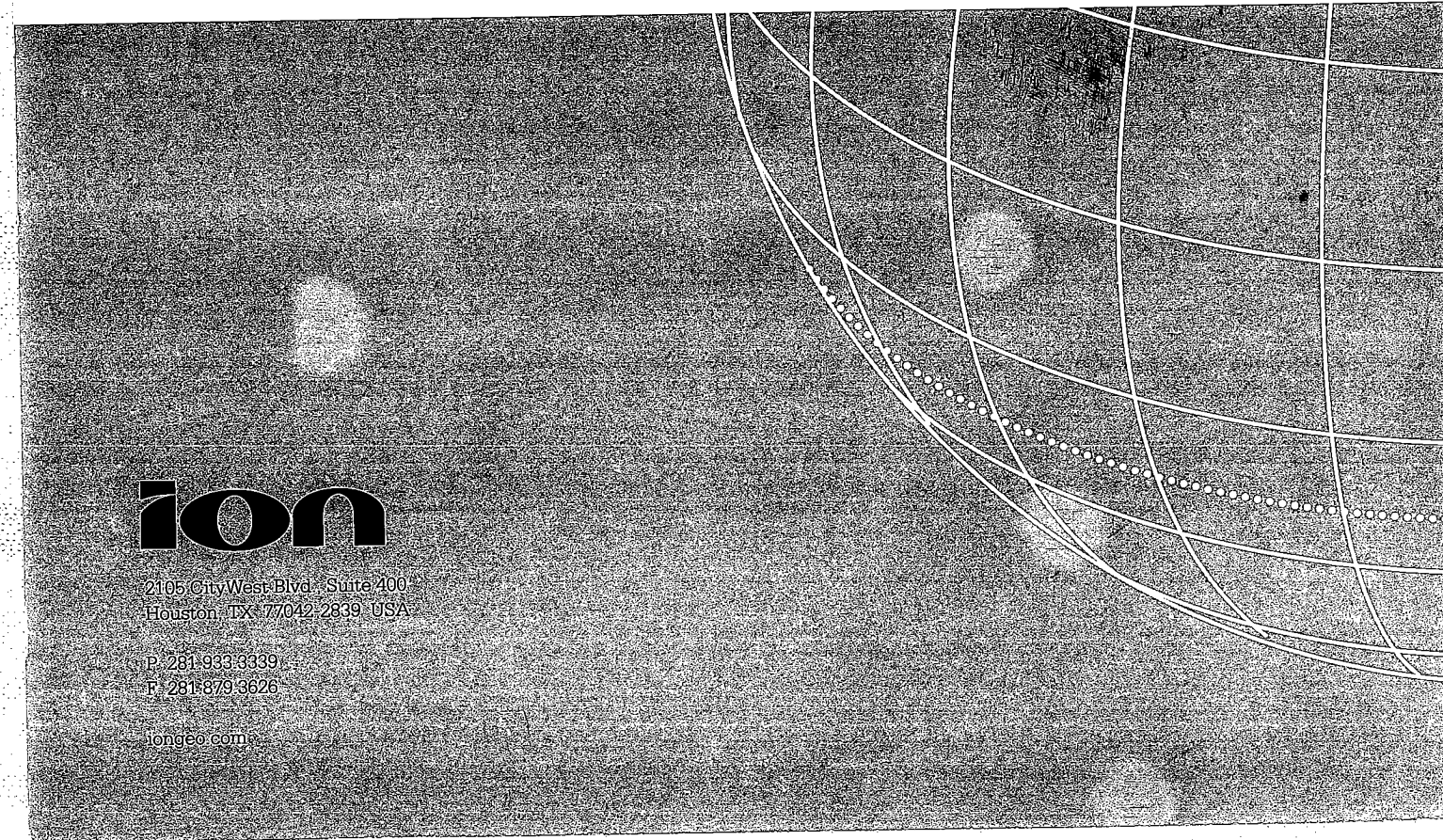
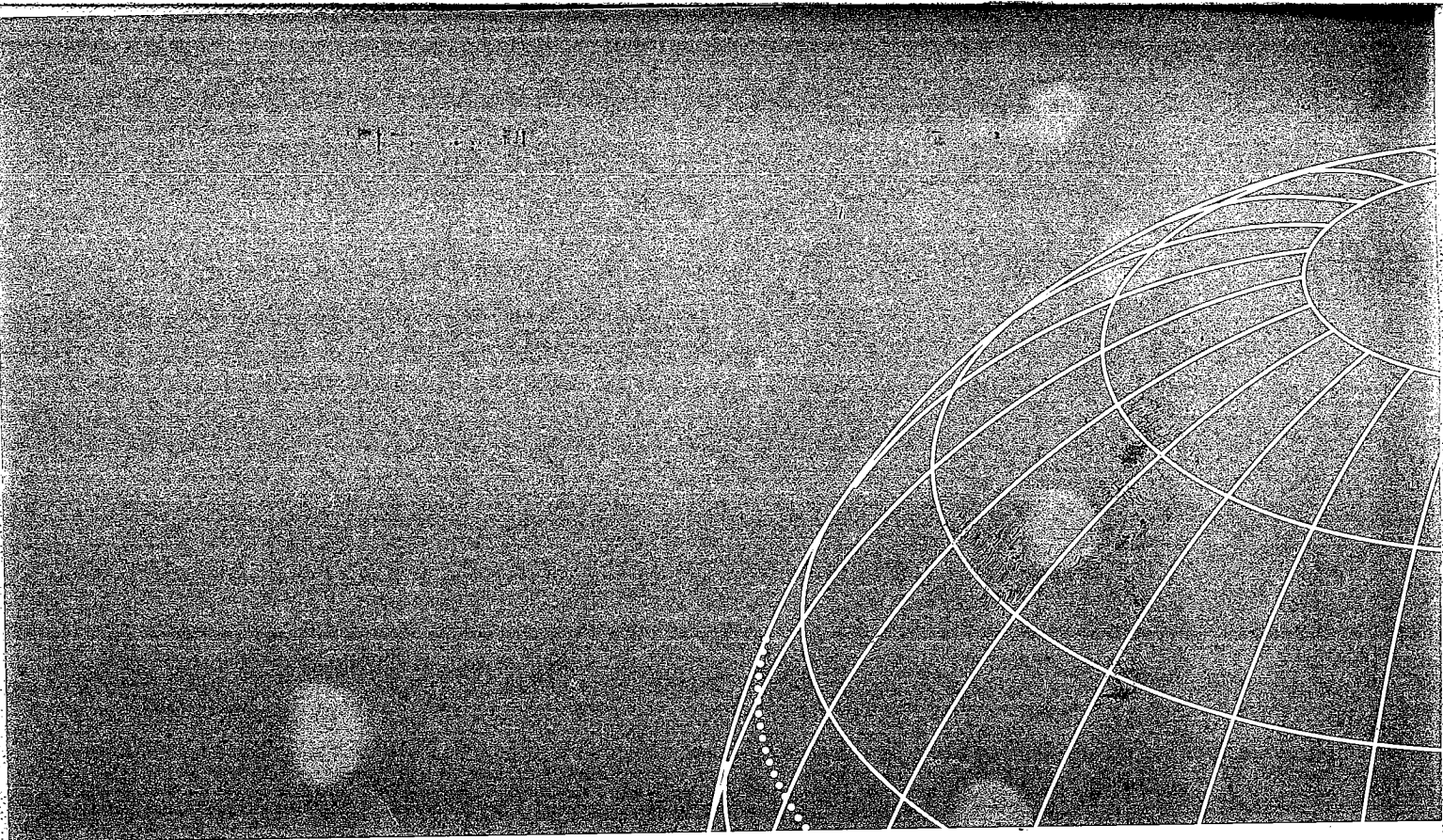
Ernst & Young LLP  
5 Houston Center  
Suite 1200  
1401 McKinney St.  
Houston, Texas 77010  
713.750.1500

## → CEO and CFO Certificates

The Company has included as Exhibit 31 to its Annual Report on Form 10-K for the fiscal year ended December 31, 2010, filed with the Securities and Exchange Commission, certificates of the Chief Executive Officer and Chief Financial Officer of the Company certifying the quality of the Company's public disclosure and the Company has submitted to the New York Stock Exchange a certificate of the Chief Executive Officer of the Company certifying that he is not aware of any violation by the Company of the New York Stock Exchange corporate governance listing standards.

## → Statement for Purpose of Forward-Looking Statements

The information included herein contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These forward-looking statements include statements concerning expected future financial positions, segment sales, results of operations, cash flows, funds from operations, financing plans, gross margins, business strategy, budgets, projected costs and expenses, capital expenditures, competitive position, product offerings, technology developments, access to capital and growth opportunities, results of litigation, future cash needs and future sources of cash, including availability under the Company's revolving line of credit facility, future compliance with debt financial covenants, future sales and market growth, benefits to be obtained by the Company from the joint venture with BGP, and other statements that are not of historical fact. Actual results may vary materially from those described in these forward-looking statements. All forward-looking statements reflect numerous assumptions and involve a number of risks and uncertainties. These risks and uncertainties include audit adjustments and other modifications to the Company's financial statements not currently foreseen, unanticipated delays in the timing and development of the Company's products and services and market acceptance of the Company's new and revised product offerings; risks associated with the economic downturn and the volatile credit environment; risks associated with the operations of the joint venture; risks associated with the Company's level of indebtedness, including compliance with debt covenants; risks associated with competitors' product offerings and pricing pressures resulting therefrom; the relatively small number of customers that the Company currently relies upon; the fact that a significant portion of the Company's revenues is derived from foreign sales; risks of litigation, risks that sources of capital may not prove adequate; risks regarding the Company's inability to produce products to preserve and increase market share; risks related to collection of receivables; and risks related to technological and marketplace changes affecting the Company's product line. Additional risk factors, which could not affect actual results, are disclosed by the Company from time to time in its filings with the Securities and Exchange Commission, including its Annual Report on Form 10-K for the year ended December 31, 2010. The information contained herein includes references to trademarks, service marks and registered marks of ION Geophysical Corporation and our subsidiaries as indicated. Except where stated otherwise or unless the context otherwise requires, the terms "ARIES II," "DigiBIRD," "DigiCOURSE," "DigiFIN," "DigiSHOT," "FireFly," "Gator," "Orca," "Reflex," "Scorpion," "Spectra," "Sprint," "System Four," "VectorSeis," and "XVib" refer to ARIES II®, DIGIBIRD®, DIGICOURSE®, DIGIFIN®, DIGISHOT®, FIREFLY®, GATOR®, ORCA®, REFLEX®, SCORPION®, SPECTRA®, SPRINT®, SYSTEM FOUR®, VECTORSEIS®, and XVIB®, registered marks owned by ION or INOVA, and the terms "AHV-IV," "ARIES," "AZIM," "BasinSPAN," "DigiSTREAMER," "Intelligent Acquisition," "SM-24XL," "Shot Pro," and "Vib Pro" refer to AHV-IV™, ARIES™, AZIM™, BASINSPAN™, DIGISTREAMER™, INTELLIGENT ACQUISITION™, SM-24XL™, SHOT PRO™, and VIB PRO™ trademarks and service marks owned by ION or INOVA.



**ion**

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F: 281-879-3626

[iongeo.com](http://iongeo.com)