

ION GEOPHYSICAL CORP  
Form 10-K  
March 01, 2010

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION**  
**Washington, DC 20549**  
**Form 10-K**

(Mark One)

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
**For the Fiscal Year Ended December 31, 2009**

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**

*(State or Other Jurisdiction of Incorporation or Organization)*

**22-2286646**

*(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

New York Stock Exchange

Preferred Stock

**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  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

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  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.

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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

Non-accelerated filer   
(Do not check if a smaller  
reporting company)

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

As of June 30, 2009 (the last business day of the registrant's second quarter of fiscal 2009), the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was \$279.4 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, \$.01 par value, 118,695,952 shares outstanding as of February 22, 2010.

**DOCUMENTS INCORPORATED BY REFERENCE**

**Document**

**Parts Into Which Incorporated**

Portions of the Proxy Statement for the Annual Meeting of Stockholders to be held May 26, 2010

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 seismic data acquisition equipment, seismic software, and seismic planning, processing, and interpretation 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 22 cities on five continents. In October 2009, we announced that we had entered into a binding term sheet with BGP Inc., China National Petroleum Corporation (BGP), a wholly-owned oil field service subsidiary of China National Petroleum Corporation (CNPC), to form a land equipment joint venture. 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 and 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 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. See Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations - Executive Summary* for a list of certain developments

in our business in 2009 and early 2010.

We operate our company through four business segments. Three of these segments – Land Imaging Systems, Marine Imaging Systems and Data Management Solutions – make up our ION Systems division. The fourth segment is our ION Solutions division.

*Land Imaging Systems* – cable-based, cableless and radio-controlled seismic data acquisition systems, digital and analog geophone sensors, vibroseis vehicles (i.e., vibrator trucks) and source controllers for detonator and vibrator energy sources and also consisting of analog geophone sensors. After we complete our land equipment joint venture with BGP, all of these business lines, with the exception of analog geophone sensors, will become part of the joint venture. See *Proposed Land Equipment Joint Venture with BGP*.

*Marine Imaging 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).

*Data Management Solutions* – software systems and related services for navigation and data management involving towed marine streamer and seabed operations.

*ION Solutions* – advanced seismic data processing services for marine and land environments, seismic data libraries, and Integrated Seismic Solutions (ISS) services.

Our results of operations and financial condition in 2009 were adversely effected by the global economic downturn, which reduced industry demand for our products and services. See Item 1A. *Risk Factors* and Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*.

Our executive headquarters are located at 2105 CityWest Boulevard, Suite 400, Houston, Texas 77042-2839. 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, 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 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 and the pace of innovation in 3-D seismic imaging technology slowed in the late 1990s, E&P companies slowed the commissioning of new seismic surveys. Also, business practices employed by geophysical contractors in the 1990s 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.

As commodity prices increased (beginning in 2004), E&P companies increased their capital investment programs, which drove higher demand for our products and services. Crude oil prices increased to record levels of \$147 per barrel in July 2008, but, in conjunction with the global recession sharply declined after that, fell to approximately \$35 per barrel during the first quarter of 2009. By the end of 2009, oil prices had recovered to approximately \$83 per barrel. Natural gas prices followed a similar, recession-induced downturn. After peaking at \$13.31 per mmBtu in July 2008, Henry Hub natural gas prices fell approximately 50%. Unlike the recent recovery of oil prices, natural gas



prices have remained depressed due in part to the excess supply of natural gas in the market. These conditions sharply curtailed demand for exploration activities in North America and in other regions. See Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations* for further information.

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

*Factors Affecting Long-Term Demand.* Beginning in 2004 and continuing until 2008, we observed increased spending for seismic services and equipment by E&P companies and seismic contractors, driven in part by an increase in commodity prices. A decline in the number and size of new discoveries, production declines in known reservoirs, and expanded demand for hydrocarbons had increased the pressure on E&P companies to discover additional fields and optimize the recovery of those already on production. Until the fourth quarter of 2008, this increasing exploration activity combined with higher commodity price levels increased the demand for seismic technology and services.

The recent global recession that began in 2008 reduced the demand for (and associated prices of) hydrocarbons, which has adversely affected our business and results of operations. However, we believe that several factors are in place that will reverse the downturn in seismic spending for the years ahead. These factors include the following:

Demand for both crude oil and natural gas should continue to increase as the financial health of developed country economies gradually improves, and as demand in high-growth emerging markets, like China and India, returns to or exceeds previous levels;

E&P companies are focusing more on hydrocarbon reservoirs that are located in deeper waters or deeper in the geologic column. These reservoirs are generally more complex or subtle than the reservoirs that were discovered in prior decades and are located in unconventional reservoir types, such as tar sand deposits or tight gas locked within hard rock or low permeability shales. 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; and

E&P companies are increasingly using seismic data to enhance production from known fields by repeating time-lapse seismic surveys over a defined area. This trend should benefit seismic companies such as ION by extending the utility of subsurface imaging beyond exploration and into production monitoring, which can last for decades.

We believe that E&P companies will, in the future, increasingly use seismic technology providers who will collaborate with them to tailor surveys that address specific geophysical problems and to apply advanced digital sensor and imaging technologies to take into account the geologic peculiarities of a specific area. In the future, we expect that these 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 from being primarily a seismic equipment provider 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.

Additionally, in September 2008, we further expanded our land system offerings through the acquisition of ARAM Systems Ltd. and Canadian Seismic Rentals Inc. (sometimes collectively referred to herein as ARAM). We acquired ARAM for the purpose of advancing our strategy and market penetration in the land seismic recording system business.

Through these and other acquisitions, along with our research and development efforts, our technologies and services now 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.

*Responses to the Global Downturn.* The dramatic economic changes that occurred in the fourth quarter of 2008 and continued through 2009 caused us to re-evaluate and refine our business strategy. The disruption in the U.S. financial markets prompted a global economic crisis that adversely affected economic activity in most regions of the world and led to a tightening of the availability of commercial credit. Many economists are now predicting a gradual recovery from the prolonged worldwide economic recession and a slow recovery in the credit markets.



Crude oil prices rapidly declined from a peak oil price of \$147 per barrel in July 2008 to approximately \$35 per barrel in the first quarter of 2009. Hydrocarbon price erosion caused E&P companies to decrease their capital expenditure plans for exploration and production activities, which, in turn, adversely impacted the demand for many of our products and services. Natural gas prices followed a similar, recession-induced downturn. After peaking at \$13.31 per mmBtu in July 2008, Henry Hub natural gas prices fell approximately 50%. Unlike the recent recovery of oil prices, natural gas prices have remained depressed due in part to the excess supply of natural gas in the market. These conditions sharply curtailed demand for exploration activities in North America and in other regions.

Unlike many other seismic companies, we participate in the technology side of the business and are mainly involved in the planning, processing and interpretation of data services. We are not in the field crew business, and therefore do not have large amounts of capital and other resources invested in vessels or other assets necessary to support contracted seismic data acquisition services, nor do we have large manufacturing facilities. Our costs are therefore much more variable than most other seismic companies, which provides greater flexibility in difficult economic times. Nonetheless, the global economic crisis, combined with the decline in crude oil and natural gas prices, adversely affected us in 2009.

All of our business segments saw decreases in revenues, with some segments experiencing significant decreases. Our 2009 total net revenues declined 38% from our 2008 total net revenues.

Our acquisition of ARAM in 2008 and the \$282 million of debt financing that we incurred to finance the acquisition over-leveraged our company.

As a result, we reacted by implementing numerous cost-savings programs, including reducing our company-wide employee headcount by approximately 26%.

We also began considering strategic alternatives.

In the summer of 2009, we commenced negotiations with BGP for a joint venture for our land equipment business, and announced the signing of a binding term sheet for such a joint venture on October 23, 2009. See *Products and Services ION Systems Division Proposed Land Equipment Joint Venture with BGP*.

Our cost reduction initiatives were necessary in order to adjust to the reduced levels in demand and to align with changes in our overall strategy. For example, the severe slowdown in sales activity for our land acquisition systems in North America and Russia, caused our largest headcount reductions to be concentrated within our Land Imaging Systems segment. We believe that our current headcount is sufficient to manage our business and serve our customers needs during 2010, but we may make further adjustments as market conditions and our strategy dictate. Our employee headcount will be further reduced once we close the BGP joint venture transactions; employees previously dedicated to the joint venture businesses are expected to become employees within the joint venture.

In addition to analyzing our employee resources, we have evaluated current and planned internal and external programs, including research and development, to ensure that each program is serving a worthwhile goal in the most efficient manner. We are a technology solutions company and we rely upon our research and development programs to ensure that we offer products capable of solving seismic imaging problems around the world efficiently. The recent declines in oil and natural gas prices do not change the data indicating that the oil and gas industry still suffers from declines in the number and size of new discoveries and production declines in known reservoirs. These facts, combined with growing global demographics, support a conclusion of continuing long-term demand for hydrocarbons. In the current difficult economic environment, we believe that our technologies and services are ideal tools for E&P companies seeking ways to be more productive in a lower price environment. As a result, we have focused much of our research and development efforts on strategic programs that are seeking efficient and cost-effective solutions for the challenges in the current market and also in a recovered economy.

A key element of our business strategy, which began with our acquisition of GXT in 2004, 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 oil and natural gas prices in late 2008 and continuing through 2009 has made it even more important for the E&P industry to reduce the number of dry holes and to optimize the wells that are successful. 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 FireFly®, DigiFIN and Orca®, 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:

Increasing our market share and profitability in land acquisition systems and furthering the commercialization of FireFly, our cableless full-wave land data acquisition system, and our other land equipment technologies through our participation in the proposed land equipment joint venture with BGP;

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 ION Solutions business in new regions with new customers and new land and marine service offerings, including proprietary services for owners and operators of oil and gas properties;

Globalizing our ION 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

Leveraging our proposed land equipment joint venture with BGP 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 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 GXT Imaging Solutions group, 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:

Scorpion® our cable-based land acquisition system;

VectorSeis Ocean (VSO) our redeployable ocean bottom cable system for the seabed; and

FireFly our cableless full-wave land acquisition system.

### **Segment Information**

We operate our company through four business segments. Three of these segments – Land Imaging Systems, Marine Imaging Systems and Data Management Solutions – make up our ION Systems division. The fourth segment is our ION Solutions division.

*Land Imaging Systems* – primarily consisting of the businesses to be pursued by the joint venture with BGP, consisting of cable-based, cableless and radio-controlled seismic data acquisition systems, digital geophone sensors, vibroseis vehicles (i.e., vibrator trucks) and source controllers for detonator and vibrator energy sources and also consisting of analog geophone sensors.

*Marine Imaging 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).

*Data Management Solutions* – software systems and related services for navigation and data management involving towed marine streamer and seabed operations.

*ION Solutions* – advanced seismic data processing services for marine and land environments, seismic data libraries, and Integrated Seismic Solutions ( ISS ) services.

We measure segment operating results based on income from operations. See further discussion of our segment operating results at Note 15 of *Notes to Consolidated Financial Statements*.

### **Products and Services**

See Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations – Executive Summary* for a list of certain developments in our business in 2009 and early 2010.

#### ***ION Systems Division***

##### ***Land Imaging Systems Products***

Products for our Land Imaging Systems business segment include the following:

*Land Acquisition Systems.* Our 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.

Our 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. In November 2008, ION launched its latest version of ARIES. Known as ARIES II<sup>®</sup>, this updated 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.

We began VectorSeis technology land acquisition field tests in 1999, and since that time VectorSeis 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. In 2002, we introduced our VectorSeis System Four<sup>®</sup> land acquisition system. In 2004, we announced the introduction of our new hybrid System Four platform, which gave seismic companies the flexibility to use both traditional analog geophone sensors and digital full-wave VectorSeis sensors on the same survey. VectorSeis is also used as the primary sensor device on our FireFly cableless land acquisition system.

In November 2005, we announced our development of FireFly, a cableless 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 will improve field productivity while reducing concerns for health and safety and environmental liability exposure. 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.

During late 2006 and 2007, we delivered version 1.0 of our FireFly system, which was used by British Petroleum and then Apache Corporation, in field application projects located in Wyoming and northeast Texas, respectively. An advanced version of our FireFly system was successfully deployed in July 2008 on a multi-client survey in northwest Colorado in which Pittsburgh-based E&P operator, East Resources, served as the lead underwriter. This initial deployment of version 2.0 of our FireFly system was called Durham Ranch, after one of the large, privately held ranches in this ecologically sensitive area. In 2009, ION sold a version 2.0 FireFly system, which is being used in a producing hydrocarbon basin containing reservoirs that have been difficult to image with conventional seismic techniques. During 2009, our version 2.0 FireFly system was utilized on nine surveys shot in three continents, including two high channel count, multicomponent (full-wave) seismic acquisition programs in northeast Texas and three projects in Mexico with Compania Mexicana de Exploraciones (Comesa), an oilfield services company majority-owned by PEMEX, the national oil company of Mexico.

*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 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.

*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. We market and sell the AHV-IV, an articulated tire-based vibrator vehicle, and a tracked vibrator, the XVib<sup>®</sup>, for use in environmentally sensitive areas such as the Arctic tundra and desert environments.

Our 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.

***Proposed Land Equipment Joint Venture with BGP***

Our binding term sheet with BGP contemplates that we will enter into a purchase agreement with BGP to form the joint venture. We expect to form the joint venture entity as a wholly-owned subsidiary of ION Geophysical Corporation and will contribute to the joint venture certain assets and related liabilities that relate to the proposed joint venture business. Then, BGP will acquire a 51% equity interest from us in the joint venture for an aggregate purchase price of \$108.5 million cash, and will contribute to the joint venture certain of its assets and related liabilities that relate to the joint venture's business. The assets of each party to be contributed to the joint venture will include seismic recording systems, inventory, certain intellectual property rights and contract rights, all as may be necessary to or principally used in the conduct or operation of the businesses to be contributed to the joint venture as presently conducted or operated by each party. The Company expects the value assigned to the joint venture to exceed the Company's current book value of its land equipment businesses.

The scope of the joint venture's business will be 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 will be (x) the analog sensor businesses of our company and BGP and (y) the businesses of certain companies in which BGP or we are currently a minority owner. All of our other businesses—including our Marine Imaging Systems, Data Management Solutions and ION Solutions (which includes GXT's Imaging Solutions, Integrated Seismic Solutions (ISS) and BasinSPAN—and seismic data libraries)—will remain owned and operated by us and will not comprise a part of the joint venture.

A key part of the strategy behind the joint venture will be to leverage our research and development experience and expertise with the operational experience and expertise of BGP. It is expected that the R&D centers will remain primarily in the U.S. and Canada and much of the land equipment manufacturing operations will move to China in order to reduce costs. In addition, BGP's crews will be able to field test new technology and related equipment for operational feedback and quality improvements. Finally, we expect that BGP will purchase the majority of its land equipment from the joint venture and will purchase ION products and services from our other business segments. Closing and formation of the joint venture is expected to occur in March 2010.

***Marine Imaging Systems Products***

Products for our Marine Imaging Systems business 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<sup>®</sup> 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. 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. Through December 31, 2009, RXT has purchased a total of \$39 million of VSO systems and related equipment toward their commitment. The agreement entitles 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, which, in 2009 and 2008, was \$4.0 million and \$2.4 million, respectively. The agreement granted RXT exclusive rights to the VSO product line through 2011. Because they did not purchase the minimum annual quantity of equipment, in February 2010 we notified RXT that they no longer have exclusive rights to the VSO product line.

***Marine Positioning Systems.*** Our DigiCOURSE<sup>®</sup> 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 a total of nine DigiFIN systems in 2008 with an additional 13 systems delivered in 2009. 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 minimize 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.

#### ***Data Management Solutions 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 Data Management Solutions business segment include the following:

*Marine Imaging.* ORCA is our next-generation software product for towed streamer navigation and integrated data management applications. During 2007 and 2008, Orca made significant inroads into the towed streamer market with several major seismic contractors adopting the technology for their new, high-end seismic vessels. Orca includes modules designed to manage acquisition marine 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 be compatible with our DigiFIN product, which enables streamer lateral control, and DigiSTREAMER, our new marine streamer acquisition system. SPECTRA® is Concept Systems' 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 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.

#### ***ION Solutions Division Services***

Services for our ION Solutions business segment include the following:

*Seismic Data Processing Services.* The GXT Imaging Solutions group provides a variety of seismic data processing and imaging services to E&P companies for marine, ocean bottom and land environments. Services include survey planning and design, project oversight of data acquisition operations, advanced signal processing, final image rendering, and geophysical and reservoir analysis.

The GXT Imaging Solutions group offers processing and imaging services through which it develops a series of subsurface images by applying its processing technology to data owned or licensed by its customers. The group also provides support services to its customers, such as data pre-conditioning for imaging and outsourced management of seismic data acquisition and image processing services.

The GXT Imaging Solutions group uses parallel computer clusters to process seismic data by applying advanced proprietary algorithms and workflows that incorporate techniques such as illumination analysis, data conditioning and velocity modeling, and time and depth migration. Pre-stack depth migration involves the application of advanced,

computer-intensive processing techniques which convert time-based seismic information to a depth basis. While pre-stack depth migration is not necessary in every imaging situation,

it generally provides the most accurate subsurface images in areas of complex geology. It also helps to convert seismic data, which is recorded in the time domain, into a depth domain format that is more readily applied by geologists and reservoir engineers in identifying well locations. 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.

Our AXIS Geophysics group (AXIS), based in Denver, Colorado, focuses on advanced seismic data processing for stratigraphically complex onshore environments. 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 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 and southeast Asia. In 2009, we completed the acquisition of new BasinSPAN surveys offshore Argentina, northeast Greenland and southern Australia. Additionally, in January 2010, we completed the acquisition of an additional 28,000 km of regional seismic data covering Brazil's southern Santos, Pelotas and northeastern Equatorial basins; this brings our total basin-scale seismic library offshore Brazil to more than 42,000 kilometers of data acquired. Non-seismic surveys employing gravity gradiometry and magnetic technology were also acquired over northern Canada and the Gulf Coast. Additional SPANS and other seismic and non-seismic programs are planned or under development for other regions of the world.

### **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.

In 2009, we principally focused our research and development efforts on commercialization of our FireFly system and on DigiSTREAMER, our solid streamer cable for marine acquisition.



During 2010, we expect that our product development efforts will continue across selective business lines aimed at the development of strategic key products and technologies. Major research and development programs are expected to continue for FireFly, our Digi- line of marine streamer technologies, our cable-based land systems and our land energy source technologies. A key research and development initiative is underway to integrate FireFly with our cable-based land recording systems in order to provide contractors with a hybrid architecture for cabled and cableless recording on the same survey. We also are investing to develop

hybrid sensor functionality for both FireFly (designing the current all-digital system to be compatible with analog geophones) and our ARIES II land acquisition system (designing its current all-analog system to be compatible with VectorSeis). 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 geophones, full-wave sensors based upon micro-electro magnetic systems (MEMS), navigation and data management software, marine positioning and streamer control systems, cableless land acquisition systems and redeployable seabed recording 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 the years ended December 31, 2009, 2008 and 2007, no single customer accounted for 10% or more of our consolidated net revenues.

Hydrocarbon price erosion has caused E&P companies to revisit their capital investment plans, which, in turn, is reverberating back through the supply chain to affect us both directly and indirectly through our seismic acquisition contractor customers.

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 the years ended December 31, 2009, 2008 and 2007, sales to destinations outside of North America accounted for approximately 64%, 60% and 62% 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.

We have consolidated our international sales at our sales facility operating in Dubai. Dubai is geographically better positioned to ensure that we are close to our customers in one of the most active oil and gas centers of the world.

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 15 of *Notes to Consolidated Financial Statements*.

**Manufacturing Outsourcing and Suppliers**

Since 2003, we have increased the use of contract manufacturers in our Land and Marine Imaging Systems business segments as an alternative to manufacturing our own products. We have outsourced the manufacturing of our vibrator vehicles, our towed marine streamers, our redeployable ocean bottom cables, various components of VectorSeis Ocean and certain electronic and ground components of our land acquisition systems. We may experience supply interruptions, cost escalations, and competitive disadvantages if we do not monitor these relationships properly.

These contract manufacturers purchase a substantial portion of the components used in our systems and products from third-party vendors. Certain items, such as integrated circuits used in our systems, are purchased from sole source vendors. Although we and our contract manufacturers attempt to maintain an adequate inventory of these single source items, the loss of ready access to any of these items could temporarily disrupt our ability to manufacture and sell certain products. Since our components are designed for use with



these single source items, replacing the single source items with functional equivalents could require a redesign of our components and costly delays could result.

In 2004, we transferred ownership of our subsidiary, Applied MEMS, Inc., to Colibrys Ltd. (Colibrys), a Swiss MEMS-based technology firm, in exchange for a 10% ownership interest in Colibrys. We concurrently entered into a five-year supply agreement with Colibrys that provided for Colibrys to supply us with products on an exclusive basis in our markets. Colibrys manufactures MEMS products, including accelerometers, for our VectorSeis sensors, and for other applications, including test and measurement, earthquake and structural monitoring, and defense. In December 2009, our five-year supply agreement with Colibrys expired, and we currently have no plans to enter into a new supply agreement with Colibrys for the products that were covered by the agreement. As of December 31, 2009, we estimate we have three to four years supply of sensor inventory.

### **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 (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 145 by year-end 2011, compared to approximately 118 at December 31, 2009. In addition, there has been an increase in acquisition activity within the sector, with the major vessel operators Schlumberger, CGGVeritas, and 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 ION Solutions Division 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 ION 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 recently 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.

In the land systems market, ION is the second largest provider of cable-based land systems worldwide, trailing only Sercel. In the cableless market, several companies have introduced technologies that compete, directly or indirectly, with FireFly, including Sercel, Ascend Geo, OYO Geospace, Fairfield, and Wireless Seismic. Each company is attempting to implement a cableless architecture in a slightly different way, with variations related to how the telemetry (data communications backbone) works, whether the system can use digital, full-wave sensors (or only analog geophones), and the amount of integration between the cableless recording unit and other technologies used for survey design, equipment deployment/retrieval, operational command and control, and data management.

### **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 patents, 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, VectorSeis System Four, System Four, FireFly, ARIES, ARIES II, DigiSHOT, XVib, DigiCOURSE, GATOR, SPECTRA, Orca, Scorpion, SPRINT, and REFLEX refer to our VECTORSEIS®, VECTORSEIS SYSTEM FOUR®, SYSTEM FOUR®, FIREFLY®, ARIES®, ARIES II®, DIGISHOT®, XVIB®, DIGICOURSE®, GATOR®, SPECTRA®, ORCA®, SCORPION®, SPRINT®, and REFLEX® registered marks, and the terms AZIM, ArgentinaSPAN, ArcticSPAN, BasinSPAN, BightSPAN, BrasilSPAN, Digital, DigiRANGE II, DigiSTREAMER, CompassBIRD, SM-24, AHV-IV, Vib Pro, Shot Pro, DigiFIN, and SWAT refer to our AZIM, ArgentinaSPAN, ArcticSPAN, BasinSPAN, BightSPAN, BrasilSPAN, Digital, DigiRANGE II, DigiSTREAMER, CompassBIRD, SM-24, AHV-IV, Vib Pro, Shot Pro, DigiFIN, Autobahn, and SWAT trademarks and service marks.

### **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. 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, 2009, we had 1,128 regular, full-time employees, 684 of which 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.

Beginning in the fourth quarter of 2008 and continuing through 2009, we implemented a restructuring program that included reducing our headcount by approximately 26%. During 2010, upon closing our joint venture transaction with BGP, we expect that a significant number of our land equipment systems employees will become employees within the joint venture, thereby further reducing our headcount. We will continue to evaluate our staffing needs during 2010 and will make adjustments as necessary.

## Financial Information by Segment and Geographic Area

For a discussion of financial information by business segment and geographic area, see Note 15 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 common terminology. Examples of other forward-looking statements contained or incorporated by reference in this report include statements regarding:

- the expected effects of current and future worldwide economic conditions and demand for oil and natural gas and seismic equipment and services;

- future compliance with our debt financial covenants;

- expectations regarding the completion of our proposed joint venture with BGP;

- future benefits to be derived from our proposed joint venture with BGP;

- future availability of cash to fund our operations and pay our obligations;

- the timing of anticipated sales;

- future levels of spending by our customers;

- future oil and gas commodity prices;

- future cash needs and future sources of cash, including availability under our revolving line of credit facility;

- expected net revenues, income from operations and net income;

- the expected outcome of litigation and other claims against us regarding our business plan, our technology and our financial condition and results of operations;



expected gross margins for our products and services;

future benefits to our customers to be derived from new products and services, such as Scorpion and FireFly and our full-wave digital products and services;

future growth rates for certain of our products and services;

future sales to our significant customers;

the degree and rate of future market acceptance of our new products and services;

expectations regarding future mix of business and future asset recoveries;

our expectations regarding oil and gas exploration and production companies and contractor end-users purchasing our more expensive, more technologically advanced products and services;

the degree and rate of future market acceptance of our new products and services;

expectations regarding future mix of business and future asset recoveries;

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;

potential future acquisitions;

future levels of capital expenditures;

our ability to maintain our costs at consistent percentages of our revenues in the future;

the outcome of pending or threatened disputes and other contingencies;

future demand for seismic equipment and services;

future seismic industry fundamentals;

the adequacy of our future liquidity and capital resources;

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;

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:

*We have a substantial amount of outstanding indebtedness, and we will need to pay or refinance our existing indebtedness or incur additional indebtedness, which may adversely affect our operations. Any failure to complete our proposed transactions with BGP could result in an event of default under our credit obligations.*

As of December 31, 2009, we had outstanding total indebtedness of approximately \$277.4 million, net of a \$8.7 million non-cash debt discount associated with the \$40.0 million in Convertible Notes, and including capital lease obligations. Total indebtedness on that date included \$101.6 million in borrowings under five-year term indebtedness and \$118.0 million, excluding the non-cash debt discount, in borrowings under our revolving credit facility, in each case incurred under our amended commercial banking credit facility (the Amended Credit Facility ). It also included \$19.1 million of indebtedness outstanding under a term secured equipment financing loan and \$35.0 million of subordinated unsecured debt outstanding under an amended and restated subordinated promissory note (the Amended and Restated Subordinated Note ) incurred in connection with the ARAM acquisition.

As of December 31, 2009 and February 22, 2010, we had available \$22 million (without giving effect to \$1.2 million and \$1.4 million, respectively, of outstanding letters of credit) of additional revolving credit borrowing capacity under our Amended Credit Facility.

In January 2009, Standard and Poor's Rating Services downgraded our outlook from stable to negative due to expectations of a weakening seismic market.

Our substantial levels of indebtedness and our other financial obligations increase the possibility that we may be unable to generate cash sufficient to pay, when due, the principal of, interest on or other amounts due, in respect of our outstanding indebtedness. Our substantial debt could also have other significant consequences. For example, it could:

- increase our vulnerability to general adverse economic, competitive and industry conditions;

- limit our ability to obtain additional financing in the future for working capital, capital expenditures, acquisitions, general corporate purposes or other purposes on satisfactory terms, or at all;

- require us to dedicate a substantial portion of our cash flow from operations to the payment of our indebtedness, thereby reducing funds available to us for operations and any future business opportunities;

- expose us to the risk of increased interest rates because certain of our borrowings, including borrowings under our Amended Credit Facility, are at variable rates of interest;

- restrict us from making strategic acquisitions or cause us to make non-strategic divestitures;

- limit our planning flexibility for, or ability to react to, changes in our business and the industries in which we operate;

- limit our ability to adjust to changing market conditions; and

- place us at a competitive disadvantage to our competitors who may have less indebtedness or greater access to financing.

During 2009, we had disclosed that under certain circumstances (including lower-than-expected revenues from sales), we would not remain in compliance with certain of the financial covenants contained in our Amended Credit Facility. If we are not able to satisfy the covenants under the Amended Credit Facility, we would need to seek to amend, or seek additional covenant waivers under the facility. There can be no assurance that we would be able to obtain any such waivers or amendments, in which case we would likely seek to obtain new secured debt, unsecured debt or equity financing. However, there also can be no assurance that such debt or equity financing would be available on terms acceptable to us or at all.

In October 2009, we entered into bridge financing arrangements with Bank of China, New York Branch in connection with our proposed transactions with BGP, and obtained waivers of the financial covenants in the Amended Credit Facility for the fiscal quarters ending September 30, 2009, December 31, 2009, March 31, 2010 and June 30, 2010. Without these waivers, we would not have been in compliance with certain of our financial covenants at September 30, 2009 or December 31, 2009. However, our failure to comply with any of our other covenants under the Amended Credit Facility could result in an event of default that, if not cured or waived, could have a material adverse

effect on our financial condition, results of operations and debt service capabilities.

We expect that upon the formation of the proposed land equipment joint venture with BGP and the closing and funding of the related transactions, we will repay our existing revolving credit loans and refinance our term loans under our Amended Credit Facility and repay the Amended and Restated Subordinated Note indebtedness.

However, if our proposed joint venture and related transactions with BGP were not to be completed, even for reasons beyond our control (such as us experiencing a material adverse event or condition that results in a material adverse effect on the our business, our prospects or results of operations), then the current waivers, upon notice from the lenders, would cease to be effective and we would at that time likely not be in compliance with certain of the financial covenants. This could then result in an event of default. As the current waivers cover a period of less than twelve months from December 31, 2009, we have classified the long-term indebtedness under our revolving line of credit and term loan facility under our Amended Credit Facility as current at December 31, 2009. As a result of the cross-default provisions contained in our secured equipment financing instruments and our Amended and Restated Subordinated Note, we have also classified these long-term obligations as current at December 31, 2009. Defaults under these credit obligations and any resulting acceleration of indebtedness under their instruments would have a material adverse effect on our operations, financial condition, results of operations and cash flows.

If we fail to make any required payments under our credit instruments, or if we fail to comply with any of the financial and operating covenants included in those instruments, we will be in default under their terms. The lenders under such facilities could then accelerate the maturity of the indebtedness and foreclose upon our and our subsidiaries assets that may secure such indebtedness. Other creditors might then accelerate other indebtedness under the cross-default provisions in those agreements. If our creditors accelerate the maturity of our indebtedness, we may not have sufficient assets to satisfy our debt obligations.

Even though we believe the joint venture with BGP will be completed as planned, there are certain events outside of our control that could cause the closing of the joint venture to be delayed, terminated or abandoned. In such event, we would need to seek to amend, or seek additional covenant waivers under, the Amended Credit Facility. Even though the lenders under the Amended Credit Facility have demonstrated their willingness to work with us in amending or providing sufficient waivers to our facility, there can be no assurance that we would be able to obtain any such waivers or amendments in the future. If we were unable to obtain such waivers or amendments from the lenders, we would likely seek to replace or pay off the Amended Credit Facility with new secured debt, unsecured debt or equity financing.

***There is no guarantee that we will complete our proposed joint venture with BGP, and, if we do complete the joint venture, we may be subject to additional risks relating to our ability to perform our obligations under the joint venture, including funding future joint venture capital requirements.***

In October 2009, we announced that we had entered into a Term Sheet with BGP dated as of October 23, 2009 (the Term Sheet ) to form a land equipment joint venture. We also entered into bridge financing arrangements consisting of the following:

Two promissory notes (the Convertible Notes ) issued to Bank of China under the Amended Credit Facility for an aggregate principal amount of \$40.0 million, both convertible into shares of our common stock; and

A Warrant Issuance Agreement with BGP, under which we granted to BGP a warrant (the Warrant ) to purchase shares of our common stock that may be exercised in lieu of conversion of the Convertible Notes.

Completion of the joint venture transactions contemplated in the Term Sheet is conditioned upon, among other things, approvals by Chinese and U.S. authorities and the lack of adverse regulatory actions that would materially prohibit, restrict or delay the completion of the joint venture transactions or the anticipated operations of the joint venture. There can be no assurances that we will obtain necessary approvals or that we will complete the joint venture transactions as contemplated by the Term Sheet. Our inability to complete the joint venture transactions as contemplated may impact adversely our ability to execute our business strategy and, consequently, the marketability and market price of our common stock. In addition, if we are not successful in completing the joint venture transactions as presently contemplated, we will likely have to modify our plans to refinance our senior secured indebtedness under our Amended Credit Facility, which may entail additional time and costs, and may prove unsuccessful. In addition, the limited waivers of our financial covenants contained in our Amended Credit Facility may be terminated in such event, and we may at that time be in violation of the financial covenants and other covenants contained in our Amended Credit Facility and the terms of other indebtedness that contain cross-default provisions.

If the transactions contemplated by the Term Sheet are not completed, it could have a number of adverse consequences for our business, including the following:

we may lose the anticipated benefits of our proposed joint venture with BGP, which would include the potential savings from economies of scope and scale for our land seismic business and potential benefits from combined technological and new product development offerings;

we may lose our ability to successfully refinance and restructure our senior secured indebtedness on terms favorable to our company, as contemplated by the Term Sheet;

our business and operations may be harmed to the extent that customers, suppliers and other believe that our ability to successfully compete will be less effective without the joint venture or there is customer or employee uncertainty surrounding the future direction of our company;

our results of operations, financial condition and cash flows may be adversely affected due to marketplace reaction, reduced sales levels and weakened financial condition caused by any of the factors mentioned above; and

the exercise price under the Warrant and the conversion prices under the Convertible Notes could be adjusted and reduced below their current amounts to considerably lower-than-current-market-price levels.

Entering into joint ventures and alliances entails risks, including difficulties in developing and expanding the business of a newly formed joint venture, funding capital calls for the joint venture, exercising influence over the management and activities of 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. The completion of the joint venture is subject to, among other things, the completion of definitive documents governing the terms of the joint venture, and we cannot guarantee that, if completed, the joint venture operations will be successful. Any inability to meet our obligations as a joint venture partner under the joint venture could result in penalties and reduced percentage interest 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 product and services of the joint venture.

***To comply with our indebtedness and other obligations, we will require a significant amount of cash and will be required to satisfy certain debt financial covenants. Our ability to generate cash and satisfy debt covenants depends on many factors beyond our control. Our failure to complete the proposed joint venture and related transactions with BGP and refinance our existing bank indebtedness could result in an event of default under our credit facilities.***

Our ability to make payments on and to refinance our indebtedness and to fund our working capital needs and planned capital expenditures, will depend on our ability to generate cash in the future. This, to a certain extent, is subject to general economic, financial, competitive and other factors that are beyond our control.

We cannot assure you that our business will generate sufficient cash flows from operations or that future borrowings will be available to us under the Amended Credit Facility or otherwise in an amount sufficient to enable us to pay our indebtedness or to fund our other liquidity needs. We will need to repay or refinance our indebtedness on or before the maturity thereof. We cannot assure you that we will be able to refinance any of such indebtedness on commercially reasonable terms, or at all.

In addition, if for any reason we are unable to meet our debt service obligations, we would be in default under the terms of our agreements governing our outstanding debt. If such a default were to occur, the lenders under the Amended Credit Facility could elect to declare all amounts outstanding under the Amended Credit Facility immediately due and payable, and the lenders would not be obligated to continue to advance funds to us. In addition, if such a default were to occur, our other indebtedness would become immediately due and payable under their cross-default provisions.

The Amended Credit Facility and other outstanding debt instruments to which we are a party impose significant operating and financial restrictions, which may prevent us from capitalizing on business opportunities and taking other actions.

Subject to certain exceptions and qualifications, the Amended Credit Facility contains customary restrictions on our activities, including covenants that restrict us and our restricted subsidiaries from:

incurring additional indebtedness and issuing preferred stock;



creating liens on our assets;

making certain investments or restricted payments;

consolidating or merging with, or acquiring, another business;

selling or otherwise disposing of our assets;

paying dividends and making other distributions with respect to capital stock, or repurchasing, redeeming or retiring capital stock or subordinated debt; and

entering into transactions with our affiliates.

The loan agreements for our \$19.1 million secured equipment financing with ICON ION, LLC contain a number of restrictive covenants that affect us, and our Amended and Restated Subordinated Note contains additional restrictions on our ability to incur additional debt. Any further debt financing we obtain is likely to have similarly restrictive covenants.

The Amended Credit Facility also contains covenants that require us to meet certain financial ratios and minimum thresholds. For example, the Amended Credit Facility requires that we and our domestic subsidiaries meet certain minimum fixed charge coverage ratio requirements, not exceed certain maximum leverage ratio limitations for each fiscal quarter, and maintain certain minimum tangible net worth. The lenders party to our Amended Credit Facility agreed in an amendment to the Credit Agreement dated October 23, 2009 to waive these financial covenants for the fiscal quarters ending September 30, 2009, December 31, 2009, March 31, 2010 and June 30, 2010. Without these waivers, we would not have been in compliance with certain of our financial covenants at September 30, 2009 or December 31, 2009.

If we were not able to satisfy all of these covenants, we would need to seek to amend, or seek one or more waivers of, the covenants under the Amended Credit Facility. If we cannot satisfy the covenants and are unable to obtain further waivers or amendments, the lenders could declare a default under the Amended Credit Facility. Any default under our Amended Credit Facility would allow the lenders under the facility the option to demand repayment of the indebtedness outstanding under the facility, and would allow certain other lenders to exercise their rights and remedies under cross-default provisions contained in their debt instruments. If these lenders were to exercise their rights to accelerate the indebtedness outstanding, there can be no assurance that we would be able to refinance or otherwise repay any amounts that may become accelerated under the agreements. The acceleration of a significant portion of our indebtedness would have a material adverse effect on our business, liquidity, and financial condition.

The restrictions in the Amended Credit Facility and our other debt instruments may prevent us from taking actions that we believe would be in the best interest of our business, and may make it difficult for us to successfully execute our business strategy or effectively compete with companies that are not similarly restricted. We also may incur future debt obligations that might subject us to additional restrictive covenants that could affect our financial and operational flexibility. We cannot assure you that we will be granted waivers or amendments to these agreements if for any reason we are unable to comply with these agreements or that we will be able to refinance our debt on terms acceptable to us, or at all. The breach of any of these covenants and restrictions could result in a default under the Amended Credit Facility and our other debt instruments. An event of default under our debt agreements would permit the holders of such indebtedness to declare all amounts borrowed to be due and payable.

Even though we believe the joint venture with BGP will be completed as planned, there are certain events outside of our control (such as our experiencing a material adverse event or condition that results in a material adverse effect on our business, its prospects or results of operations) that could cause the closing of the joint venture to be delayed, terminated or abandoned. In such event, we would need to seek to amend, or seek additional covenant waivers under, the Amended Credit Facility. Even though the lenders under the Amended Credit Facility have demonstrated their willingness to work with us in amending or providing sufficient waivers to our facility, there can be no assurance that we would be able to obtain any such waivers or amendments in the future. If we were unable to obtain such waivers or amendments from the lenders, we would likely seek to replace or pay off the Amended Credit Facility with new secured debt, unsecured debt or equity financing.

***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 fiscal 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 in revenue recognition. 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 has been 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. For a description of this material weakness in our internal control over financial reporting identified in November 2009 and our remediation efforts as of December 31, 2009, see Item 9A. *Controls and Procedures*.

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. We may experience controls deficiencies or material weakness in the future, which could adversely impact the accuracy and timeliness of our future reporting and reports and filings we make with the SEC.

***If we, our option holders or others 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, the Convertible Notes issued under our Amended Credit Facility and our Warrant issued to BGP in connection with our proposed joint venture with BGP are convertible into or exercisable for shares of our common stock. The conversion of the Series D Preferred Stock or the Convertible Notes or the exercise of the Warrant would result in dilution, and could result in substantial dilution, to existing stockholders. Sales in the open market of the shares of common stock acquired upon such conversion or exercise may have the effect of reducing the then-current market prices 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 22, 2010, we had 118,695,952 shares of common stock issued and outstanding. Substantially all of these shares are available for public sale, subject in some cases to volume and other limitations or delivery of a prospectus. At December 31, 2009, we had outstanding stock options to purchase up to 7,766,188 shares of our common stock at a weighted average exercise price of \$7.65 per share. We also had, as of that date, 16,494 shares of common stock reserved for issuance under outstanding restricted stock unit awards.

Additionally, Fletcher International, Ltd., the holder of our Series D-1 Cumulative Convertible Preferred Stock, Series D-2 Cumulative Convertible Preferred Stock and Series D-3 Cumulative Convertible Preferred Stock (together, the Series D Preferred Stock ) currently has the right to convert the preferred shares it holds into 9,669,434 shares of our common stock. Under our agreement with Fletcher, the holder of our Series D Preferred Stock has the ability to sell the shares of our common stock (under effective registration statements) acquired by it upon conversion of the Series D Preferred Stock. In September 2009, Fletcher delivered a notice to us purporting to increase the number of shares of our common stock into which its preferred shares may convert from 9,669,434 shares to 11,669,434 shares, to become effective in November 2009. Because we believe that our agreement with Fletcher does not provide Fletcher, as holder, the right to demand such additional increase, we have filed a declaratory judgment action in the Court of Chancery of the State of Delaware asking the court to resolve the issue. See Item 3. *Legal Proceedings*.

We currently have other pending litigation with Fletcher in Delaware regarding issues involving our Series D Preferred Stock. See Item 3. *Legal Proceedings*.

The 18,500,000 shares of common stock we issued in June 2009 to certain institutional investors may be resold into the public markets in transactions pursuant to a currently-effective registration statement that was declared effective by the SEC on June 16, 2009. Thus, these purchasing institutional investors currently have the right to dispose of their shares in the public markets.

In October 2009, we issued the Convertible Notes and the Warrant in connection with our execution of the binding Term Sheet with BGP. These instruments provide that they will be initially convertible into, or exercisable for, in the aggregate, up to 14,285,714 shares of common stock. The exercise price under the Warrant and conversion prices under the Convertible Notes will be subject to adjustment upon the occurrence of a Triggering Event. A Triggering Event will occur in the event that the joint venture transactions cannot be completed by March 31, 2010, solely as a result of the occurrence of a statement, order or other indication from any relevant governmental regulatory agency that (a) the transactions would not be approved, would be opposed, objected to or sanctioned or (b) the transactions or

BGP's business and operations would be required to be altered (or upon the earlier abandonment of such transactions due to any such statement, indication or order). In such event, the exercise price and conversion price will be adjusted (but not to an amount that exceeds \$2.80 per share) to a price per share that is equal to 75% of the lowest trading price of our common stock over a ten-consecutive-trading-day period, beginning on and inclusive of the first trading day following the public

announcement of any failure to complete such transactions (or the abandonment thereof), which failure or abandonment was the result of the Triggering Event. Such an adjustment would further dilute holders of our common stock.

The conversion prices of the Series D Preferred Stock, the exercise price of the Warrant and conversion prices of the Convertible Notes are also subject to certain customary anti-dilution adjustment.

Any conversion of the Convertible Notes or exercise of the Warrant will be conditioned upon certain governmental approvals from the Chinese government. At the closing of the transactions contemplated under the Term Sheet, it is expected that BGP (along with any permitted assignees and designees) will own 23,789,536 shares of common stock, whether through exercise of the Warrant, conversions of the Convertible Notes or by direct purchase of shares of common stock from us. Under a registration rights agreement that we entered into with BGP on October 23, 2009, we agreed to register certain resales of shares of common stock acquired by BGP or its assignees or designees under the Convertible Notes or the Warrant.

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. Likewise, the conversion of the Convertible Notes under our Amended Credit Facility and exercise of our Warrant issued to BGP in connection with our proposed joint venture with BGP will also dilute the ownership interests of existing stockholders. Sales in the public market of shares of common stock issued upon conversion or exercise would likely apply downward pressure on prevailing market prices of our common stock. In addition, the very existence of the outstanding shares of the Series D Preferred Stock, the Convertible Notes and the Warrant represents potential issuances of common stock upon their conversion or exercise, and could represent potential sales into the market of our common stock to be acquired on conversion or exercise, which could also depress trading prices for our common stock.

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.

***The current economic and credit environment and lower oil and natural gas prices could continue to 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 continue to be weak. The global recession has caused weakened demand and lower prices for oil and natural gas on a worldwide basis, which have tended to reduce the levels of exploration for oil and 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 continue to be reduced if the level of exploration expenditures continues to be 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.

The turmoil 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. Continued weakness in the financial markets could also have a material adverse effect on our ability to refinance all or a portion of our indebtedness incurred in connection with the ARAM acquisition and to otherwise fund our operational requirements.

Given the tight credit markets, 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 current economic conditions will persist, whether they 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 over the past 18 months, 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. This increased volatility, coupled with depressed economic conditions, could continue to have a depressing effect on the market price of our common stock.

***If capital expenditures for E&P companies remain at reduced levels compared to recent 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 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 ability of the Organization of Petroleum Exporting Countries ( OPEC ) to set and maintain production levels for oil;

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 products our competition offer, and these products may tend to be, for that reason, more expensive than comparable products of our competitors.

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 64% of our consolidated net revenues for the year ended December 31, 2009, 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, 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 our assets;

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 variable rate indebtedness subjects us to interest rate risk, which could cause our debt service obligations to increase significantly.***

Each borrowing under our Amended Credit Facility will bear interest, at our option, at either an alternate base rate or a LIBOR-based rate. As of December 31, 2009, the \$101.6 million in term loan indebtedness and the \$118.0 million, excluding a non-cash debt discount, in total revolving credit indebtedness under the Amended Credit Facility accrued interest using the LIBOR-based interest rate of 6.7% per annum. The average effective interest rate

for the quarter ended December 31, 2009 under the LIBOR-based rates was 6.2% per annum.

Assuming that \$219.6 million in revolving and term loans are outstanding, 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 \$2.2 million. As of December 31, 2009, the weighted average interest rate on our outstanding indebtedness of \$277.4 million was 12.9% per annum. Our obligations to pay interest at relatively higher rates:

require us to dedicate a greater portion of our cash flow for interest payments on our indebtedness and our other financial obligations, thereby reducing the availability of our cash flow to fund working capital and capital expenditures;

limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate; and

place us at a competitive disadvantage compared to our competitors that have proportionately less debt.

Alternative funding could result in higher interest rates. However, there can be no assurance that alternative financial resources will be available promptly, on favorable terms or at all. Failure to obtain necessary funding could adversely affect our short-term liquidity and our ability to invest in research and development to fund new product and service initiatives, upgrade our process technology and manufacturing capabilities, and seek out potential acquisition candidates and could adversely affect our business, financial condition and operating results.

***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. 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. 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 and the availability and equipping of marine vessels, can affect our ION Solutions division'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.

***The technologies and businesses contributed by our company and BGP to the proposed joint venture may prove difficult to integrate, disrupt our business, dilute stockholder value and divert management attention.***

The proposed formation of a joint venture with BGP is consistent with our overall business strategy of seeking new technologies, products and businesses to broaden the scope of our existing and planned product lines and technologies. The BGP joint venture involves the integration of multiple product lines and business models that previously have operated independently. This will be a complex and time consuming process. There can be no assurance that we will achieve the expected benefit of the proposed joint venture. This joint venture (if completed) 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.

The BGP joint venture and future transactions may expose us to:

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increased costs associated with the transaction 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 being 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 inability to generate revenues to offset associated transaction costs;

the requirement to maintain uniform standards, controls and procedures; and

the impairment of relationships with employees and customers as a result of the integration of management personnel from different companies.

Integration of the contributed businesses requires significant efforts from us and BGP, including coordinating existing business plans and research and development efforts. We may not be able to realize the operating efficiencies, cost savings or other benefits that we expect from the joint venture. The process of combining BGP's business with our business could cause an interruption of, or loss of momentum in, the operations and activities of the joint venture's business, as well as the possible loss of key personnel, and could distract our management's attention from the day-to-day operation of our Company's remaining businesses.

***Intangible assets and goodwill 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 the first quarter of 2009, we determined that approximately \$38.0 million of intangible assets related to ARAM (included in our Land Imaging Systems reporting unit) had been impaired. We recorded the expense as of March 31, 2009 and reduced the carrying amount of 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, 2009 and 2008, the goodwill balance was \$52.0 million and \$49.8 million, respectively. At December 31, 2009 and 2008, the intangible asset balance was \$61.8 million and \$107.4 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, Canada, the Netherlands, China, Venezuela, India, 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 collectibility 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 and Canada. The subsidiaries in those countries receive their income and pay their expenses primarily in pounds sterling (GBP) and Canadian dollars (CAD), respectively. To the extent that transactions of these subsidiaries are settled in GBP or CAD, 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. For financial reporting purposes, such depreciation will negatively affect our reported results of operations since GBP- and CAD-denominated earnings 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 the GBP and CAD harms our competitive position against companies whose financial strength bears less correlation to the strength of the U.S. dollar. 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.

***We are exposed to risks related to complex, highly technical products.***

Our customers often require demanding specifications for product performance and reliability. 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.

***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 transitions 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 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 estimates 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. ***We invest significant sums of money in acquiring and processing seismic data for our ION Solutions multi-client data library.***

We invest significant amounts in acquiring and processing new seismic data to add to our ION Solutions multi-client data library. A majority of these investments is funded by our customers, while the remainder is recovered through future data licensing fees. In 2009, we invested \$89.6 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 rapid decline of oil and natural gas prices in late 2008 have and could continue to cause E&P companies to significantly delay or reduce their current seismic capital spending budgets. Therefore, we may not be able to recover all of the costs of or earn any return on these investments. In periods in which sales do not meet original expectations, we may be required to record additional amortization and/or impairment charges to reduce the carrying value of our data library, which charges may be material to our results of operations in any period.

***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 the years ended December 31, 2009, 2008 and 2007; however, our top five customers in total represented approximately 29%, 30% and 31%, 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. The loss of any of our significant customers to further consolidation could materially and adversely affect our results of operations and financial condition.

***Our ION Solutions and Data Management Solutions segments increase our exposure to the risks experienced by more technology-intensive companies.***

The businesses of ION Solutions and Data Management Solutions, being more concentrated in software, processing services, and proprietary technologies than our traditional business, have exposed us to the risks typically encountered by smaller technology companies that are more dependent on proprietary technology protection. These risks include:

future competition from more established companies entering the market;

product 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.

The contribution of our land equipment businesses to the joint venture exposes our company to additional risks. Please refer to the additional risks below.

***Reservoir Exploration Technology (RXT) has been a significant customer of our Marine Imaging Systems segment. A loss of business from this customer could adversely affect our sales and financial condition if RXT is not replaced by another customer or customers.***

In May 2007, we entered into a multi-year agreement with RXT under which they agreed to purchase a minimum of \$160 million in VectorSeis Ocean (VSO) systems and related equipment through 2011. In addition, this agreement entitles us to receive a royalty of 2.1% of revenues generated by RXT through the use of all VSO equipment commencing in January 2008 until the expiration of the agreement. In turn, RXT was granted exclusive rights to this product line through 2011. Because they did not purchase the minimum annual quantity of equipment, in February 2010, we notified RXT that they no longer have exclusive rights to the VSO product line.

For the years ended December 31, 2009 and 2008, \$9.3 million, or 2.2%, and \$49.0 million, or 7.2%, respectively, of our consolidated net revenues, were attributable to marine equipment sales to and royalty revenues from RXT. The loss of RXT as a customer or a continued significant reduction in their equipment or systems needs could reduce our sales volumes and revenues and lessen our cash flows, and thereby have a material adverse effect on our results of operations and financial condition. Unless we can broaden our customer base for these marine products, we can give no assurances that the revenues and cash flows from RXT, if lost, can be replaced. To the extent that the risks faced by RXT cause it to curtail its business activities or to make timely payments to its suppliers, we are subject to the same risks.

***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.

***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 weather events. Our Marine Imaging 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 this facility and evacuated and locked down the facility in preparation for Hurricane Katrina. This facility 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 facility 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.

***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, the current global economic crisis 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 vibrator vehicles, our towed marine streamers, our redeployable ocean bottom cables, our Applied MEMS components, various components of VectorSeis Ocean, and certain electronic and ground components of our land acquisition systems. 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.

***Our outsourcing relationships may require us to purchase inventory when demand for products produced by third-party manufacturers is low.***

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. We currently have no purchase commitments with Colibrys for additional MEMS.

***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. Any such claims, 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 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. For instance, regulations regarding the protection of marine mammals in the Gulf of Mexico may reduce demand for our air guns and other marine products. 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 agreement with Fletcher 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 and our agreement with Fletcher 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 proposed terms of our 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, 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. See Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*.

**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, 2009 were as follows:

Operating Facilities	Square Footage	Segment
Stafford, Texas	281,000	Land and Marine Imaging Systems
Calgary, Canada	139,000	Land Imaging Systems and ION Solutions
Houston, Texas	106,000	Global Headquarters and ION Solutions
Harahan, Louisiana	93,000	Marine Imaging Systems
Lacombe, Louisiana	87,000	Marine Imaging Systems
Jebel Ali, Dubai, United Arab Emirates	40,000	International Sales Headquarters and Land Imaging Systems
Denver, Colorado	29,000	ION Solutions
Voorschoten, The Netherlands	29,000	Land Imaging Systems
Edinburgh, Scotland	15,000	Data Management Solutions
	819,000	

Each of these operating facilities is leased by us under a long-term lease agreement. These lease agreements have terms that expire ranging from 2010 to 2018. 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; 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 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 asserted that WesternGeco misappropriated our proprietary technology and breached a confidentiality agreement by using our technology in its patents and products and 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.

*Fletcher.* During 2009, three lawsuits were filed in Delaware involving Fletcher International, Ltd. ( Fletcher ), the holder of shares of our Series D Preferred Stock.

On July 10, 2009, Fletcher filed a books and records proceeding in the Delaware Court of Chancery under Section 220(b) of the Delaware General Corporation Law, styled *Fletcher International, Ltd. v. ION Geophysical Corporation f/k/a Input/Output, Inc.* Fletcher's complaint asked the Court to require us to produce for its inspection a broad range of our documents and records relating to our ARAM acquisition and other matters. Section 220(b) allows stockholders of Delaware corporations to make a demand on the corporation for access to certain books and records of the corporation, provided that such demand is made with appropriate specificity and is made for a proper purpose. We responded by asserting that Fletcher had not requested the information with appropriate specificity or for a proper purpose as required by law. After a hearing on December 23, 2009, the court determined that most of Fletcher's stated purposes for requesting the information were not valid or did not constitute proper purposes and issued a ruling denying in significant part the scope and breadth of the inspection sought by Fletcher.

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 that purported 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 gave Fletcher the right to issue only one notice to increase the Maximum Number (which Fletcher had exercised on November 8, 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 is permitted to deliver only one notice to increase the Maximum Number and that its purported second notice is legally invalid. Please refer to Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources - Sources of Capital.*

On November 25, 2009, Fletcher filed a lawsuit against us and each 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 alleges, among other things, that we violated Fletcher's consent rights by ION International S.à r.l., 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 International S.à r.l. to issue the note without Fletcher's consent. Fletcher is seeking a court order requiring ION International S.à r.l. to repay the \$10 million advanced to ION

International S.à r.l. under the bridge loan and unspecified monetary damages. In the lawsuit, Fletcher is not claiming that it had a right to consent to any note issued by ION Geophysical Corporation, including the issuance by ION Geophysical Corporation of a \$30 million convertible promissory note to the Bank of China on October 27, 2009, as part of the bridge loan. We believe that Fletcher did not have the right to consent to the issuance of the bridge loan note by ION International S.à r.l. or any other promissory note and that the claims asserted by Fletcher in the lawsuit are without merit. We further believe 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 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 two-week 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. On October 13, 2009, the presiding trial judge signed and entered the judgment, awarding us the amount of the jury verdict. Under applicable law, we are also entitled to receive legal interest from the date of filing the lawsuit, plus our attorneys' fees and costs. Through December 22, 2009, accrued legal interest totaled \$11.2 million, and interest will continue to accrue at the statutory annual rate of 8.5% until paid. Including the verdict amount and accrued interest, the total amount owed under the judgment as of December 22, 2009 was \$32.9 million plus our attorneys' fees and costs. The judgment is currently on appeal.

*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. Our products that use the VectorSeis technology include our 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. We have asked the court to issue a permanent injunction to prohibit Sercel from making, using, selling, offering for sale or importing any infringing products into the United States.

*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. 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.

<b>Period</b>	<b>Price Range</b>	
	<b>High</b>	<b>Low</b>
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
Year ended December 31, 2008:		
Fourth Quarter	\$13.95	\$ 2.14
Third Quarter	17.61	12.64
Second Quarter	18.26	13.82
First Quarter	16.05	11.04

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 Amended Credit Facility prohibit us from paying dividends on or repurchasing shares of our common stock without the prior consent of the lenders.

Additionally, the terms of our Amended Credit Facility contain covenants that restrict us, subject to certain exceptions, from paying cash dividends on our common stock and repurchasing and acquiring shares of our common stock unless (i) there is no event of default under the Amended Credit Facility and (ii) the amount of cash used for cash dividends, repurchases and acquisitions does not, in the aggregate, exceed an amount equal to the excess of 30% of ION's domestic consolidated net income for our most recently completed fiscal year over \$15.0 million. See Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources."

On December 31, 2009, there were 737 holders of record of our common stock.

During the three months ended December 31, 2009, 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:

<b>(c) Total Number of Shares Purchased</b>	<b>(d) Maximum Number (or Approximate Dollar Value) of Shares That</b>
---	--

<b>Period</b>	<b>(a) Total Number of Shares Acquired</b>	<b>(b) Average Price Paid Per Share</b>	<b>as Part of Publicly Announced Plans or Program</b>	<b>May Yet Be Purchased Under the Plans or Program</b>
October 1, 2009 to October 31, 2009		\$	Not applicable	Not applicable
November 1, 2009 to November 30, 2009	173	\$ 2.53	Not applicable	Not applicable
December 1, 2009 to December 31, 2009	39,376	\$ 5.76	Not applicable	Not applicable
Total	39,549	\$ 5.75		



**Item 6. Selected Financial Data**

The selected consolidated financial data set forth below with respect to our consolidated statements of operations for the years ended December 31, 2009, 2008, 2007, 2006 and 2005, and with respect to our consolidated balance sheets at December 31, 2009, 2008, 2007, 2006 and 2005 have been derived from our audited consolidated financial statements. Our results of operations and financial condition have been affected by the acquisition of ARAM in September 2008 and impairments of assets during the periods presented, which may affect the comparability of the financial information. Our results of operations for the year ended December 31, 2009 and 2008 were negatively impacted from the impairment of our goodwill and intangibles assets totaling \$38.0 million and \$252.3 million, respectively, the fair value adjustment of the warrant, including amortization of a non-cash debt discount, totaling \$36.1 million, for the year-ended December 31, 2009 and from the beneficial conversion charge of \$68.8 million associated with our outstanding convertible preferred stock for the year ended December 31, 2008. This information should not be considered as being necessarily 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.

	<b>Years Ended December 31,</b>				
	<b>2009</b>	<b>2008</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>
	<b>(In thousands, except for per share data)</b>				
<b>Statement of Operations Data:</b>					
Product revenues	\$ 237,664	\$ 417,511	\$ 537,691	\$ 354,258	\$ 237,359
Service revenues	182,117	262,012	175,420	149,298	125,323
Net revenues	419,781	679,523	713,111	503,556	362,682
Cost of products	165,923	289,795	386,849	252,647	163,575
Cost of services	121,720	181,980	119,679	91,592	86,619
Gross profit	132,138	207,748	206,583	159,317	112,488
<b>Operating expenses:</b>					
Research, development and engineering	44,855	49,541	49,965	37,853	26,379
Marketing and sales	34,945	47,854	43,877	40,651	33,167
General and administrative	72,510	70,893	48,847	40,865	28,326
Impairment of goodwill and intangible assets	38,044	252,283			
Total operating expenses	190,354	420,571	142,689	119,369	87,872
Income (loss) from operations	(58,216)	(212,823)	63,894	39,948	24,616
Interest expense, including amortization of non-cash debt discount	(35,671)	(12,723)	(6,283)	(5,770)	(6,134)
Interest income	1,721	1,439	1,848	2,040	843
Fair value adjustment of the warrant	(29,401)				
Impairment of cost method investment	(4,454)				
Other income (expense)	(4,023)	4,200	(3,992)	(2,161)	820

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Income (loss) before income taxes and change in accounting principle	(130,044)	(219,907)	55,467	34,057	20,145
Income tax expense (benefit)	(19,985)	1,131	12,823	5,114	1,366
Net income (loss) before change in accounting principle	(110,059)	(221,038)	42,644	28,943	18,779
Cumulative effect of change in accounting principle				398	
Net income (loss)	(110,059)	(221,038)	42,644	29,341	18,779
Preferred stock dividends and accretion	3,500	3,889	2,388	2,429	1,635
Preferred stock beneficial conversion charge		68,786			
Net income (loss) applicable to common shares	\$ (113,559)	\$ (293,713)	\$ 40,256	\$ 26,912	\$ 17,144
Net income (loss) per basic share before change in accounting principle	\$ (1.03)	\$ (3.06)	\$ 0.49	\$ 0.33	\$ 0.22
Cumulative effect of change in accounting principle				0.01	
Net income (loss) per basic share	\$ (1.03)	\$ (3.06)	\$ 0.49	\$ 0.34	\$ 0.22
Net income (loss) per diluted share before change in accounting principle	\$ (1.03)	\$ (3.06)	\$ 0.45	\$ 0.32	\$ 0.21
Cumulative effect of change in accounting principle				0.01	
Net income (loss) per diluted share	\$ (1.03)	\$ (3.06)	\$ 0.45	\$ 0.33	\$ 0.21

	<b>Years Ended December 31,</b>				
	<b>2009</b>	<b>2008</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>
	<b>(In thousands, except for per share data)</b>				
Weighted average number of common shares outstanding	110,516	95,887	81,941	79,497	78,600
Weighted average number of diluted shares outstanding	110,516	95,887	97,321	95,182	79,842

**Balance Sheet Data (end of year):**

Working capital	\$ (59,018)	\$ 267,155	\$ 220,522	\$ 170,342	\$ 153,761
Total assets	748,186	861,431	709,149	655,136	537,861
Long-term debt, net of current maturities	6,249	253,510	9,842	70,974	71,541
Stockholders' equity	282,468	325,070	476,240	369,668	327,545

**Other Data:**

Capital expenditures	\$ 2,966	\$ 17,539	\$ 11,375	\$ 13,704	\$ 5,304
Investment in multi-client library	89,635	110,362	64,279	39,087	19,678
Depreciation and amortization (other than multi-client library)	47,911	33,052	26,767	22,036	23,497
Amortization of multi-client library	48,449	80,532	37,662	25,011	10,707

The negative working capital seen above is the result of the re-classification of the majority of our long-term debt as current and as a result of the fair value of the warrant associated with our bridge financings arrangements. See Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations - Executive Summary Our Current Debt Levels, Liquidity and Capital Resources Sources of Capital Meeting our Liquidity Requirements and Proposed Joint Venture and Related Transactions with BGP* for further information.

**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 that appear elsewhere in this Annual Report on Form 10-K.*

**Executive Summary**

*Our Business.* We are a technology-focused seismic solutions company that provides advanced seismic data acquisition equipment, seismic software and seismic planning, processing and interpretation 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 contractors to generate high-resolution images of the Earth's subsurface for exploration, exploitation and production operations.

We operate our company through four business segments. Three of our business segments - Land Imaging Systems, Marine Imaging Systems and Data Management Solutions - make up our ION Systems division. Our fourth business segment is our ION Solutions division.

*Land Imaging Systems* - cable-based, cableless and radio-controlled seismic data acquisition systems, digital geophone sensors, vibroseis vehicles (i.e., vibrator trucks) and source controllers for detonator and vibrator energy sources and also consisting of analog geophone sensors. After we complete our land equipment joint venture with BGP, all of these business lines, with the exception of analog geophone sensors, will become part of the joint venture. See *Proposed Land Joint Venture with BGP*.

*Marine Imaging 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).

*Data Management Solutions* software systems and related services for navigation and data management involving towed marine streamer and seabed operations.

*ION Solutions* advanced seismic data processing services for marine and land environments, seismic data libraries, and Integrated Seismic Solutions ( ISS ) services.

Our current business strategy is predicated on successfully executing seven key imperatives:

Increasing our market share and profitability in land acquisition systems and furthering the commercialization of FireFly,

our cableless full-wave land data acquisition system, and our other land equipment technologies through our participation in the proposed land equipment joint venture with BGP;

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 ION Solutions business in new regions with new customers and new land and marine service offerings, including proprietary services for owners and operators of oil and gas properties;

Globalizing our ION Solutions data processing business by opening advanced imaging centers in new 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

Leveraging our proposed land equipment joint venture with BGP 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.

*Our Current Debt Levels.* In connection with our acquisition in September 2008 of ARAM, we increased our total indebtedness significantly. As of December 31, 2009, we had outstanding total indebtedness of approximately \$277.4 million, net of a \$8.7 million non-cash debt discount associated with \$40.0 million in Convertible Notes, and including capital lease obligations. Total indebtedness on that date included \$101.6 million of outstanding five-year term indebtedness and \$118.0 million, excluding the non-cash debt discount, in outstanding revolving credit debt, in each case incurred under our amended commercial banking credit facility (the *Amended Credit Facility*). Total indebtedness on that date also included \$19.1 million in borrowings under our secured equipment financing transaction with ICON (described below) and \$35.0 million of subordinated indebtedness outstanding under an amended and restated subordinated promissory note (the *Amended and Restated Subordinated Note*) that we had issued to one of ARAM's selling shareholders as part of the purchase price consideration for the ARAM acquisition.

On June 4, 2009, we completed a private placement transaction under which we issued and sold 18,500,000 shares of our common stock in privately-negotiated transactions, for aggregate gross proceeds of approximately \$40.7 million. The \$38.2 million of net proceeds from the offering, along with \$2.6 million of cash on hand, were applied to repay in full the outstanding indebtedness under a 2008 bridge loan agreement with Jefferies Finance LLC. The indebtedness under the bridge loan agreement had been scheduled to mature on January 31, 2010 and had an effective interest rate at the time of repayment of 25.3%. We also entered into an additional amendment to the *Amended Credit Facility* (the *Fifth Amendment*), which among other things, modified certain of the financial and other covenants contained in the *Amended Credit Facility*. See further discussion below at *Liquidity and Capital Resources Sources of Capital* and at Note 12 *Notes Payable, Long-term Debt and Lease Obligations*.

On June 29, 2009, we entered into a \$20.0 million secured equipment financing with ICON ION, LLC, an affiliate of ICON Capital Inc. ( *ICON* ), receiving \$12.5 million in funding on that date and \$7.5 million in July 2009. All borrowed indebtedness under the master loan agreements governing this equipment financing arrangement is scheduled to mature on July 31, 2014. We used the proceeds of the secured term loans for working capital and general corporate purposes. See further discussion below at *Liquidity and Capital Resources Sources of Capital* and at Note

12 *Notes Payable, Long-term Debt and Lease Obligations.*

*Proposed Joint Venture with BGP.* On October 23, 2009, we entered into a binding term sheet (the *Term Sheet* ) with BGP Inc., China National Petroleum Corporation, a company organized under the laws of the people's Republic of China ( *BGP* ), which sets forth, among other things, the principal terms for a proposed land equipment joint venture between BGP and us. In connection with the execution of the *Term Sheet*, we entered into an amendment to the Amended Credit Facility (the *Sixth Amendment* ) that, among other things, (i) increased the aggregate revolving commitment amount under the Amended Credit Facility from \$100.0 million to \$140.0 million, (ii) permitted Bank of China, New York Branch ( *Bank of China* ), to join the Amended Credit Facility as a lender,

and (iii) modified, or provided limited waivers of, certain of the financial and other covenants contained in the Amended Credit Facility. Our bridge financing arrangement consisted of the following:

Two promissory notes (the Convertible Notes ) issued to the Bank of China under the Amended Credit Facility for an aggregate principal amount of \$40.0 million, both convertible into shares of our common stock; and

A Warrant Issuance Agreement with BGP, under which we granted to BGP a warrant (the Warrant ) to purchase shares of our common stock that may be exercised in lieu of conversion of the Convertible Notes.

See further discussion below at *Proposed Joint Venture and Related Transactions with BGP*.

*Waivers under Amended Credit Facility.* As a result of our October 2009 bridge financing arrangements with Bank of China, we believe that our liquidity will be sufficient to fund our operations until such time as the transactions with BGP are completed or alternative financing could be obtained. Additionally, as a result of our entering into the Sixth Amendment, we believe that the waivers of the financial covenants contained in the Amended Credit Facility for the fiscal quarters ending September 30, 2009, December 31, 2009, March 31, 2010 and June 30, 2010 should enable us to conduct our operations without defaulting under our Amended Credit Facility until the transactions under the Term Sheet are completed. We currently expect these transactions will be completed in March 2010. Without these waivers, we would not have been in compliance with certain of our financial covenants at September 30, 2009 or December 31, 2009.

If the proposed transactions under the Term Sheet are not completed by March 31, 2010, then the current waivers, upon notice from the lenders after a designated period of time, would cease to be effective and we at that time would likely not be in compliance with certain of the financial covenants contained in the Amended Credit Facility, which could then result in an event of default. As the current waivers cover a period of less than twelve months from December 31, 2009, we have classified our long-term indebtedness under our revolving line of credit and term loan facility under the Amended Credit Facility as current at December 31, 2009. As a result of the cross-default provisions in our secured equipment financing and our amended and restated subordinated seller note, we have also classified these long-term obligations as current at December 31, 2009.

Even though we believe the joint venture with BGP will be completed as planned, there are certain events outside of our control (such as us experiencing a material adverse event or condition that results in a material adverse effect on our business, our prospects or results of operations) that could cause the closing of the joint venture to be delayed, terminated or abandoned. In such event, we would need to seek to amend, or seek additional covenant waivers under, the Amended Credit Facility. Even though the lenders under the Amended Credit Facility have demonstrated their willingness to work with us in amending or providing sufficient waivers to its facility, there can be no assurance that we would be able to obtain any such waivers or amendments in the future. If we were to be unable to obtain such waivers or amendments from the lenders, we would likely seek to replace or pay off the Amended Credit Facility with new secured debt, unsecured debt or equity financing.

As part of the formation of the joint venture, we have been in discussions with various financial institutions (both domestic and international) on the refinancing of our debt. As a result of these discussions and with the recent improvements within the financial markets, we believe that in the unlikely event the joint venture is not completed as planned, we would be able to obtain additional debt or equity financings prior to defaulting on our current debt obligations. However, there also can be no assurance that such debt or equity financing would be available on terms acceptable to us or at all.

*Economic Conditions and Cost Containments.* 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 has resulted in sharply curtailed demand for oil and gas exploration activities in North America and other regions. The uncertainty surrounding future economic activity levels and the tightening of credit availability resulted in decreased sales levels for several of our businesses in 2009. Our land seismic equipment businesses in North America and Russia have been particularly adversely affected.

Our seismic contractor customers and the E&P companies that are users of our products, services and technology have generally reduced their capital spending levels since 2008. We also expect that exploration and production expenditures will remain at restrained levels to the extent E&P companies and seismic contractors are limited in their access to the credit markets as a result of further disruptions in, or continued conservative lending practices in, the credit markets. There continues to be significant uncertainty about



future activity levels and the impact on our businesses. In particular, our North America and Russia land systems business and our vibroseis truck business experienced steep sales declines in 2009, and uncertain prospects for 2010.

In response to the global economic downturn, we took measures to reduce operating costs in our businesses during 2008 and 2009. In addition, we slowed our capital spending, including our investments in our multi-client data libraries in 2009. For the year ended December 31, 2009, total capital expenditures were \$92.6 million, compared to \$127.9 million for the year ended December 31, 2008. We are projecting capital expenditures for 2010 to be between \$100 million to \$110 million. Of that total, we expect to spend approximately \$90 million to \$100 million on investments in our multi-client data library, and we anticipate that a majority of this investment will be underwritten by our customers. To the extent that our customers' commitments do not reach an acceptable level of pre-funding, the amount of our anticipated investment could in likely respect decline. The remaining sums are expected to be funded from internally generated cash.

We are continuing to explore ways to reduce our cost structure. We have taken a deliberate approach to analyzing product and service demands in our business and are taking a more conservative approach in offering extended financing terms to our customers. Our most significant cost reduction to date has related to reduced headcount. Beginning in the fourth quarter of 2008 and continuing through 2009, we reduced our headcount by 384 positions, or approximately 26% of our employee headcount, in order to adjust to the lower levels of activity. Including all contractors and employees, we reduced our headcount by 489 positions, or 27%. In April 2009, we also initiated a salary reduction program that reduced employee salaries. The salary reductions reduced affected employees' annual base salaries by 12% for our chief executive officer, chief operating officer and chief financial officer, 10% for all other executives and senior management, and 5% for most other employees. Our Board also elected to implement a 15% reduction in director fees. In addition to the salary reduction program, we suspended our matching contributions to employee 401(k) plan contributions.

We reinstated all employees' salaries and director fees at their previous levels following the October 23, 2009 announcement of our company and BGP entering into a binding Term Sheet providing for, among other things, the formation of a joint venture between our company and BGP involving our land-based seismic data acquisition equipment business (see *Proposed Joint Venture and Related Transactions with BGP* below).

We will continue to fund strategic programs to position us for the expected recovery in economic activity. Overall, we will give priority to generating cash flows and reducing our cost structure, while maintaining our long-term commitment to continued technology development. Our business is mainly technology-based. We are not in the field crew business, and therefore do not have large amounts of capital and other resources invested in vessels or other assets necessary to support contracted seismic data acquisition services, nor do we have large manufacturing facilities. This cost structure gives us the flexibility to adjust our expense base when downward economic cycles affect our industry.

While the current global recession and the decline in oil and gas prices have slowed demand for our products and services in the near term, we believe that our industry's long-term prospects remain favorable because of the declining rates in oil and gas production and the relatively small number of new discoveries of oil and gas reserves. We believe that technology that adds a competitive advantage through cost reductions or improvements in productivity will continue to be valued in our marketplace, even in the current difficult market. For example, we believe that our new technologies, such as FireFly, DigiFIN and Orca, will continue to attract interest from our customers because those technologies are designed to deliver improvements in image quality within more productive delivery systems. We have adjusted much of our sales efforts for our ARIES land seismic systems from North America to international sales channels (other than Russia).

International oil companies (IOCs) continue to have difficulty accessing new sources of supply for their exploration activities, partially as a result of the growth of national oil companies. This situation is also affected by increasing environmental concerns, particularly in North America, where companies may be denied access to some of the most promising onshore and offshore exploration opportunities. It is estimated that approximately 85%-90% of the world's reserves are controlled by national oil companies, which increasingly prefer to develop resources on their own or by working directly with the oil field services and equipment providers. These dynamics often prevent capital, technology and project management capabilities from being optimally deployed on the best exploration and

production opportunities, which results in global supply capacity being less than it otherwise might be. As a consequence, the pace of new supply additions may be insufficient to keep up with demand once the global recession ends.

*2009 Developments.* Our overall total net revenues of \$419.8 million for the year ended December 31, 2009 decreased \$259.7 million, or 38.2%, compared to total net revenues for the year ended December 31, 2008. At the same time, our overall gross profit percentage improved for the year ended 2009 to 31.5% compared to 30.6% for the year ended 2008. For the year ended December 31,

2009, we recorded a loss from operations of (\$58.2) million (which includes the effect of an impairment of intangible assets charge of \$38.0 million taken in the first quarter of 2009), compared to (\$212.8) million (which includes the effect of impairments of goodwill and intangible asset charges of \$252.3 million taken in the fourth quarter of 2008) for the year ended December 31, 2008.

Developments during 2009 and early 2010 include the following:

In January 2009, we announced our first delivery of a multi-thousand station version 2.0 FireFly system equipped with digital, full-wave VectorSeis sensors to the world's largest land contractor. The deployment in the second quarter of 2009 (we recognized the revenue from this sale in the fourth quarter of 2009) of this FireFly system occurred in a producing hydrocarbon basin containing reservoirs that have proven difficult to image with conventional seismic techniques.

In March 2009, we announced that we had signed an agreement with The Polarcus Group of Companies for the provision of seismic data processing services. Under the agreement, we will provide hardware, software and geophysicists in order to support a seismic project's entire imaging lifecycle, from the vessel to an onshore data processing center.

In April 2009, we announced that a 6,100 station FireFly system will be utilized by a major oil company to undertake two high channel count, multicomponent (full-wave) seismic acquisition programs in northeast Texas, and, in July 2009, we announced that our client had sanctioned the second phase of the program.

In April 2009, we announced the first commercial sale of our cable-based ARIES II seismic recording platform to one of the world's largest geophysical services providers. The sale includes two 5,000 channel ARIES II recording systems that the customer plans to deploy on upcoming, high-channel count seismic surveys.

In May 2009, we announced that an 8,000 station FireFly system will be utilized by Compania Mexicana de Exploraciones (Comesa), an oilfield services company majority-owned by PEMEX, the national oil company of Mexico, on three projects in Mexico.

In May 2009, we announced that we had successfully acquired an additional 6,200 kilometers of regional seismic data offshore India's western coast as part of our ongoing IndiaSPAN program. Another 3,800 kilometers has since been acquired off the east coast of India.

In July 2009, we announced that we had successfully completed the data processing and interpretation for ArgentineSPAN, a basin-scale seismic program offshore Argentina. ArgentineSPAN contains approximately 11,800 kilometers of new, regional data.

In July 2009, we announced that we had successfully acquired 5,000 kilometers of regional seismic data covering the Bight Basin and Ceduna Sub-basin offshore southern Australia. Known as BightSPAN, this latest addition to our global BasinSPAN seismic data library offers the first regional geologic study of Australia's deepwater southern coast.

In October 2009, we announced our proposed joint venture with BGP and the related bridge financing transactions. See *Proposed Joint Venture and Related Transactions with BGP*.

In January 2010, we announced that we had extended our BrasilSPAN program, which makes it one of the largest 2-D seismic datasets in our multi-client data library. The program currently contains 42,000 km of data off the coast of South America.

#### **Proposed Joint Venture and Related Transactions with BGP**

On October 23, 2009, we entered into a binding Term Sheet with BGP, which provides for, among other things, the formation of a joint venture between our company and BGP involving our land-based seismic data acquisition equipment business.

The Term Sheet contemplates that we will enter into a purchase agreement with BGP to form the joint venture. We expect to form the joint venture entity as a wholly-owned subsidiary of ION Geophysical Corporation and will contribute to the joint venture certain assets and related liabilities that relate to the proposed joint venture business. Then, BGP will acquire from us a 51% equity interest in the joint venture for an aggregate purchase price of \$108.5 million cash and will contribute to the joint venture certain of its assets and related liabilities that relate to the joint venture's business. The assets of each party to be contributed to the joint venture will include seismic recording systems, inventory, certain intellectual property rights and contract rights, all as may be necessary to or

principally used in the conduct or operation of the businesses to be contributed to the joint venture as presently conducted or operated by each party.

The scope of the joint venture's business is defined in the Term Sheet as being the business of designing, development, engineering, manufacturing, research and development, distribution, sales and marketing and field support of land-based equipment used in seismic data acquisition for the petroleum industry. Excluded from the scope of the joint venture's business will be (x) the analog sensor businesses of our company and BGP and (y) 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 Marine Imaging Systems, Data Management Solutions and ION Solutions, which includes GXT's Imaging Solutions, Integrated Seismic Solutions (ISS) and BasinSPAN and seismic data libraries will remain owned and operated by us and will not comprise a part of the joint venture.

Under the Term Sheet, the parties have agreed to use their best efforts to cause the closing of the joint venture and related transactions to occur as soon as practicable following the execution of the definitive transaction documents, and on or before the later to occur of the following dates: (i) December 31, 2009 or (ii) 10 business days following the date on which all necessary regulatory approvals (including receiving clearance from the Committee on Foreign Investment in the United States (CFIUS) to complete the transactions) have been obtained, but in any event, no later than March 31, 2010. The parties' obligations under the Term Sheet may be terminated (a) by written agreement of the parties, (b) by either party in the event that such party's conditions have not been satisfied on or before March 31, 2010 (subject to a 15-day cure period) or (c) by either party in the event that certain mutual conditions have not been satisfied on or before March 31, 2010. In addition, BGP and we have each agreed to pay the other a break-up fee of \$5.0 million if either party determines to terminate its obligations under the Term Sheet because the other party has failed to satisfy certain conditions, including conditions precedent to closing that (x) the other party has not experienced a material adverse event or condition that has resulted in a material adverse effect on its business, prospects and results of operations change, (y) the other party has not breached any of its representations and warranties contained in the Term sheet and such representations and warranties continue to be true and correct and (z) with respect to BGP's obligations under the Term Sheet, we have not suffered any material default or accelerations of any of our liabilities.

On October 27, 2009, we borrowed an aggregate of \$40.0 million in the form of revolving credit bridge loan financing from Bank of China, which was evidenced by the Convertible Notes. This borrowing was pursuant to and permitted by the terms of the Sixth Amendment to the Credit Facility, which increased the aggregate revolving commitment amount under the accordion feature provisions of the Amended Credit Facility from \$100.0 million to \$140.0 million and permitted the Bank of China to join the Amended Credit Facility as a lender.

The Convertible Notes provide that at the stated initial conversion price of \$2.80 per share, the full \$40.0 million principal amount under the Convertible Notes would be convertible into 14,285,714 shares of Common Stock. The Convertible Notes provide that the conversion price and the number of shares into which the notes may be converted are subject to adjustment under certain terms and conditions similar to those contained in the Warrant.

As part of BGP arranging for the Bank of China to join our Amended Credit Facility, we granted to BGP the Warrant. The Warrant will be exercisable, in whole or in part, at any time and from time to time, subject to the conditions described below. The Warrant will initially entitle the holder thereof to purchase a number of shares of common stock equal to \$40.0 million divided by the exercise price of \$2.80 per share, subject to adjustment as described below. At the initial exercise price of \$2.80 per share, at such time as the Warrant becomes exercisable, it would initially be fully exercisable for 14,285,714 shares of common stock.

The Warrant will only become exercisable and the Convertible Notes will only become convertible upon receipt of certain governmental approvals. Any conversions of the Convertible Notes and prior exercises of the Warrant will reduce the dollar amount under the Warrant into which the exercise price may be divided to determine the number of shares that may be acquired upon exercise.

Additionally, the Term Sheet provides that when the joint venture transactions are closed:

BGP will have purchased approximately 23.8 million shares of our common stock for \$66.6 million and thereby own, before giving effect to the issuance of those shares, approximately 19.99% of our outstanding common stock.

To the extent that shares are not purchased by BGP under the Warrant prior to closing, the new revolving credit loans from Bank of China, evidenced by the Convertible Notes will convert into approximately 14.3 million shares of ION common stock and will be credited against the approximately 23.8 million shares of ION stock to be purchased by BGP at the transaction closing.

ION will appoint a designee of BGP to its Board of Directors to serve with the current nine members of ION's Board of Directors.

BGP will arrange for our then-outstanding long-term debt under the Amended Credit Facility (currently \$101.6 million outstanding at February 22, 2010) to be refinanced at the joint venture closing.

We will use a portion of the proceeds from the transactions to pay off and retire our outstanding indebtedness under our current revolving credit facility (after giving effect to the \$40.0 million in additional revolving credit borrowings under our existing Amended Credit Facility, approximately \$118.0 million is currently outstanding at February 22, 2010) and \$35.0 million in seller subordinated indebtedness incurred in connection with our acquisition of ARAM in September 2008.

We will receive a new \$100 million revolving credit facility at the joint venture closing.

The \$19.1 million (as of December 31, 2009) secured equipment financing transaction with ICON will be assigned to and become indebtedness of the joint venture.

The proposed joint venture is intended to provide a number of benefits and opportunities, including the following: Preferred access to BGP, currently the world's largest land seismic contractor;

Anticipated improved economies of scope and scale in our land data acquisition system manufacturing and sales operations, enabling us to deliver products in a more timely manner at an overall lower cost to its customers;

Combining our strengths in land equipment technologies with BGP's emerging geophysical product portfolio and expertise in operating land seismic acquisition crews, which should permit new joint venture products to be designed and field-tested for reliability, quality and productivity to the benefit of all customers; and

Aligning the joint venture engineering teams to develop innovative, market-leading land recording systems, 3C (full-wave) sensor and vibroseis products.

We believe that the joint venture will enable us to continue developing land systems and sensor technologies with lessened primary capital requirements through our partnership with BGP.

*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, 2009, compared to those for fiscal 2008 and 2007 (in thousands, except per share amounts):

	<b>Years Ended December 31,</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
Net revenues:			
ION Systems Division:			
Land Imaging Systems	\$ 103,038	\$ 200,493	\$ 325,037
Marine Imaging Systems	103,024	182,710	177,685
Data Management Solutions	33,733	37,240	37,660
Total ION Systems Division	239,795	420,443	540,382
ION Solutions Division	179,986	259,080	172,729
Total	\$ 419,781	\$ 679,523	\$ 713,111

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Income (loss) from operations:

ION Systems Division:

Land Imaging Systems	\$ (39,126)	\$ (13,662)	\$ 28,681
Marine Imaging Systems	29,632	52,624	44,727
Data Management Solutions	19,970	22,298	17,290
Total ION Systems Division	10,476	61,260	90,698
ION Solutions Division	27,747	40,534	21,646
Corporate	(58,395)	(62,334)	(48,450)



	<b>Years Ended December 31,</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
Impairment of goodwill and intangible assets	(38,044)	(252,283)	
Total	\$ (58,216)	\$ (212,823)	\$ 63,894
Net income (loss) applicable to common shares	\$ (113,559)	\$ (293,713)	\$ 40,256
Basic net income (loss) per common share	\$ (1.03)	\$ (3.06)	\$ 0.49
Diluted net income per (loss) common share	\$ (1.03)	\$ (3.06)	\$ 0.45

We intend that the discussion of our financial condition and results of operations that follows 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.

We anticipate that we will account for our 49% interest in the proposed joint venture with BGP under the equity method of accounting under U.S. generally accepted accounting principles. As a result, after the joint venture is formed, we will no longer include in our results of operations all of the net revenues and costs and expenses attributable to the contributed businesses on a going forward basis. In our results of operations, our proportional share of the joint venture's net income (loss) will be reported as a single line item, and our investment in the joint venture will be increased by our proportional share of joint venture net income and decreased by our proportional payment of dividends made. Additionally, our equity investment in the joint venture will be reported as a single line item on our balance sheet, and the assets and liabilities of the contributed business currently consolidated in our balance sheet as of December 31, 2009 will be removed. See *Proposed Joint Venture and Related Transactions with BGP* below.

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, 2009 Compared to Year Ended December 31, 2008***

*Net Revenues.* Net revenues of \$419.8 million for the year ended December 31, 2009 decreased \$259.7 million, compared to the corresponding period of 2008, principally due to the continued decline in the global economy, which caused decreased activity and demand for seismic products and services, most notably in our Land Imaging Systems segment. Land Imaging Systems' net revenues decreased by \$97.5 million, to \$103.0 million compared to \$200.5 million during the twelve months ended December 31, 2008. Despite the inclusion of ARAM's full-year operating results, the division was strongly impacted by the market decline, which resulted in reduced sales across all product lines compared to 2008. Marine Imaging Systems' net revenues decreased \$79.7 million to \$103.0 million, compared to \$182.7 million during the year ended December 31, 2008, principally due to the continued decline in the global economy and to delays in the scheduled completion and commissioning of new marine vessels being introduced into the market, which would otherwise have been outfitted by our marine products. This decrease was partially offset by increased sales of our DigiFIN positioning systems. Our Data Management Solutions' net revenues decreased slightly by \$3.5 million, to \$33.7 million compared to \$37.2 million in 2008. This decrease was due entirely to the effect of foreign currency exchange rate fluctuations compared to a year ago.

ION Solutions' net revenues decreased \$79.1 million, to \$180.0 million, compared to \$259.1 million in 2008. The results for 2009 reflected decreased multi-client data library sales and new venture program sales, partially offset by increases in data processing service revenues.

*Gross Profit and Gross Profit Percentage.* Gross profit of \$132.1 million for the year ended December 31, 2009 decreased \$75.6 million compared to the prior year. Gross profit percentage for the twelve months ended December 31, 2009 was 31.5% compared to 30.6% in the prior year. The 0.9% increase in our gross margin

percentage was primarily due to the mix of business, especially in our Marine Imaging Systems and our ION Solutions segments. This increase was partially offset by lower margins in our Land Imaging System division, which were principally the result of increased amortization expense related to ARAM's acquired intangibles and the headcount reduction restructuring charges taken during 2009. The margins for 2009 in our Data Management Solutions segment remained flat due to product mix sold when compared to 2008 margin levels.

*Research, Development and Engineering.* Research, development and engineering expense was \$44.9 million, or 10.7% of net revenues, for the year ended December 31, 2009, a decrease of \$4.6 million compared to \$49.5 million, or 7.3% of net revenues, for the corresponding period last year. The decrease 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 \$34.9 million, or 8.3% of net revenues, for the year ended December 31, 2009 decreased \$13.0 million compared to \$47.9 million, or 7.0% of net revenues, for the corresponding period last year. The decrease in our sales and marketing expenditures reflects 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 and the timing of the expenses throughout the year. Based upon the recently completed restructuring programs, we expect to continue to incur lower costs related to our marketing and sales efforts than in prior periods as mentioned in *Executive Summary* above.

*General and Administrative.* General and administrative expense of \$72.5 million for the year ended December 31, 2009 increased \$1.6 million compared to \$70.9 million in the prior year. General and administrative expenses as a percentage of net revenues for the years ended December 31, 2009 and 2008 were 17.3% and 10.4%, respectively. The increase in general and administrative expense was mainly due to additional stock-based compensation expense related to adjustments between estimated and actual award forfeitures of \$4.5 million, of which \$3.3 million is an out-of-period adjustment. Additionally, general and administrative expenses also reflect the inclusion of ARAM's expenses in 2009 and severance charges related to reductions in headcount. This increase is partially offset by decreased professional legal fees, travel expenses and general office expenses related to cost reduction measures. Based upon the recently completed restructuring programs, we expect to incur lower costs related to our general and administrative activities than in prior periods as mentioned in *Executive Summary* above.

*Impairment of Intangible Assets.* At March 31, 2009, we further evaluated our intangible assets for potential impairment. Based upon our evaluation and given the current market conditions, we determined that approximately \$38.0 million of proprietary technology and customer relationships (written off entirely) related to ARAM acquired intangibles were impaired. In the fourth quarter of 2008, we recorded an impairment charge of \$10.1 million related to ARAM's customer relationships, trade name and non-compete agreements. Our net book value associated with ARAM's acquired intangibles is \$34.8 million at December 31, 2009 and has a remaining weighted average life of 6.2 years.

*Interest Expense, including Amortization of a Non-Cash Debt Discount.* Interest expense of \$35.7 million for the year ended December 31, 2009 increased \$23.0 million compared to \$12.7 million for the corresponding period last year. The increase is 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 the year ended December 31, 2009, we amortized to interest expense \$6.7 million of a non-cash debt discount associated with the Convertible Notes. The remaining unamortized non-cash debt discount was \$8.7 million at December 31, 2009 and will be recognized over the expected term of the Convertible Notes (March 31, 2010). See further discussion of the Convertible Notes and other bridge financing arrangements related to BGP and the Bank of China at *Proposed Joint Venture and Related Transactions with BGP* and *Liquidity and Capital Resources Sources of Capital*. Because of these increased levels of borrowed indebtedness, our interest expense will continue to be significantly higher in 2010 than we experienced in prior years; however, with the closing of the proposed joint venture with BGP and the subsequent re-financing of the Amended Credit Facility, the Company believes that its interest expense will decrease compared to 2009.

*Fair Value Adjustment of the Warrant.* We are required to account for separately and adjust to fair value the Warrant. We recorded a non-cash fair value adjustment of \$29.4 million, reflecting a total non-cash liability associated with the Warrant of \$44.8 million at December 31, 2009. We will continue to adjust the Warrant to fair value until such time as it is exercised or converted into our equity at the closing of the joint venture, which is expected to occur in March 2010. Also, associated with the Warrant, we recorded a \$15.4 million non-cash discount on the Convertible Notes, which is being amortized to interest expense (see discussion above) over the expected term of the notes (March 31, 2010).

*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 the year ended December 31, 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 the year ended December 31, 2009 was (\$20.0) million compared to \$1.1 million of tax expense for the year ended December 31, 2008. The increase in tax benefits during 2009 primarily relates to reduced

consolidated income from operations. We continue to maintain a valuation allowance for a significant portion of our U.S. net deferred tax assets. Our effective tax rate for the year ended December 31, 2009 was 15.4% as compared to (0.5%) for the similar period during 2008. The increase in our effective tax rate relates primarily to the 2008 impairment of goodwill, which has no tax benefit.

*Preferred Stock Dividends.* The preferred stock dividend relates to our Series D-1, Series D-2 and Series D-3 Cumulative Convertible Preferred Stock (collectively referred to as the Series D Preferred Stock) that we issued in February 2005, December 2007 and February 2008, respectively. Quarterly dividends must be paid in cash. Dividends are paid at a rate equal to the greater of (i) 5% per annum or (ii) the three month LIBOR rate on the last day of the immediately preceding calendar quarter plus 2<sup>1</sup>/<sub>2</sub>% per annum. All dividends paid to date on the Series D Preferred Stock have been paid in cash. The Series D Preferred Stock dividend rate was 5.0% at December 31, 2009.

***Year Ended December 31, 2008 Compared to Year Ended December 31, 2007***

*Net Revenues.* Net revenues of \$679.5 million for the year ended December 31, 2008 decreased \$33.6 million, compared to the corresponding period of 2007, principally due to the sharp decline in the global economy, which caused decreased activity and demand for seismic services, most notably in our Land Imaging Systems segment. Land Imaging Systems' net revenues decreased by \$124.5 million, to \$200.5 million compared to \$325.0 million during the twelve months ended December 31, 2007. Despite the inclusion of ARAM's operating results, the division was strongly impacted by the market decline, which resulted in reduced sales of both land systems and vibroseis trucks. This decrease was also made more pronounced by the inclusion of several large 2007 sales of our land acquisition systems that were not duplicated in 2008, including the sale of 14 land acquisition systems to ONGC, the sale of our initial version of FireFly and significantly increased vibrator truck sales in 2007. Marine Imaging Systems' net revenues increased \$5.0 million to \$182.7 million, compared to \$177.7 million during the year ended December 31, 2007, principally due to stronger sales of our marine positioning products, including sales related to the full commercialization of our DigiFIN advanced streamer command and control system, the first two commercial sales of our DigiSTREAMER system and stronger sales of our marine seismic data acquisition products. We delivered to RXT the fifth VSO system in 2008; however, VSO system sales decreased compared to 2007 mainly due to the timing of the sales. Our Data Management Solutions' net revenues decreased slightly by \$0.5 million, to \$37.2 million compared to \$37.7 million in 2007. This change primarily reflects continued energy industry demand for marine seismic work, slightly offset by the impact of foreign currency exchange rates between the GBP and the U.S. Dollar in 2008.

ION Solutions' net revenues increased \$86.4 million, to \$259.1 million, or 50%, compared to \$172.7 million in 2007. This increase was due to larger demand related to higher proprietary processing revenues, pre-funded multi-client seismic surveys primarily off the coasts of Alaska and South America and sales of off-the-shelf seismic data sales. Sales of our pre-funded multi-client seismic surveys and of off-the-shelf seismic data increased approximately 60% in 2008 compared to 2007.

*Gross Profit and Gross Profit Percentage.* Gross profit of \$207.7 million for the year ended December 31, 2008 increased \$1.1 million compared to the prior year. Gross profit percentage for the twelve months ended December 31, 2008 was 31% compared to 29% in the prior year. The 2% improvement in our gross margin percentage was primarily due to the mix of business, including an increase in system sales as well as higher margin sales from our Data Management Solutions segment, including significantly increased sales of our Orca software. This increase was partially offset by slightly lower margins in our Land Imaging System division relating to inventory write downs directly related to the integration activities of ARAM into our current operating segment and in our ION Solutions segment due to the change in product mix with higher levels of proprietary processing sales. During 2008, we also wrote down the carrying values of certain of our mature analog land systems and related equipment inventory, resulting in a \$10.1 million charge.

*Research, Development and Engineering.* Research, development and engineering expense was \$49.5 million, or 7.3% of net revenues, for the year ended December 31, 2008, a decrease of \$0.5 million compared to \$50.0 million, or 7.0% of net revenues, for the corresponding period last year. We expect to continue to incur research, development and engineering expenses in 2009 at a more conservative rate than in prior years, as we continue to invest in our next generation of seismic acquisition products and services.

*Marketing and Sales.* Marketing and sales expense of \$47.9 million, or 7.0% of net revenues, for the year ended December 31, 2008 increased \$4.0 million compared to \$43.9 million, or 6.2% of net revenues, for the corresponding period last year. The increase in our sales and marketing expenditures reflects the hiring of additional sales personnel, increased exhibit and convention costs and increased travel associated with our global marketing efforts. This increase was partially offset by a decrease in our corporate branding expenses in 2008, due to the higher expenses in 2007 associated with our name change that year.

*General and Administrative.* General and administrative expense of \$70.8 million for the year ended December 31, 2008 increased \$21.7 million compared to \$49.1 million in the prior year. General and administrative expenses as a percentage of net revenues for the years ended December 31, 2008 and 2007 were 10.4% and 6.9%, respectively. The increase in expenditures was primarily due to increases in our bad debt reserves of \$4.6 million, in our professional fees relating to our financing efforts of \$5.7 million, in salaries and related expenses of \$8.7 million due to the hiring of additional personnel and an increase in general office expenses related to our acquisition of ARAM. This increase was partially offset by a decrease in bonus expense due to the lower operating performance compared to 2007 s operating performance.

*Impairment of Goodwill and Intangible Assets.* At December 31, 2008, we evaluated our reporting units for potential impairment. Based upon our evaluation and given the current market conditions, we determined that approximately \$252.3 million of goodwill and intangible assets related to our Land Imaging Systems, ARAM Systems and ION Solutions reporting units were impaired. We recorded the expense as of December 31, 2008 and reduced the carrying amount of our goodwill and intangible assets.

*Income Tax Expense.* Income tax expense for the year ended December 31, 2008 was \$1.1 million compared to income tax expense of \$12.8 million for the twelve months ended December 31, 2007. The decrease in tax expense during 2008 primarily relates to reduced consolidated income from operations and changes to the valuation allowance on U.S. deferred tax assets. This decrease was partially offset by deferred taxes on the utilization of acquired net operating losses. We continue to maintain a valuation allowance for a significant portion of our U.S. net deferred tax assets. Our effective tax rate for the year ended December 31, 2008 was (0.5%) as compared to 23.1% for the similar period during 2007. The decreased effective tax rate for 2008 relates primarily to the impairment of goodwill, which has no tax benefit, and a reduction in the valuation allowance on U.S. deferred tax assets offset by deferred tax expense related to the utilization of acquired net operating losses of \$3.5 million. The 2007 and 2008 effective tax rates were lower than the statutory rate due to the goodwill impairment in 2008 and to the utilization of previously reserved U.S. deferred tax assets in both 2007 and 2008.

*Preferred Stock Dividends and Accretion.* The preferred stock dividend relates to our Series D Preferred Stock that we issued in February 2005, December 2007 and February 2008. Quarterly dividends must be paid in cash. Dividends are paid at a rate equal to the greater of (i) 5% per annum or (ii) the three month LIBOR rate on the last day of the immediately preceding calendar quarter plus 2<sup>1</sup>/<sub>2</sub>% per annum. All dividends paid to date on the Series D Preferred Stock have been paid in cash. The Series D Preferred Stock dividend rate was 6.55% at December 31, 2008.

*Adjustments from Preferred Stock Redemption and Conversion Features.* Our results of operations for 2008 reflected additional credits to and charges against our earnings resulting from our outstanding Series D-1 Cumulative Convertible Preferred Stock (the Series D-1 Preferred Stock ), Series D-2 Cumulative Convertible Preferred Stock (the Series D-2 Preferred Stock ) and Series D-3 Cumulative Convertible Preferred Stock (the Series D-3 Preferred Stock and together with the Series D-1 Preferred Stock and the Series D-2 Preferred Stock, the Series D Preferred Stock ).

On November 28, 2008, we delivered a notice (the Reset Notice ) to Fletcher International, Ltd. ( Fletcher ) of our election to reset the conversion prices on our outstanding shares of Series D Preferred Stock. See *Liquidity and Capital Resources Sources of Capital Cumulative Convertible Preferred Stock*. Fletcher is the holder of all of the outstanding shares of our Series D Preferred Stock. By delivering the Reset Notice to Fletcher, we reset the conversion prices on all of our Series D Preferred Stock to \$4.4517 per share, in accordance with the terms of our agreement with Fletcher dated as of February 15, 2005 (as amended, the Fletcher Agreement ). 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 would be required to (i) thereafter pay all dividends on shares of Series D Preferred Stock only in cash and (ii) elect to either (a) satisfy future redemption obligations by distributing only cash (or a combination of cash and common stock), or (b) reset the conversion prices of all of outstanding shares of Series D Preferred Stock to the Minimum Price, in which event the Series D Preferred Stock holder would have no further rights to call for the redemption of those shares.

We had originally classified the preferred stock outside of stockholders equity on the balance sheet below total liabilities. However, with the termination of the redemption rights, there are no other provisions that require cash redemption. Therefore, in the fourth quarter of 2008, we reclassified the preferred stock to stockholders equity.

The redemption features of our outstanding Series D-2 Preferred Stock and Series D-3 Preferred Stock had been considered embedded derivatives that were required to be bifurcated and accounted for separately at their fair value during 2008. These features had been bifurcated as a separate line item in the liabilities section of our consolidated balance sheet. For each quarter during 2008, these redemption features had been re-measured at quarter-end at their fair value with any resulting gain or loss recognized below income from operations and reflected in earnings for the period. As a result of the election we made under the Reset Notice, Fletcher



is no longer permitted to redeem any shares of our Series D Preferred Stock and the original value of the redemption features of \$1.2 million was credited to and reflected in other income in the fourth quarter of 2008.

*Preferred Stock Beneficial Conversion Charge.* As a result of the Reset Notice and the adjustment in November 2008 of the conversion prices for the Series D Preferred Stock to the Minimum Price of \$4.4517 per share under the Fletcher Agreement, we recognized in the fourth quarter of 2008 a contingent beneficial conversion feature of the Series D Preferred Stock as a non-cash charge to earnings in the amount of \$68.8 million. Under applicable financial accounting guidance, the adjustment of reducing the conversion price was deemed to be equivalent to value being transferred to the holder of the Series D Preferred Stock, with such holder thereby realizing enhanced economic value compared to the holders of other ION securities that did not hold a beneficial conversion feature. This feature was calculated at its intrinsic value at the original commitment date, and the amount of the charge was limited to the amount of proceeds allocated to the convertible instruments (i.e. the Series D Preferred Stock).

## **Liquidity and Capital Resources**

### *Sources of Capital*

Our cash requirements include our working capital requirements, debt service payments, dividend payments on our preferred stock, data acquisitions and capital expenditures. In recent years, our primary sources of funds have been cash flow from operations, existing cash balances, equity issuances and our revolving credit facility (*see Revolving Line of Credit and Term Loan Facilities* below).

At December 31, 2009, our outstanding credit facilities and debt consisted of:

Our Amended Credit Facility, comprised of:

An amended revolving line of credit sub-facility (including the additional \$40.0 million of revolving credit indebtedness evidenced by the Convertible Notes); and

A \$125.0 million original principal amount term loan;

A \$20.0 million secured equipment financing term loan; and

A \$35.0 million Amended and Restated Subordinated Promissory Note.

*Revolving Line of Credit and Term Loan Facilities.* In July 2008, we, ION Sàrl, and certain of our domestic and other foreign subsidiaries (as guarantors) entered into a \$100 million amended and restated revolving credit facility under the terms of an amended credit agreement with our commercial bank lenders (this agreement, as it has been further amended, is referred to our Amended Credit Agreement ). The revolving credit facility terminates on July 3, 2013. This amended and restated revolving credit facility provided us with additional flexibility for our international capital needs by not only permitting borrowings by one of our foreign subsidiaries under the facility but also providing us the ability to borrow in alternative currencies.

On September 17, 2008, we added a new \$125.0 million term loan sub-facility under the Amended Credit Agreement, and borrowed \$125.0 million in term loan indebtedness and \$72.0 million under the revolving credit sub-facility to fund a portion of the cash consideration for the ARAM acquisition.

The interest rate on borrowings under our Amended Credit Facility is, at our option, (i) an alternate base rate (either the prime rate of HSBC Bank USA, N.A., or a federal funds effective rate plus 0.50%, plus an applicable interest margin) or (ii) for Eurodollar borrowings and borrowings in Euros, pounds sterling or Canadian dollars, a LIBOR-based rate, plus an applicable interest margin. The amount of the applicable interest margin is determined by reference to a leverage ratio of total funded debt to consolidated EBITDA for the four most recent trailing fiscal quarters. The interest rate margins currently range from 2.875% to 5.5% for alternate base rate borrowings, and from 3.875% to 6.5% for Eurodollar borrowings. As of December 31, 2009, both the \$101.6 million in term loan indebtedness under the Amended Credit Facility and the \$118.0 million in total revolving credit indebtedness under the Amended Credit Facility accrued interest at the then-applicable LIBOR-based interest rate of 6.7% per annum. The average effective interest rates for the quarter ended December 31, 2009 under the LIBOR-based rates for both the term loan indebtedness and the revolving credit indebtedness were 6.2%.

At March 31, 2009, we were in compliance with all of the financial covenants under the terms of the Amended Credit Facility. However, based upon our results for that quarter and our then-current operating forecast for the remainder of 2009, we determined that it was probable that, if we did not take any mitigating actions, we would not be in compliance for the period ending September 30, 2009 with one or more financial covenants under the Amended Credit Facility's debt agreements. As a result, we approached the lenders under the Amended Credit Facility to obtain amendments to relax certain of these financial covenants and pursued the private placement of our common stock, which, along with our cash on hand, generated sufficient funds to repay the outstanding indebtedness under a bridge loan agreement that we had entered into with Jefferies Finance, LLC in December 2008. See further discussion of the private placement transaction below at *Private Placement of 18.5 Million Shares of Common Stock*.

*Fifth Amendment to Amended Credit Facility.* In June 2009, we entered into an additional amendment (the Fifth Amendment) to our Amended Credit Facility that, among other things, modified certain of the financial and other covenants contained in the Amended Credit Facility and permitted us to repay our Jefferies bridge loan indebtedness. Principal modifications to the terms of the Amended Credit Agreement resulting from the Fifth Amendment included the following:

An increase in applicable maximum interest rate margins in the event that our leverage ratio exceeds 2.25 to 1.0 from 4.5% to up to 5.5% for alternate base rate loans, and from 5.5% to up to 6.5% for LIBOR-rate loans;

A modified restricted payments covenant that permitted us to apply up to \$6.0 million of our available cash on hand to repay the indebtedness under the Jefferies bridge loan agreement;

A new defined term, Excess Cash Flow, and a new requirement for us to apply 50% of our Excess Cash Flow, if any, calculated with respect to a just-completed fiscal year, to the prepayment of the term loan under the Amended Credit Agreement if our fixed charge coverage ratio or our leverage ratio for the just-completed fiscal year does not meet certain requirements; and

An amendment to fix the maximum revolving credit facility (accordion feature) amount to which the Amended Credit Facility could be increased at \$140.0 million.

The Amended Credit Agreement contains covenants that restrict us, 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 similar transactions, entering into transactions with affiliates, making certain sales or other dispositions of assets, making certain investments, acquiring other businesses and entering into certain sale-leaseback transactions with respect to certain of our properties;

Paying cash dividends on our common stock and repurchasing and acquiring shares of our common stock unless (i) there is no event of default under the Amended Credit Facility and (ii) the amount of cash used for cash dividends, repurchases and acquisitions does not, in the aggregate, exceed an amount equal to the excess of 30% of our domestic consolidated net income for our most recently completed fiscal year over \$15.0 million.

The Amended Credit Facility requires us to be in compliance with certain financial covenants, including requirements for us and our domestic subsidiaries to:

maintain a minimum fixed charge coverage ratio (which must be not less than 1.10 to 1.0 for the fiscal quarter ended December 31, 2009; 1.15 to 1.0 for the fiscal quarter ending March 31, 2010; 1.25 to 1.0 for the fiscal quarter ending June 30, 2010; 1.35 to 1.0 for the fiscal quarter ending September 30, 2010; and 1.50 to 1.0 the fiscal quarter ending December 31, 2010 and thereafter);

not exceed a maximum leverage ratio (3.00 to 1.0 for the fiscal quarters ended December 31, 2009; 2.75 to 1.0 for the fiscal quarter ending March 31, 2010 and June 30, 2010; 2.5 to 1.0 for the fiscal quarter ending September 30, 2010; and 2.25 to 1.0 the fiscal quarter ending December 31, 2010 and thereafter); and

maintain a minimum tangible net worth of at least 80% of our tangible net worth as of September 18, 2008 (the date that we completed our acquisition of ARAM), plus 50% of our consolidated net income for each quarter thereafter, and 80% of the proceeds from any mandatorily convertible notes and preferred and common stock issuances for each quarter thereafter.

The term loan indebtedness we borrowed under the Amended Credit Facility is subject to scheduled quarterly amortization payments of \$4.7 million per quarter until December 31, 2010. On that date, the quarterly principal amortization increases to \$6.3 million per quarter until December 31, 2012, when the quarterly principal amortization amount increases to \$9.4 million for each quarter until maturity on September 17, 2013. The term loan indebtedness matures on September 17, 2013, but the administrative agent under the Amended Credit Facility may accelerate the maturity date to a date that is six months prior to the maturity date of any additional debt financing that we may incur to refinance certain indebtedness incurred in connection with the ARAM acquisition, by giving us written notice of such acceleration between September 17, 2012 and October 17, 2012.

The Amended Credit Facility contains customary event of default provisions (including an event of default upon any change of control event affecting us), the occurrence of which could lead to an acceleration of ION's obligations under the Amended Credit Facility.

*Sixth Amendment to Amended Credit Facility.* On October 23, 2009, we entered into a Sixth Amendment to the Amended and Restated Credit Agreement that, among other things, (i) increased the aggregate revolving commitment amount under the Amended Credit Facility from \$100.0 million to \$140.0 million, (ii) permitted Bank of China, New York Branch, to join the Amended Credit Facility, (iii) modified, or provided limited waivers of, certain of the financial and other covenants contained in the Amended Credit Facility (including waivers to the extent necessary to permit the issuance of the BGP Warrant) and (iv) permitted the principal amount of the new revolving credit loans from Bank of China (as evidenced by the Convertible Notes) to be convertible into shares of our common stock. We borrowed on October 27, 2009 an aggregate of \$40.0 million in revolving credit indebtedness under the Amended Credit Facility (as amended by the Sixth Amendment), pursuant to the Convertible Notes. The Convertible Notes were issued by ION Geophysical Corporation and ION Sàrl to Bank of China under the terms and conditions of the Amended Credit Facility. The outstanding indebtedness under the Convertible Notes is currently scheduled to mature on the maturity date of the revolving credit indebtedness under the Amended Credit Facility, which is July 3, 2013.

Under the terms of the Amended Credit Agreement, up to \$84.0 million (or its equivalent in foreign currencies) is available for non-U.S. borrowings by ION Sàrl and up to \$105.0 million is available for domestic borrowings in the U.S.; however, the total level of outstanding borrowings under the revolving credit facility cannot exceed \$140.0 million. Revolving credit borrowings under the Amended Credit Facility are available to fund our working capital needs, to finance acquisitions, investments and share repurchases and for general corporate purposes. In addition, the Amended Credit Facility includes a \$35.0 million sub-limit for the issuance of documentary and stand-by letters of credit, of which \$1.2 million was outstanding at December 31, 2009. Borrowings under the Amended Credit Facility may be prepaid without penalty.

As a result of our October 2009 bridge financing arrangements with Bank of China in connection with the Sixth Amendment, we believe that our liquidity will be sufficient to fund our operations for the first quarter of 2010. The execution of the Sixth Amendment, which included waivers of the financial covenants contained in the Amended Credit Facility for the fiscal quarters ending September 30, 2009, December 31, 2009, March 31, 2010 and June 30, 2010, should enable us to conduct our operations without defaulting under the Amended Credit Facility until the transactions with BGP are completed, which we currently believe will occur in March 2010. Without these waivers, we would not have been in compliance with certain of our financial covenants at September 30, 2009 or December 31, 2009.

If the proposed transactions under the Term Sheet are not completed by March 31, 2010, then the current waivers, upon notice from the lenders after a designated period of time, would cease to be effective and we, at that time, would likely not be in compliance with certain of the financial covenants contained in the Amended Credit Facility, which could then result in an event of default. As the current waivers cover a period of less than twelve months from December 31, 2009, we have classified our long-term indebtedness under our revolving line of credit and term loan facility under the Amended Credit Facility as current at December 31, 2009. As a result of the cross-default provisions in our secured equipment financing and our amended and restated subordinated seller note, we have also classified these long-term obligations as current at December 31, 2009.

Even though we believe the joint venture with BGP will be completed as planned, there are certain events outside of our control (such as our experiencing a material adverse event or condition that results in a material adverse effect on our business, its prospects or results of operations) that could cause the closing of the joint venture to be delayed,

terminated or abandoned. In such event, we would need to seek to amend, or seek additional covenant waivers under, the Amended Credit Facility. Even though the lenders under the Amended Credit Facility have demonstrated their willingness to work with us in amending or providing sufficient waivers to our facility, there can be no assurance that we would be able to obtain any such waivers or amendments in the future. If we were unable to

obtain such waivers or amendments from the lenders, we would likely seek to replace or pay off the Amended Credit Facility with new secured debt, unsecured debt or equity financing.

*Convertible Notes and Warrant.* On October 27, 2009, we borrowed an aggregate of \$40.0 million in the form of revolving credit bridge financing arranged by BGP from Bank of China, New York Branch, which was evidenced by the Convertible Notes. This borrowing was permitted by the terms of the Sixth Amendment to the Credit Facility, which increased the aggregate revolving commitment amount under the accordion feature provisions of the Amended Credit Facility from \$100.0 million to \$140.0 million and permitted Bank of China to join the Amended Credit Facility as a lender. As further described above, the total outstanding indebtedness under the Amended Credit Facility, which includes the Bank of China bridge loans, was \$118.0 million, excluding the non-cash debt discount, at December 31, 2009.

The Convertible Notes, issued in October 2009 in connection with the execution of the Term Sheet with BGP, provide that at the stated initial conversion price of \$2.80 per share, the full \$40.0 million principal amount under the Convertible Notes would be convertible into 14,285,714 shares of Common Stock. The Convertible Notes provide that the conversion price and the number of shares into which the notes may be converted are subject to adjustment under certain terms and conditions similar to those contained in the Warrant.

As part of BGP arranging for the Bank of China to join our Amended Credit Facility, we granted to BGP the Warrant. The Warrant will be exercisable, in whole or in part, at any time and from time to time, subject to the conditions described below. The Warrant will initially entitle the holder thereof to purchase a number of shares of common stock equal to \$40.0 million divided by the exercise price of \$2.80 per share, subject to adjustment as described below. At the initial exercise price of \$2.80 per share, at such time as the Warrant becomes exercisable, it would initially be fully exercisable for 14,285,714 shares of common stock.

The Warrant will only become exercisable and the Convertible Notes will only become convertible upon receipt of certain governmental approvals. Any conversions of the Convertible Notes and prior exercises of the Warrant will reduce the dollar amount under the Warrant into which the exercise price may be divided to determine the number of shares that may be acquired upon exercise.

The exercise price under the Warrant and conversion prices under the Convertible Notes will be subject to adjustment upon the occurrence of a Triggering Event. A Triggering Event will occur in the event that the joint venture transactions cannot be completed by March 31, 2010, solely as a result of the occurrence of a statement, order or other indication from any relevant governmental regulatory agency that (a) the transactions would not be approved, would be opposed, objected to or sanctioned or (b) the transactions or BGP's business and operations would be required to be altered (or upon the earlier abandonment of such transactions due to any such statement, indication or order). In such event, the exercise price and conversion price per share will be adjusted (but not to an amount that exceeds \$2.80 per share) to a price per share that is equal to 75% of the lowest trading price of our common stock over a ten-consecutive-trading-day period, beginning on and inclusive of the first trading day following the public announcement of any failure to complete such transactions (or the abandonment thereof), which failure of abandonment was the result of the Triggering Event. The exercise price of the Warrant and conversion prices of the Convertible notes are also subject to certain customary anti-dilution adjustment.

The Warrant provides for certain cashless exercise rights that are exercisable by the holder of the Warrant in the event that certain governmental approvals from the People's Republic of China permitting the exercise of the Warrant for cash are not obtained.

At the same time as the closing of the joint venture transactions, all of the then-outstanding principal amounts under the Convertible Notes will be automatically converted into shares of common stock unless, at the option of the holder of the Warrant, the holder elects to exercise the Warrant in whole or in part, in lieu of the full conversion of such remaining principal amounts under the Convertible Notes.

Assuming that no adjustments occur to the exercise or conversion prices of (or the number of shares to be issued under) the Warrant or the Convertible Notes prior to closing the joint venture transactions, the Term Sheet provides that at the closing of the transactions, BGP would purchase directly from us a number of shares of Common Stock at a purchase price of \$2.80 per shares such that, when added to the total number of shares of Common Stock that may have been previously issued pursuant to conversion of the Convertible Notes and/or exercise of the Warrant, BGP

(and its transferees and permitted assignees) would own, together, before giving effect to the issuance of those shares, approximately 19.99% of the issued and outstanding shares of our Common Stock (i.e. 23,789,536 shares).

See further discussion of the accounting impact of the Warrant at *Critical Accounting Policies and Estimates Fair Value of the Warrant*.

*Secured Equipment Financing.* On June 29, 2009, we entered into a \$20.0 million secured equipment financing transaction with ICON ION, LLC ( *ICON* ), an affiliate of ICON Capital Inc. Two master loan agreements were entered into with ICON in connection with this transaction: (i) we, ARAM Rentals Corporation, a Nova Scotia unlimited company ( *ARC* ), and ICON entered into a Canadian Master Loan and Security Agreement dated as of June 29, 2009 with regard to certain equipment leased to customers by ARC, and (ii) we, ARAM Seismic Rentals, Inc., a Texas corporation ( *ASRI* ), and ICON entered into a Master Loan and Security Agreement (U.S.) dated as of June 29, 2009 with regard to certain equipment leased to customers by ASRI (collectively, the *ICON Loan Agreements* ). All borrowed indebtedness under the *ICON Loan Agreements* is scheduled to mature on July 31, 2014. We used the proceeds of the secured term loans for working capital and general corporate purposes.

Under the terms of the *ICON Loan Agreements*, ICON advanced \$12.5 million on June 29, 2009 and \$7.5 million on July 20, 2009. The indebtedness under the *ICON Loan Agreements* is secured by first-priority liens in (a) certain of our ARAM seismic rental equipment located in the United States and Canada (subject to certain exceptions), and certain additional and replacement seismic equipment, (b) written leases or other agreements evidencing payment obligations relating to the leasing by ARC or ASRI of this equipment to their respective customers, including their related receivables, (c) the cash or cash equivalents held by such subsidiaries and (d) any proceeds thereof.

The obligations of each of ARC and ASRI under the *ICON Loan Agreements* are guaranteed by us under a Guaranty dated as of June 29, 2009 (the *ICON Guaranty* ). The *ICON Loan Agreements* and the *ICON Guaranty* constitute permitted indebtedness under the Amended Credit Facility.

Under both *ICON Loan Agreements*, interest on the outstanding principal amount will accrue at a fixed interest rate of 15% per annum calculated monthly, and is payable monthly on the first day of each month. Principal and interest are payable, commencing on September 1, 2009, in 60 monthly installments until the maturity date, when all remaining outstanding principal and interest will be due and payable. Pursuant to the *ICON Loan Agreements*, in connection with the closing in June 2009, ARC and ASRI paid ICON a non-refundable upfront fee of \$0.3 million. In addition, ICON will receive an administrative fee equal to 0.5% of the aggregate principal amount of advances under the *ICON Loan Agreements*, payable at the end of each of the first four years during their terms. Inclusive of these additional fees, the effective interest rate on the *ICON loan* was 16.3% as of December 31, 2009.

Beginning on August 1, 2012, and continuing until January 31, 2014, we may prepay the outstanding principal balances of the loans in full by giving ICON 30 days prior written notice and paying a prepayment fee equal to 3.0% of the then-outstanding principal amount of the loans. Commencing on February 1, 2014, the loans may be prepaid in full without payment of any prepayment penalty or fee, subject to our giving ICON 30 days prior written notice.

The *ICON Loan Agreements* contain certain cross-default provisions with respect to defaults under our Amended Credit Facility. Therefore, similar to the current classification of the Amended Credit Facility indebtedness, we have also classified this long-term indebtedness as current.

Assuming that the BGP joint venture transaction is completed as planned, we anticipate that the primary obligation to repay the *ICON indebtedness* will be assumed by the joint venture, and the obligations under the Guaranty will be assumed by a joint venture entity, although it is also expected that we would remain secondarily liable on the Guaranty by backstopping the joint venture entity's guaranty of the primary repayment obligations.

*Amended and Restated Subordinated Seller Note.* As part of the purchase price for the ARAM acquisition, one of our subsidiaries issued an unsecured senior promissory note (the *Senior Seller Note* ) in the original principal amount of \$35.0 million to Maison Mazel Ltd., one of the selling shareholders of ARAM. On December 30, 2008, in connection with other acquisition refinancing transactions that were completed on that date, the *Senior Seller Note* was amended and restated pursuant to an Amended and Restated Subordinated Promissory Note ( the *Amended and Restated Subordinated Note* ) issued to Maison Mazel, the selling shareholder. The principal amount of the *Amended and Restated Subordinated Note* is \$35.0 million and matures on September 17, 2013. We also entered into a guaranty dated December 30, 2008, whereby we guaranteed on a subordinated basis the subsidiary's repayment obligations under the *Amended and Restated Subordinated Note*.



Effective April 9, 2009, (i) the subsidiary transferred the Amended and Restated Subordinated Note to us and we assumed in full the obligations of ION Sub under such note, and (ii) our guaranty of payment of the indebtedness under the Amended and Restated

Subordinated Note was terminated. The subsidiary was also released from its obligations under the Amended and Restated Promissory Note by Maison Mazel.

Interest on the outstanding principal amount under the Amended and Restated Subordinated Note accrues at the rate of fifteen percent (15%) per annum, and is payable quarterly.

The terms of the Amended and Restated Subordinated Note provide that the particular covenants contained in the Amended Credit Agreement (or in any successor agreement or instrument) that restricts our ability to incur additional indebtedness will be incorporated into the Amended and Restated Subordinated Note. However, under the Amended and Restated Subordinated Note, neither Maison Mazel nor any other holder of the Amended and Restated Subordinated Note will have a separate right to consent to or approve any amendment or waiver of the covenant as contained in the Amended Credit Facility.

In addition, we have agreed that if we incur indebtedness under any financing that:

qualifies as Long Term Junior Financing (as defined in the Amended Credit Agreement),

results from a refinancing or replacement of the Amended Credit Facility such that the aggregate principal indebtedness (including revolving commitments) thereunder would be in excess of \$275.0 million, or

qualifies as unsecured indebtedness for borrowed money that is evidenced by notes or debentures, has a maturity date of at least five years after the date of its issuance and results in total gross cash proceeds to us of not less than \$40.0 million,

then we will be obligated to repay in full from the total proceeds from such financing the then-outstanding principal of and interest on the Amended and Restated Subordinated Note.

The indebtedness under the Amended and Restated Subordinated Note is subordinated to the prior payment in full of our Senior Obligations, which are defined in the Amended and Restated Subordinated Note as the principal, premium (if any), interest and other amounts that become due in connection with:

our obligations under the Amended Credit Facility,

our liabilities with respect to capital leases and obligations that qualify as a Sale/Leaseback Agreement (as that term is defined in the Amended Credit Agreement),

guarantees of the indebtedness described above, and

debentures, notes or other evidences of indebtedness issued in exchange for, or in the refinancing of, the Senior Obligations described above, or any indebtedness arising from the payment and satisfaction of any Senior Obligations by a guarantor.

It is contemplated that at the closing of the joint venture transactions, we will obtain sources of financing sufficient to enable us to repay in full the indebtedness under the Amended and Restated Subordinated Note.

The Amended and Restated Subordinated Seller Note contains certain cross-default provisions with respect to defaults and acceleration of indebtedness under our Amended Credit Facility. Therefore, similar to the current classification of the Amended Credit Facility, we have also classified this long-term indebtedness as current.

*Private Placement of 18.5 Million Shares of Common Stock.* On June 4, 2009, we completed the offering and sale of 18,500,000 shares of our common stock in privately-negotiated transactions with several institutional investors. The purchase price per share of common stock sold was \$2.20, representing total gross proceeds of approximately \$40.7 million. The net proceeds from the offering of \$38.2 million were applied, along with \$2.6 million of our cash on hand, to repay in full the outstanding indebtedness under the Bridge Loan Agreement. In accordance with the terms of the stock purchase agreements, we filed with the SEC on June 11, 2009, a registration statement with respect to potential resales of the shares purchased by the investors, which was declared effective on June 19, 2009. The offering and sale by us of the shares of common stock in the private placement were not registered under the Securities Act of 1933, as amended, in reliance on an exemption from the registration requirements of that Act.



*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. On November 28, 2008, Fletcher purported to deliver a second notice to us to increase the Maximum Number to 9,669,434 shares, effective February 1, 2009. On September 15, 2009, Fletcher delivered a notice to us purporting to increase the Maximum Number from 9,669,434 shares to 11,669,434 shares, to become effective on November 19, 2009. We believe that our agreement with Fletcher gives Fletcher the right to issue only one notice to increase the Maximum Number. On November 6, 2009, we filed an action in the Court of Chancery of the State of Delaware seeking a declaration that, under the relevant agreement, Fletcher is permitted to deliver only one notice to increase the Maximum Number and that its purported second notice is legally invalid.

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, 2009, our total outstanding indebtedness (including capital lease obligations) was approximately \$277.4 million, net of a \$8.7 million non-cash debt discount, consisting of approximately \$101.6 million in borrowings under the term loans and \$118.0 million, excluding the non-cash debt discount, in revolving credit indebtedness under the Amended Credit Facility, \$19.1 million of borrowings under our new secured equipment financing and \$35.0 million of outstanding subordinated indebtedness under the Amended and Restated Subordinated Note. The repayment in full in June 2009 of the \$40.0 million bridge loan agreement indebtedness was significant because it represented at that time short-term indebtedness that was scheduled to mature in January 2010. Inclusive of the additional fees (and an upfront fee previously paid of 5.0%), the effective interest rate under the Bridge Loan Agreement was 25.3% at the time of repayment. Currently, under their terms, none of our principal debt facilities mature prior to 2013.

We had disclosed in our Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2009 that, as a result of our entering into the Fifth Amendment, repaying the indebtedness outstanding under the Bridge Loan Agreement and entering into the secured equipment financing transaction in June 2009, we expected that we would remain in compliance with the financial covenants under the Amended Credit Facility and that our cash on hand and cash generated from our operations would be sufficient to fund our operations for the remainder of 2009. However, lower-than-expected sales revenues realized during the third quarter of 2009 resulted in a high likelihood that, as of September 30, 2009, we would not be in compliance with certain of such financial covenants. As a result, we entered into the Sixth Amendment of our Amended Credit Facility, which, among other things, included waivers of the financial covenants contained in the Amended Credit Facility for the fiscal quarters ending September 30, 2009, December 31, 2009,

March 31, 2010 and June 30, 2010. These waivers should enable us to conduct our operations without defaulting under the Amended Credit Facility until the transactions with BGP are completed, which we currently believe will occur in March 2010. Without these waivers, we would not have been in compliance with certain of our financial covenants at September 30, 2009 or December 31, 2009.

As a result of obtaining the \$40.0 million of additional revolving credit indebtedness under the Convertible Notes in October 2009 and entering into the Sixth Amendment, we believe that our liquidity will be sufficient to fund our operations until such time as the transactions with BGP are completed or alternate financing could be obtained.

If the proposed transactions under the Term Sheet with BGP are not completed by March 31, 2010, then the current waivers, upon notice from the lenders after a designated period of time, would cease to be effective and we at that time would likely not be in compliance with certain of the financial covenants contained in the Amended Credit Facility, which could then result in an event of default. As the current waivers cover a period of less than twelve months from December 31, 2009, we have classified our long-term indebtedness under our revolving line of credit and term loan facility under the Amended Credit Facility as current at December 31, 2009. As a result of the cross-default provisions in our secured equipment financing and our amended and restated subordinated seller note, we have also classified these long-term obligations as current at December 31, 2009.

Even though we believe the joint venture with BGP will be completed as planned, there are certain events outside of our control (such as us experiencing a material adverse event or condition that results in a material adverse effect on our business, our prospects or results of operations) that could cause the closing of the joint venture to be delayed, terminated or abandoned. In such event, we would need to seek to amend, or seek additional covenant waivers under, the Amended Credit Facility. Even though the lenders under the Amended Credit Facility have demonstrated their willingness to work with us in amending or providing sufficient waivers to its facility, there can be no assurance that we would be able to obtain any such waivers or amendments in the future. If we were to be unable to obtain such waivers or amendments from the lenders, we would likely seek to replace or pay off the Amended Credit Facility with new secured debt, unsecured debt or equity financing.

As part of the formation of the joint venture, we have been in discussions with various financial institutions (both domestic and international) on the refinancing of our debt. As a result of these discussions and with the recent improvements within the financial markets, we believe that in the unlikely event the joint venture is not completed as planned, we would be able to obtain additional debt or equity financings prior to defaulting on our current debt obligations. However, there also can be no assurance that such debt or equity financing would be available on terms acceptable to us or at all.

For the year ended December 31, 2009, total capital expenditures, including investments in our multi-client data library, were \$92.6 million, and we are projecting capital expenditures for the year 2010 to be between \$100 million to \$110 million. If there continues to be weak demand for our products and services, we would expect continued reduced levels of capital expenditures, which may, in turn, lessen our requirements for working capital. Of the total projected 2010 capital expenditures, we are estimating that approximately \$90 million to \$100 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 \$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 the year ended December 31, 2009, compared to \$111.7 million for the year ended December 31, 2008. The decrease in net cash provided in our operating activities was primarily due to decreased accrued liabilities and accounts payable. This decrease was partially offset by a decrease in our inventories, a decrease in accounts receivable resulting from lower sales levels and increased collections on our receivables and a decrease in our unbilled receivables due to lower sales levels and the timing of the invoicing of those sales. We are continuing to adjust our manufacturing and purchasing plans in order to focus on continuing to make sales from the remaining inventory and thereby further reduce current levels of inventory.

Cash and cash equivalents were \$35.2 million at December 31, 2008, a decrease of \$1.2 million compared to December 31, 2007. Net cash provided by operating activities was \$111.7 million for the year ended December 31, 2008, compared to \$93.8 million for the year ended December 31, 2007. The increase in net cash provided in our operating activities was primarily due to increased accrued liabilities and accounts payable as well as decreased accounts receivable resulting from increased collections in 2008. This increase was partially offset by increased investment in our inventories. We have adjusted our manufacturing and purchasing plans in order that we can focus on making sales from this inventory in order to reduce our current levels of inventory.

**Cash Flow from Investing Activities**

Net cash flow used in investing activities was \$91.6 million for the year ended December 31, 2009, compared to \$354.6 million for the year ended December 31, 2008. The principal uses of our cash for investing activities during the year ended December 31, 2009 were a \$89.6 million investment in our multi-client data library and \$3.0 million of equipment and rental equipment purchases.

Net cash flow used in investing activities was \$354.6 million for the year ended December 31, 2008, compared to \$76.0 million for the year ended December 31, 2007. The principal uses of our cash for investing activities during the year ended December 31, 2008 were \$242.8 million expended to acquire ARAM in September 2008, \$17.5 million of equipment and rental equipment purchases and a \$110.4 million investment in our multi-client data library. This was partially offset by \$10.7 million of cash we acquired in the ARAM acquisition and proceeds from the sale of assets and rental assets of \$5.4 million.

**Cash Flow from Financing Activities**

Net cash flow provided by financing activities was \$19.7 million for the year ended December 31, 2009, compared to \$244.3 million for the year ended December 31, 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 Amended Credit 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 the twelve months ended December 31, 2009.

Net cash flow provided by financing activities was \$244.3 million for the year ended December 31, 2008, compared to \$0.8 million for the year ended December 31, 2007. The net cash flow provided by financing activities during 2008 was primarily related to \$160.3 million of net proceeds from acquisition debt we borrowed to purchase ARAM, \$66.0 million of net borrowings on our revolving credit facility, \$35.0 million in proceeds from the issuance and sale of our Series D-3 Preferred Stock in February 2008 and \$6.3 million in proceeds related to the exercise of stock options and stock purchases by our employees under our employee plans. This cash inflow was partially offset by scheduled principal payments of \$18.1 million on our notes payable and capital lease obligations and \$3.9 million in cash dividends paid on our outstanding Series D-1, Series D-2 and Series D-3 Preferred Stock.

**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.

**Future Contractual Obligations**

The following table was compiled based upon the current presentation of our debt in our balance sheet and not on the original terms and maturity dates of the respective debt instruments. The table below also does not include the non-cash debt discount of \$8.7 million but instead lists the contractual principal amounts since those amounts will be the principal paid at the termination of the contractual obligations. The following table sets forth estimates of future payments of our consolidated contractual obligations, as of December 31, 2009 (in thousands):

<b>Contractual Obligations</b>	<b>Total</b>	<b>Less Than 1 Year</b>	<b>1-3 Years</b>	<b>3-5 Years</b>	<b>More Than 5 Years</b>
Notes payable and long-term debt	\$ 279,562	\$ 275,905	\$ 1,324	\$ 1,798	\$ 535
Interest on notes payable and long-term debt obligations	16,628	15,544	713	353	18
Equipment capital lease obligations	6,475	3,884	2,591		
Operating leases	46,330	12,603	18,469	8,018	7,240



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Product warranty	5,088	5,088				
Purchase obligations	21,430	21,430				
Total	\$ 375,513	\$ 334,454	\$ 23,097	\$ 10,169	\$ 7,793	

The long-term debt and lease obligations at December 31, 2009 included \$118.0 million, excluding the \$8.7 million non-cash debt discount, of revolving credit indebtedness and \$101.6 million under our five-year term loan, in each case incurred under our Amended Credit Facility and maturing in 2013. The remaining amount of these obligations consists of \$35.0 million under our Amended and Restated Subordinated Note, \$19.1 million under the ICON Loan Agreements, \$4.2 million indebtedness related to our Stafford, Texas facility sale-leaseback arrangement and \$1.7 million of short-term notes payable. The \$6.5 million of capital lease obligations relates to ARAM and GXT financing of computer and other equipment purchases. The interest on notes payable and long-term debt obligations in the table above are calculated based upon the current presentation of our debt in our balance sheet and not on the original terms and maturity dates of the respective debt instruments. Using the original terms and maturity dates, the interest expense would be \$24.8 million for 1-3 years and \$8.1 million for 3-5 years. See *Revolving Line of Credit and Term Loan Facilities* above and Note 12 *Notes Payable, Long-term Debt and Lease Obligations*.

Because we may prepay our outstanding revolving credit indebtedness under the Amended Credit Facility at any time, the interest expense is not included in the above table. However, if the outstanding principal of \$118.0 million as of December 31, 2009 was not repaid in 2010, the interest expense would be \$8.0 million using the interest rate as of December 31, 2009. For further discussion of our notes payable, long-term debt and capital lease obligations, see Note 12 *Notes Payable, Long-term Debt and Lease Obligations*.

The non-cash liability associated with fair value of the Warrant of \$44.8 million at December 31, 2009 was not reflected in the above table as its settlement upon exercise is only through issuance of our common shares and does not provide for cash settlement. See further discussion of the accounting impact of the Warrant at *Critical Accounting Policies and Estimates - Fair Value of the Warrant*.

The operating lease commitments at December 31, 2009 relate to our leases for certain equipment, offices, processing centers, and warehouse space under non-cancelable operating leases.

The liability for product warranties at December 31, 2009 relate to the estimated future warranty expenditures associated with our products. Our warranty periods generally range from 30 days to three years from the date of original purchase, depending on the product. We record an accrual for product warranties and other contingencies at the time of sale, which is when the estimated future expenditures associated with those contingencies become probable and the amounts can be reasonably estimated. We generally receive warranty support from our suppliers regarding equipment they manufactured. Our purchase obligations primarily relate to our committed inventory purchase orders for which deliveries are scheduled to be made in 2010.

Dividends on our Series D Preferred Stock are payable quarterly and must be paid in cash. In 2009, we paid \$3.5 million in dividends on our Series D Preferred Stock. The dividend rate was 5.0% at December 31, 2009. See *Liquidity and Capital Resources* above.

Upon the completion of the joint venture transactions, the ICON Loan Agreements and all outstanding amounts owed under the agreements will be assumed by the joint venture. In addition, we intend to repay the \$35.0 million under our Amended and Restated Subordinated Note and the \$118.0 million of revolving credit indebtedness from the proceeds of the joint venture transaction. Additionally, as of December 31, 2009, approximately \$16.9 million of operating leases, product warranty and purchase obligations related to businesses that will be assumed by the joint venture upon its closing.

#### **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 and Product Warranty.* We derive revenue from the sale and rental of (i) acquisition systems and other seismic equipment within our Land Imaging Systems and Marine Imaging Systems segments; (ii) imaging services, multi-client surveys and licenses of off-the-shelf data libraries within our ION Solutions segment; and (iii) navigation, survey and quality control software systems within our Data Management Solutions segment.

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.

Our Land Imaging Systems segment receives rental income from the rental of seismic equipment. The rental is in the form of operating leases as the lease terms range from a couple of days to several months. Rental revenue is recognized on a straight line basis over the term of the operating lease.

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.

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.

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*, and allocate revenue to each element based upon its vendor-specific objective evidence of fair value, so long as each such element meets the criteria for treatment as a separate unit of accounting. We limit the amount of revenue recognized for delivered elements to the amount that is not contingent on the future delivery of products or services. We generally do not grant return or refund privileges to our customers. When undelivered elements, such as training courses and engineering services, are inconsequential or perfunctory and not essential to the functionality of the delivered elements, we recognize revenue on the total contract and make a provision for the costs of the incomplete elements.

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*, because in those systems the software is more than incidental to the arrangement as a whole. Following the requirements of ASC 985-605 *Applicability of AICPA Statement of Position 97-2 to Non-Software Deliverables in an Arrangement Containing More-Than-Incidental*

*Software*, we consider the hardware within these systems to be a software-related item because the software is essential to the hardware's functionality. As a result, we recognize revenue from sales of navigation, survey and quality control 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 and software-related hardware 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. 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 of fair value of the element or, if vendor-specific objective evidence 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 these time-based licenses, we recognize revenue ratably over the contract term, which is generally two to five years.

We generally warrant that our manufactured equipment will be free from defects in workmanship, material and parts. Warranty periods generally range from 30 days to three years from the date of original purchase, depending on the product. We provide for estimated warranty as a charge to costs of sales at the time of sale.

*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 the years ended December 31, 2009, 2008 and 2007, we capitalized, as part of our multi-client data library \$3.8 million, \$5.4 million, and \$4.3 million, respectively, of direct internal processing costs.

Our method of amortizing the costs of a multi-client data library available for commercial sale is the greater of (i) the percentage of actual revenue to the total estimated revenue multiplied by the total cost of the project (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. The total amortization period of four years represents the minimum period over which benefits from these surveys are expected to be derived. 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 2009, an increase in 10% in the sales forecasts of all surveys would have decreased our amortization expense by approximately \$3.2 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*, record an impairment charge with respect to such data. There were no impairment charges during 2009 and 2008.

*Fair Value of the Warrant.* We issued the Warrant to BGP as part of our proposed joint venture with them, which included BGP arranging for the Bank of China to join as a new lender to our Amended Credit Facility. The Warrant is required to be accounted for at its fair value with changes in its fair value being recognized below income from operations in the period of change. The fair value of the Warrant was determined using a Black-Scholes model that the value of the features based upon certain key inputs. The key input for the Black-Scholes model is the current market price of our common stock, the yield on our common stock dividend payments (0%), risk-free interest rates, the expected term (March 31, 2010) and our stock's historical and implied volatility. The most significant inputs are the current market price of our common stock. Holding all other inputs constant, a 10% increase or decrease in our common stock price would result in an increase or decrease in the fair value of the warrant liability of \$8.4 million and (\$8.3 million), respectively.

*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, 2009 was \$30.6 million compared to \$24.1 million at December 31, 2008. The majority of the increase in our reserves for excess and obsolete inventory in 2009 related to our Marine Imaging Systems mature acquisition systems and source products. The increase in our reserves for excess and obsolete inventories in 2008 primarily related to our analog land acquisition systems. As a result of the integration of ARAM into our Land Imaging Systems segment, at the end of 2008, we evaluated and determined that market values of certain of our mature analog products were lower than their then-current book values.

*Goodwill and Other Intangible Assets.* For purposes of performing the impairment test for goodwill as required by ASC 350, we established the following reporting units: Land Imaging Systems (includes ARAM), Sensor Geophone, Marine Imaging Systems, Data Management Solutions, and ION 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.

ASC 350 requires us to compare the fair value of our reporting units to their carrying amount on an annual basis to determine if there is potential goodwill impairment. If the fair value of the reporting unit is less than its carrying value, an impairment loss is recorded to the extent that the fair value of the goodwill within the reporting units is less than its carrying value.

We completed our annual goodwill impairment testing as of December 31, 2008 and determined that all of the goodwill within our Land Imaging Systems (including ARAM) and ION Solutions reporting units were impaired. As a result, we recorded a goodwill impairment charge of \$242.2 million. The decrease in these reporting units' fair value was primarily driven by the overall economic and financial crisis and the decrease in the current demand for our land analog acquisition products, especially within North America and Russia.

We completed our annual goodwill impairment testing as of December 31, 2009 and determined that no goodwill was impaired. Our remaining goodwill as of December 31, 2009 was comprised of \$27.0 million in our Marine Imaging Systems and \$25.1 million in our Data Management Solutions reporting units. Our 2009 annual impairment test indicated that the fair value of these two reporting units significantly exceeded their carrying values by over 50% for each business unit. The analyses are based upon the operating forecasts approved annually by the Board of Directors, 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, trade names and non-compete agreements 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 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 the years ended December 31, 2009 and 2008, we determined that certain of the intangible assets (customer relationships, trade names and non-compete agreements) associated with our ARAM acquisition 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.

*Accounts and Notes Receivable Collectibility.* We consider current information and circumstances regarding our customers' ability to repay their obligations, such as the length of time the receivable balance is outstanding, the customers' credit worthiness and historical experience, and consider an account or note impaired when it is probable that we will be unable to collect all amounts due. When we consider a note receivable as impaired, we measure the amount of the impairment based on the present value of expected future cash flows or the fair value of collateral. We include impairment losses (recoveries) in our allowance for doubtful accounts and notes through an increase (decrease) in bad debt expense.



We record interest income on investments in notes receivable on the accrual basis of accounting. We do not accrue interest on impaired loans where collection of interest according to the contractual terms is considered doubtful. Among the factors we consider in making an evaluation of the collectibility of interest are: (i) the status of the loan; (ii) the fair value of the underlying collateral; (iii) the financial condition of the borrower; and (iv) anticipated future events.

*Stock-Based Compensation.* We account for stock based compensation under the recognition provisions of ASC 718 *Share-Based Payment.* 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 the twelve months ended December 31, 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 the current year and were therefore recorded in 2009.

In 2009, 2008 and 2007, we recognized \$12.7 million, \$8.3 million and \$6.9 million, respectively, of stock-based compensation expense related to our employees' outstanding stock-based awards. The total expense in 2009 was comprised of \$1.2 million reflected in cost of sales, \$0.8 million in research and development expense, \$1.5 million in marketing and sales expense, and \$9.2 million (including the \$3.3 million stock-based compensation charge described above) in general and administrative expense. In addition to the share-based compensation expense related to the Company's plans, we recorded \$0.8 million of share-based compensation expense in 2009 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**

In October 2009, the Financial Accounts Standards Board (FASB) issued Accounting Standard Update (ASU) No. 2009-13 on ASC 605, *Revenue Recognition - Multiple Deliverable Revenue Arrangements - a consensus of the FASB Emerging Issues Task Force* (ASU 2009-13). ASU 2009-13 amended guidance related to multiple-element arrangements which requires an entity to allocate arrangement consideration at the inception of an arrangement to all of its deliverables based on their relative selling prices. The consensus eliminates the use of the residual method of allocation and requires the relative-selling-price method in all circumstances. All entities must adopt the guidance no later than the beginning of their first fiscal year beginning on or after June 15, 2010. Entities may elect to adopt the guidance through either prospective application for revenue arrangements entered into, or materially modified, after the effective date or through retrospective application to all revenue arrangements for all periods presented. We are currently evaluating the impact, if any, of ASU 2009-13 on our financial position and results of operations.

In October 2009, the FASB issued ASU No. 2009-14 on ASC 985, *Certain Revenue Arrangements That Include Software Elements* (ASU 2009-14). ASU 2009-14 amended guidance that is expected to significantly affect how entities account for revenue arrangements that contain both hardware and software elements. As a result, many tangible products that rely on software will be accounted for under the revised multiple-element arrangements revenue recognition guidance, rather than the software revenue recognition guidance. The revised guidance must be adopted by all entities no later than fiscal years beginning on or after June 15, 2010. An entity must select the same transition method and same period for the adoption of both this guidance and the revisions to the multiple-element arrangements guidance noted above. We are currently evaluating the impact, if any, of ASU 2009-14 on our financial position and results of operations.

In August 2009, the FASB issued ASU 2009-05, *Fair Value Measurements and Disclosures, Measuring Liabilities at Fair Value (Topic 820)* (ASU 2009-05). ASU 2009-05 provides additional clarification on valid valuation techniques using acquired prices in active markets for identical liabilities. The provisions for ASU 2009-05 were effective for interim period ending after August 2009. The adoption of ASU 2009-05 did not have a material impact to the company's financial position, results of operations or cash flows.

In June 2009, the FASB issued ASC 105-10, *The FASB Accounting Standards Codification and the Hierarchy of Generally Accepted Accounting Principles - a replacement of FASB Statement No. 162* (ASC 105-10). ASC 105-10 is the single, official source of authoritative, nongovernmental GAAP, other than guidance issued by the SEC and is effective for interim or annual financial periods ending after September 15, 2009. We adopted this statement on September 15, 2009 and have updated all existing GAAP references to the new codification.

In April 2009, the FASB issued ASC 825-10-65-1, *Interim Disclosures about Fair Value of Financial Instruments* (ASC 825-10-65-1). ASC 825-10-65-1 provides additional clarification on interim disclosures and require public companies to disclose the fair value of financial instruments whenever companies publish interim financial summary information. The provisions for ASC 825-10-65-1 were effective for interim periods ending after June 15, 2009 with earlier adoption permitted. We adopted ASC 825-10-65-1 on the effective date. The adoption of ASC 825-10-65-1 did not have a material impact to our financial position, results of operation or cash flows.

In April 2009, the FASB issued ASC 320-10, *The Meaning of Other-Than-Temporary Impairment and its Application to Certain Investments* (ASC 320-10). ASC 320-10 provides additional guidance designed to create greater clarity and consistency in accounting for and presenting impairment losses on securities. This issuance changes (i) the method for determining whether an other-than-temporary impairment exists for debt securities and for cost method investments; and (ii) the amount of an impairment charge to be recorded in earnings. ASC 320-10 was effective for interim and annual periods ending after June 15, 2009. The Company has determined that it is not practicable to estimate the fair value of its cost method investments, as quoted market prices are not available. During 2009, the Company's investment in Colibrys Ltd. was determined to be impaired and was subsequently written off. The aggregate carrying amount of cost method investments was \$0.5 million at December 31, 2009, and was included within Other Assets. The adoption of ASC 320-10 did not have a material impact to our financial position, results of operation or cash flows.

In September 2008, the FASB issued ASC 260-10, *Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities* (ASC 260-10), which was effective for fiscal years beginning after December 15, 2008. ASC 260-10 would require unvested share-based payment awards containing non-forfeitable rights to dividends or dividend equivalents (whether paid or unpaid) to be included in the computation of basic earnings per share according to the two-class method. The adoption of ASC 260-10 did not have a material impact on our earnings per share computation.

#### **Credit and Sales Risks**

No single customer represented 10% or more of our consolidated net revenues for the years ended December 31, 2009, 2008 and 2007; however, our top five customers in total represented approximately 29%, 30% and 31%, respectively of our consolidated net revenues. The loss of any significant customers or deterioration in our relationship with either customer could have a material adverse effect on our results of operations and financial condition.

For the twelve months ended December 31, 2009, we recognized \$92.8 million of sales to customers in Europe, \$67.2 million of sales to customers in Asia Pacific, \$25.4 million of sales to customers in Africa, \$42.4 million of sales to customers in the Middle East, \$34.3 million of sales to customers in Latin American countries, and \$4.7 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 the years ended December 31, 2009 and 2008, international sales comprised 64% and 60%, respectively, of total net revenues. In recent years, the CIS and certain Latin American countries have experienced economic problems and uncertainties. However, given the recent market downturn, more countries and areas of the world have also begun to experience 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 collectibility 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**

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 8.1% of our outstanding common stock as of February 22, 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 accounting, 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, 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 2009, we paid Laitram a total of approximately \$4.0 million, which consisted of approximately \$3.2 million for manufacturing services, \$0.7 million for rent and other pass-through third party facilities charges, and \$0.1 million for other services. For the 2008 and 2007 fiscal years, we paid Laitram a total of approximately \$4.3 million and \$4.9 million 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 part of our ongoing business, we do not participate in transactions that generate material relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities (SPEs) that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. As a result, we have no material off-balance sheet arrangements.

### 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, foreign currency exchange rates and changes in our common stock price.

*Interest Rate Risk.* On December 31, 2009, we had outstanding total indebtedness of approximately \$277.4 million, net of a \$8.7 million non-cash debt discount associated with our \$40.0 million in Convertible Notes, and including capital lease obligations. Of that indebtedness, approximately \$219.6 million accrues interest under rates that fluctuate based upon market rates plus an applicable margin. Both the \$101.6 million in term loan indebtedness and the \$118.0 million, excluding the non-cash debt discount, in total revolving credit indebtedness outstanding under the Amended Credit Facility accrued interest using LIBOR-based interest rate of 6.7% per annum. The average effective interest rate for the quarter ended December 31, 2009 under the LIBOR-based rates for both the term loan indebtedness and the revolving credit loans were 6.2%. 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 \$2.2 million.

The fair market value of our outstanding notes payable and long-term debt was determined to be \$286.0 million at December 31, 2009. Approximately \$118.0 million of our revolving credit borrowings and \$101.6 million of our Term Loan were re-negotiated in October 2009. Additionally, the debt under the ICON Loan Agreements totaling \$19.1 million at December 31, 2009 was negotiated in June 2009. As a result, a majority of our principal debt facilities were re-negotiated within the fourth quarter of 2009 using current market rates. Also, a majority of our indebtedness is variable-rate, which approximates fair value.

*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 Canadian dollars (CAD). 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, Canada, the Netherlands, China, Venezuela, India, 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, 2009 reflected approximately \$38.8 million of net working capital related to our foreign subsidiaries. A majority of our foreign net working capital is within Canada and the United Kingdom. The subsidiaries in those countries receive their income and pay their expenses primarily in Canadian dollars (CDN) and pounds sterling (GBP), respectively. To the extent that transactions of these subsidiaries are settled in CDN or GBP, 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.

*Fair Value of the Warrant.* The Warrant issued to BGP related to our proposed joint venture, which included BGP arranging for the Bank of China to join as a new lender to our Amended Credit Facility, is required to be accounted for at its fair value. The value of the Warrant was determined using a Black-Scholes model. The key input for the

Black-Scholes model is the current market price of

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our common stock, the yield on our common stock dividend payments (0%), risk-free interest rates, the expected term (March 31, 2010) and our stock's historical and implied volatility. Holding all other inputs constant, a 10% increase or decrease in our common stock price would result in an increase or decrease in the fair value of the warrant liability of \$8.4 million and (\$8.3 million), respectively.

**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. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives.

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, 2009. 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, 2009.

(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, 2009 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, 2009.



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.

*Remediation of Material Weakness in Internal Control over Financial Reporting.* Under Rule 12b-2 under the Exchange Act, a material weakness is defined as a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of the Company's annual or interim financial statements will not be prevented or detected on a timely basis. In October 2009, a material weakness was identified in the design and operation of controls surrounding revenue recognition, which resulted in a restatement to our condensed consolidated financial statements as of and for the three and six months ended June 30, 2009. This revenue recognition error resulted from the fact that the sales records in the possession of our management at June 30, 2009 did not contain all relevant documentation relating to the sale of our FireFly land seismic data acquisition system and related hardware and components in China. The discovery of the existence of the additional documentation relating to the sale in question occurred during the course of due diligence procedures that had been performed in connection with our proposed joint venture and related transactions with BGP. In connection with this due diligence process, our employees discovered certain documentation irregularities regarding the sale of the FireFly system, including that a portion of the documentation reflecting the terms for the sale had not been made available to our management for assessment with respect to the recording and reporting of the sale.

As a result, we implemented the following procedures to remediate this material weakness:

We implemented a quarterly certification requiring our global sales force to confirm that all documentation related to sales transactions have been provided to Company management.

Global sales personnel (including China) no longer have the authority to enter into sales contracts without the review and approval of designated corporate management; and

We provided further training and education on the Company's revenue recognition policies and procedures and will continue to provide this training on an annual basis to our global sales force.

Because of significant efforts expended to remediate the material weaknesses described above, management believes that, as of December 31, 2009, the material weakness that existed as of June 30, 2009 had been fully remediated.

(c) *Changes in Internal Control.* Other than as described above, there was not any change in our internal control over financial reporting that occurred during the fourth quarter of fiscal 2009 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

We believe that the actions taken to remediate these weaknesses and the resulting improvement in controls have strengthened our disclosure controls and procedures, as well as 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' internal control over financial reporting as of December 31, 2009, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). ION Geophysical Corporation and subsidiaries' 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 ION Geophysical Corporation and subsidiaries' 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, 2009, 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, 2009 and 2008 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, 2009 of ION Geophysical Corporation and subsidiaries and our report dated March 1, 2010 expressed an unqualified opinion thereon.

/s/ Ernst and Young LLP

Houston, Texas

March 1, 2010

**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 26, 2010 (the 2010 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 2010 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 2010 Proxy Statement, under *Item 1 Section 16(a) Beneficial Ownership Reporting Compliance*, 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, Related Transactions and Director Independence**

Reference is made to the information appearing in the 2010 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 2010 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 Designation of Series D-3 Cumulative Convertible Preferred Stock dated February 20, 2008, filed on February 22, 2008 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 4.6 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.
- 4.7 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.
- 4.8 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.
- 4.9 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.
- 4.10 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.
- 4.11 Warrant to Purchase Shares of the Common Stock of ION Geophysical Corporation dated October 27, 2009, issued by ION Geophysical Corporation to BGP Inc., China National Petroleum Corporation, filed on October 29, 2009 as Exhibit 4.1 to the Company's Current Report on Form 8-K/A and incorporated

herein by reference.

- 4.12 Convertible Promissory Note, dated October 23, 2009, issued by ION Geophysical Corporation to the Bank of China, New York Branch, filed on October 29, 2009 as Exhibit 4.2 to the Company's Current Report on Form 8-K/A and incorporated herein by reference.
- 4.13 Convertible Promissory Note, dated October 23, 2009, issued by ION International S.à r.l. to the Bank of China, New York Branch, filed on October 29, 2009 as Exhibit 4.3 to the Company's Current Report on Form 8-K/A 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 Fourth Amended and Restated 2004 Long-Term Incentive Plan, filed as Appendix A to the definitive proxy statement for the 2008 Annual Meeting of Stockholders of ION Geophysical Corporation, filed on April 21, 2008, 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.
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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.
- \*\*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 Consulting Services Agreement dated as of October 19, 2006, by and between GX Technology Corporation and Michael K. Lambert, filed on October 24, 2006 as Exhibit 10.2 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- \*\*10.39 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.
- \*\*10.40 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.
- \*\*10.41 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.
- 10.42 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.
- 10.43 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.
- 10.44 Amended and Restated Share Purchase Agreement, dated as of September 17, 2008, by and among ION Geophysical Corporation, Aram Systems Ltd., Canadian Seismic Rentals Inc. and the Sellers party thereto, filed on September 23, 2008 as Exhibit 2.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 10.45 Assignment Agreement dated as of December 30, 2008 by and among 3226509 Nova Scotia Company, ARAM Systems Ltd., Canadian Seismic Rentals Inc., Maison Mazel Ltd. and ION Geophysical Corporation, filed on January 5, 2009 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 10.46 Release Agreement dated as of December 30, 2008 by and among ION Geophysical Corporation, 3226509 Nova Scotia Company, ARAM Systems Ltd., Canadian Seismic Rentals Inc., Maison Mazel Ltd. and the Sellers party thereto, filed on January 5, 2009 as Exhibit 10.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 10.47 Amended and Restated Subordinated Promissory Note dated December 30, 2008, made by 3226509 Nova Scotia Company in favor of Maison Mazel Ltd., filed on January 5, 2009 as Exhibit 10.6 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- \*\*10.48 ION Stock Appreciation Rights Plan dated November 17, 2008.
- 10.49 Form of Purchase Agreement dated as of June 1, 2009, for the offering and sale of 18,500,000 shares of common stock of ION Geophysical Corporation in privately-negotiated transactions to accredited investors (as defined in Rule 501 under the Securities Act of 1933, as amended), by and between ION

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Geophysical Corporation and the Purchasers named therein, filed on August 6, 2009 as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2009, and incorporated herein by reference.

- 10.50 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.
- 10.51 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.
- \*10.52 Term Sheet dated as of October 23, 2009 by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation.
- \*10.53 Warrant Issuance Agreement dated as of October 23, 2009 by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation.
- \*10.54 Registration Rights Agreement dated as of October 23, 2009 by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation.

- \*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 March 1, 2010.

## 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, 2009, 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.

<b>Name</b>	<b>Capacities</b>	<b>Date</b>
/s/ ROBERT P. PEEBLER  Robert P. Peebler	Chief Executive Officer and Director (Principal Executive Officer)	March 1, 2010
/s/ R. BRIAN HANSON  R. Brian Hanson	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	March 1, 2010
/s/ MICHAEL L. MORRISON  Michael L. Morrison	Vice President and Corporate Controller (Principal Accounting Officer)	March 1, 2010
/s/ JAMES M. LAPEYRE, JR.  James M. Lapeyre, Jr.	Chairman of the Board of Directors and Director	March 1, 2010
/s/ BRUCE S. APPELBAUM  Bruce S. Appelbaum	Director	March 1, 2010

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/s/ THEODORE H. ELLIOTT, JR.	Director	March 1, 2010
Theodore H. Elliott, Jr.		
/s/ G. THOMAS MARSH	Director	March 1, 2010
G. Thomas Marsh		
/s/ FRANKLIN MYERS	Director	March 1, 2010
Franklin Myers		
/s/ S. JAMES NELSON, JR.	Director	March 1, 2010
S. James Nelson, Jr.		
/s/ JOHN N. SEITZ	Director	March 1, 2010
John N. Seitz		

<b>Name</b>	<b>Capacities</b>	<b>Date</b>
/s/ NICHOLAS G. VLAHAKIS	Director	March 1, 2010
Nicholas G. Vlahakis	76	

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**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES  
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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, 2009 and 2008, 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, 2009. 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, 2009 and 2008, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2009, 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, 2009, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 1, 2010, expressed an unqualified opinion thereon.

/s/ Ernst and Young LLP

Houston, Texas

March 1, 2010

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**

	December 31, 2009                      2008	
	(In thousands, except share data)	
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 16,217	\$ 35,172
Restricted cash	1,469	6,610
Accounts receivable, net	111,046	150,565
Current portion notes receivable, net	13,367	11,665
Unbilled receivables	21,655	36,472
Inventories	202,601	262,519
Deferred income tax asset	6,001	4,382
Prepaid expenses and other current assets	23,145	16,004
 Total current assets	 395,501	 523,389
Notes receivable		4,438
Deferred income tax asset	26,422	11,757
Property, plant, equipment and seismic rental equipment, net	78,555	59,129
Multi-client data library, net	130,705	89,519
Goodwill	52,052	49,772
Intangible assets, net	61,766	107,443
Other assets	3,185	15,984
 Total assets	 \$ 748,186	 \$ 861,431
 <b>LIABILITIES AND STOCKHOLDERS EQUITY</b>		
Current liabilities:		
Notes payable and current maturities of long-term debt	\$ 271,132	\$ 38,399
Accounts payable	40,189	94,586
Accrued expenses	65,893	77,438
Accrued multi-client data library royalties	18,714	28,044
Fair value of the warrant	44,789	
Deferred revenue	13,802	17,767
 Total current liabilities	 454,519	 256,234
Long-term debt, net of current maturities	6,249	253,510
Non-current deferred income tax liability	1,262	22,713
Other long-term liabilities	3,688	3,904
 Total liabilities	 465,718	 536,361
 Commitments and contingencies		
 Stockholders' equity:		

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Cumulative convertible preferred stock	68,786	68,786
Common stock, \$.01 par value; authorized 200,000,000 shares; outstanding 118,688,702 and 99,621,926 shares at December 31, 2009 and 2008, respectively, net of treasury stock	1,187	996
Additional paid-in capital	666,928	619,198
Accumulated deficit	(411,548)	(301,489)
Accumulated other comprehensive income (loss)	(36,320)	(55,859)
Treasury stock, at cost, 849,539 and 848,422 shares at December 31, 2009 and 2008, respectively	(6,565)	(6,562)
Total stockholders' equity	282,468	325,070
Total liabilities and stockholders' equity	\$ 748,186	\$ 861,431

See accompanying Notes to Consolidated Financial Statements.

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**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

	Years Ended December 31,		
	2009	2008	2007
	(In thousands, except per share data)		
Product revenues	\$ 237,664	\$ 417,511	\$ 537,691
Service revenues	182,117	262,012	175,420
 Total net revenues	 419,781	 679,523	 713,111
 Cost of products	 165,923	 289,795	 386,849
Cost of services	121,720	181,980	119,679
 Gross profit	 132,138	 207,748	 206,583
 Operating expenses:			
Research, development and engineering	44,855	49,541	49,965
Marketing and sales	34,945	47,854	43,877
General and administrative	72,510	70,893	48,847
Impairment of goodwill and intangible assets	38,044	252,283	
 Total operating expenses	 190,354	 420,571	 142,689
 Income (loss) from operations	 (58,216)	 (212,823)	 63,894
Interest expense, including amortization of a non-cash debt discount	(35,671)	(12,723)	(6,283)
Interest income	1,721	1,439	1,848
Fair value adjustment of the warrant	(29,401)		
Impairment of cost method investment	(4,454)		
Other income (expense)	(4,023)	4,200	(3,992)
 Income (loss) before income taxes	 (130,044)	 (219,907)	 55,467
Income tax (benefit) expense	(19,985)	1,131	12,823
 Net income (loss)	 (110,059)	 (221,038)	 42,644
Preferred stock dividends and accretion	3,500	3,889	2,388
Preferred stock beneficial conversion charge		68,786	
 Net income (loss) applicable to common shares	 \$ (113,559)	 \$ (293,713)	 \$ 40,256
 Earnings per share:			
Basic net income (loss) per share	\$ (1.03)	\$ (3.06)	\$ 0.49
Diluted net income (loss) per share	\$ (1.03)	\$ (3.06)	\$ 0.45

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Weighted average number of common shares  
outstanding:

Basic	110,516	95,887	81,941
Diluted	110,516	95,887	97,321

See accompanying Notes to Consolidated Financial Statements.

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**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	<b>Years Ended December 31</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
	<b>(In thousands)</b>		
Cash flows from operating activities:			
Net income (loss)	\$ (110,059)	\$ (221,038)	\$ 42,644
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization (other than multi-client library)	47,911	33,052	26,767
Amortization of multi-client data library	48,449	80,532	37,662
Stock-based compensation expense related to stock options, nonvested stock, and employee stock purchases	12,671	8,306	6,875
Bad debt expense	3,528	4,852	437
Amortization of debt discount	6,732	816	
Fair value adjustment of the warrant	29,401		
Fair value adjustment of preferred stock redemption features		(1,215)	
Impairment of goodwill and intangible assets	38,044	252,283	
Impairment of cost method investment	4,454		
Deferred income tax	(38,150)	(17,549)	2,960
Excess tax benefit from stock-based compensation		(328)	
Profit on sale of rental assets	(524)	(3,190)	
Change in operating assets and liabilities:			
Accounts and notes receivable	41,936	37,673	(14,348)
Unbilled receivables	14,817	(14,084)	6,211
Inventories	18,582	(89,998)	(11,270)
Accounts payable, accrued expenses and accrued royalties	(72,140)	46,160	8,674
Deferred revenue	(4,188)	(6,088)	(16,203)
Other assets and liabilities	10,522	1,531	3,351
Net cash provided by operating activities	51,986	111,715	93,760
Cash flows from investing activities:			
Purchase of property, plant and equipment	(2,966)	(17,539)	(11,375)
Investment in multi-client data library	(89,635)	(110,362)	(64,279)
Business acquisition		(242,835)	
Cash of acquired business		10,677	
Proceeds from the sale of fixed assets and rental equipment	1,972	5,434	386
Increase in cost method investments	(59)		(700)
Other investing activities	(950)		
Net cash used in investing activities	(91,638)	(354,625)	(75,968)
Cash flows from financing activities:			
Borrowings under revolving line of credit	77,000	235,000	175,000
Repayments under revolving line of credit	(25,000)	(169,000)	(175,000)
Net proceeds from issuance of debt	19,218	160,308	

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Net proceeds from issuance of stock	38,220		
Payments on notes payable and long-term debt	(81,517)	(18,082)	(8,424)
Costs associated with debt amendments	(4,630)		
Issuance of preferred stock		35,000	5,000
Payment of preferred dividends	(3,500)	(3,889)	(2,375)
Proceeds from employee stock purchases and exercise of stock options	286	6,323	8,038
Restricted stock cancelled for employee minimum income taxes	(345)	(1,660)	(1,314)
Excess tax benefit from stock-based compensation		328	
Purchases of treasury stock	(3)	(39)	(117)
Net cash provided by financing activities	19,729	244,289	808
Effect of change in foreign currency exchange rates on cash and cash equivalents	968	(2,616)	753
Net increase (decrease) in cash and cash equivalents	(18,955)	(1,237)	19,353
Cash and cash equivalents at beginning of period	35,172	36,409	17,056
Cash and cash equivalents at end of period	\$ 16,217	\$ 35,172	\$ 36,409

See accompanying Notes to Consolidated Financial Statements.

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**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 Other Comprehensive Income		Treasury Stock	Total Stockholders Equity
						Deficit	(Loss)		
	Shares	Amount	Shares	Amount					
Balance at January 1, 2007		\$	80,123,486	\$ 810	\$ 493,605	\$ (123,095)	\$ 4,859	\$ (6,511)	\$ 369,668
Comprehensive income:									
Net income						42,644			42,644
Other comprehensive income:									
Translation adjustment							601		601
Total comprehensive income									43,245
Preferred stock dividends					(2,388)				(2,388)
Stock-based compensation expense					6,875				6,875
Purchase of treasury stock			(8,548)					(117)	(117)
Exercise of stock options			1,036,794	10	6,960				6,970
Vesting of restricted stock units/awards			455,307	4	(4)				
Restricted stock cancelled for employee minimum income taxes			(91,732)		(1,314)				(1,314)
Issuance of stock for the ESPP			113,763	2	1,068				1,070
Conversion of 5.5% convertible senior notes			12,212,964	122	52,030				52,152
Issuance of treasury stock			5,574		35			44	79
Balance at December 31, 2007			93,847,608	948	556,867	(80,451)	5,460	(6,584)	476,240
Comprehensive income:									
Net loss						(221,038)			(221,038)
Other comprehensive loss:									
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)



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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:									
Net loss						(110,059)			(110,059)
Other comprehensive loss:									
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

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 (formerly Input/Output, Inc.) and its wholly-owned subsidiaries offer a full suite of related products and services for seismic data acquisition and processing, including products incorporating traditional analog technologies and products incorporating the proprietary VectorSeis, True Digital technology. 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 and Proposed Joint Venture with BGP.* Demand for the Company's products and services is cyclical and substantially dependent upon activity levels in the oil and gas industry, particularly the willingness and ability of the Company's customers 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 global financial crisis, which has contributed, among other things, to significant reductions in available capital and liquidity from banks and other providers of credit, resulted in the worldwide economy entering into a prolonged, severe recessionary period, which may continue through all or part of 2010. Oil prices increased to record levels during the second quarter of 2008, but, in conjunction with the global recession, sharply declined after that, falling to approximately \$35 per barrel during the first quarter of 2009. By the end of 2009, oil prices had recovered to approximately \$83 per barrel. Natural gas prices followed a similar, recession-induced downturn. After peaking at \$13.31 mmBtu in July 2008, Henry Hub natural gas prices fell approximately 50%. Unlike the recent recovery of oil prices, natural gas prices have remained depressed due in part to the excess supply of natural gas in the market. These conditions sharply curtailed demand for exploration activities in North America and other regions.

The weakness in demand for the Company's products, the uncertainty surrounding future economic activity levels and the tightening of credit availability resulted in decreased sales for the Company's business units. The Company's seismic contractor customers and the exploration and production companies ( E&P companies ) that are users of the Company's products, services and technology have generally reduced their capital spending levels since 2008. The Company expects that the level of customers' exploration and production expenditures will continue to be reduced to the extent that E&P companies and seismic contractors are limited in their access to the credit markets as a result of further disruptions in, or the more conservative lending practices by, the lending markets. There continues to be significant uncertainty about future exploration and production activity levels and the impact on the Company's businesses. In particular, the North America and Russia land systems business and the Company's vibroseis truck business experienced steep sales declines in 2009.

While the global recession and the lower oil and gas prices slowed demand for the Company's products and services in the near term, the Company believes that the industry's long-term prospects remain favorable because of the declining rates in oil and gas production. The Company believes that technology that adds a competitive advantage through cost reductions or improvements in productivity will continue to be valued in its marketplace, even in the current difficult market. For example, the Company believes that its new technologies, such as FireFly®, DigiFIN and Orca®, will continue to attract interest from its customers because those new technologies are designed to deliver improvements in image quality within more productive delivery systems.

In response to this global economic downturn and subsequently decreased demand for the Company's products and services, the Company took measures to reduce its cost structure. The most significant cost reduction to date has related to reduced headcount. Beginning in the fourth quarter of 2008 and continuing through 2009, the Company reduced its headcount by 384 positions, or approximately 26% of its employee headcount, in order to adjust to the lower levels of activity. Including all contractors and employees, the Company reduced its headcount by 489 positions, or 27%. In April 2009, the Company also initiated a salary reduction program that reduced employee base salaries. The salary reductions reduced affected employees' annual base salaries by 12% for the Company's chief executive officer, chief operating officer and chief financial officer, 10% for all other executives and senior

management, and 5% for most other employees. Additionally, the Board of Directors elected to implement a 15% reduction in director fees. In addition to the salary reduction program, the Company elected to suspend its matching contributions to its employee 401(k) plan contributions. See further discussion of the reinstatement of employees salaries and of director fees at Note 20 *Restructuring Activities*. The Company intends to continue to fund strategic programs to position it for the expected recovery in economic activity. Overall, the Company has and will continue to give priority to generating cash flow and reducing its cost structure, while maintaining its long-term commitment to continued technology development.

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On June 4, 2009, the Company completed a private placement transaction in which the Company issued and sold 18,500,000 shares of its common stock in privately-negotiated transactions for aggregate gross proceeds of approximately \$40.7 million. The \$38.2 million in net proceeds from the offering, along with \$2.6 million of cash on hand, were applied to repay in full the outstanding indebtedness under a bridge loan agreement with Jefferies Finance LLC dated as of December 30, 2008. The indebtedness under this bridge loan agreement had been scheduled to mature on January 31, 2010 and had an effective interest rate at the time of repayment of 25.3%. The Company also entered into an additional amendment (the *Fifth Amendment*) to its amended commercial banking credit facility (the *Amended Credit Facility*) which, among other things, modified certain of the financial and other covenants contained in the *Amended Credit Facility*.

In addition, on June 29, 2009, the Company also entered into a \$20.0 million secured equipment financing term loan with ICON ION, LLC ( *ICON* ), an affiliate of ICON Capital Inc. The Company received \$12.5 million on that date and \$7.5 million in July 2009. All borrowed indebtedness under this arrangement is scheduled to mature on July 31, 2014 and constitutes permitted indebtedness under the *Amended Credit Facility*. The proceeds of the secured term loan are being applied for working capital and general corporate purposes. See further discussion at Note 12 *Notes Payable, Long-term Debt and Lease Obligations*.

On October 23, 2009, the Company entered into a binding term sheet (the *Term Sheet*) with BGP Inc., China National Petroleum Corporation, a company organized under the laws of the People's Republic of China ( *BGP* ), which sets forth, among other things, the principal terms for a proposed joint venture between BGP and the Company. In connection with the execution of the *Term Sheet*, the Company entered into an amendment to the *Amended Credit Facility* (the *Sixth Amendment*), that, among other things, (i) increased the aggregate revolving commitment amount under the *Amended Credit Facility* from \$100.0 million to \$140.0 million, (ii) permitted Bank of China, New York Branch ( *Bank of China* ), to join the *Amended Credit Facility* as a lender, and (iii) modified, or provided limited waivers of, certain of the financial and other covenants contained in the *Amended Credit Facility*. This bridge financing arrangement consisted of the following:

Two promissory notes (the *Convertible Notes*) issued to Bank of China under the *Amended Credit Facility* as amended by the *Sixth Amendment*, both convertible into shares of the Company's common stock; and

A Warrant Issuance Agreement with BGP, under which the Company granted BGP a warrant (the *Warrant*) to purchase shares of the Company's common stock that may be exercised in lieu of conversion of the *Convertible Notes*.

In October 2009, the Company borrowed an aggregate of \$40.0 million in the form of revolving credit bridge financing arranged by BGP from Bank of China, New York Branch and evidenced by the *Convertible Notes* mentioned directly above. This borrowing was permitted by the terms of the *Sixth Amendment* to the *Credit Facility*. See further discussion below at Note 2 *Term Sheet with BGP and Bridge Financing Transactions*.

As a result of the Company's bridge financing arrangements that the Company entered into in October 2009, the Company believes that its liquidity will be sufficient to fund its operations until such time as the transactions with BGP are completed or alternate financing could be obtained. As a result of the Company's entering into the *Sixth Amendment*, the Company believes that the waivers of the financial covenants contained in the *Amended Credit Facility* for the fiscal quarters ending September 30, 2009, December 31, 2009, March 31, 2010 and June 30, 2010 should enable the Company to conduct its operations without defaulting under the *Amended Credit Facility* until the transactions under the *Term Sheet* are completed. The Company currently expects these transactions to be completed during March 2010. Without these waivers, the Company would not have been in compliance with certain of its financial covenants at September 30, 2009 or December 31, 2009.

If the proposed transactions under the *Term Sheet* are not completed by March 31, 2010, then the current waivers, upon notice from the lenders after a designated period of time, would cease to be effective and the Company at that time would likely not be in compliance with certain of the financial covenants contained in the *Amended Credit Facility*, which could then result in an event of default. As the current waivers cover a period of less than twelve months from December 31, 2009, the Company has classified its long-term indebtedness under its revolving line of credit and term loan facility under the *Amended Credit Facility* as current at December 31, 2009. As a result of the

cross-default provisions in its secured equipment financing and its amended and restated subordinated seller note, the Company has also classified these long-term obligations as current at December 31, 2009.

Even though the Company believes the joint venture with BGP will be completed as planned, there are certain events outside of the Company's control (such as the Company experiencing a material adverse event or condition that results in a material adverse effect on the Company's business, its prospects or results of operations) that could cause the closing of the joint venture to be delayed, terminated or abandoned. In such event, the Company would need to seek to amend, or seek additional covenant waivers under, the

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Amended Credit Facility. Even though the lenders under the Amended Credit Facility have demonstrated their willingness to work with the Company in amending or providing sufficient waivers to its facility, there can be no assurance that the Company would be able to obtain any such waivers or amendments in the future. If the Company were to be unable to obtain such waivers or amendments from the lenders, the Company would likely seek to replace or pay off the Amended Credit Facility with new secured debt, unsecured debt or equity financing.

As part of the formation of the joint venture, the Company has been in discussions with various financial institutions (both domestic and international) on the refinancing of the Company's debt. As a result of these discussions and with the recent improvements within the financial markets, the Company believes that in the unlikely event the joint venture is not completed as planned, the Company would be able to obtain additional debt or equity financings sufficient to meet its obligations. However, there also can be no assurance that such debt or equity financing would be available on terms acceptable to the Company or at all.

*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 exact precision. Areas involving significant estimates include, but are not limited to, accounts and notes receivable, inventory valuation, sales forecast related to multi-client data libraries, goodwill and intangible asset valuation, deferred taxes, and accrued warranty costs. Actual results could 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, 2009 and 2008, there were \$1.5 million and \$6.6 million, respectively, of short-term restricted cash that are used to secure standby and commercial letters of credit.

*Accounts and Notes Receivable.* Accounts and notes receivable are recorded at cost, less the related allowance for doubtful accounts and notes. 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. The Company considers an account or note to be impaired when it is probable that the Company will be unable to collect all amounts due according to the contractual terms. When a note receivable is considered impaired, the amount of the impairment is measured based on the present value of expected future cash flows or the fair value of collateral. Impairment losses (recoveries) are included in the allowance for doubtful accounts and notes through an increase (decrease) in bad debt expense.

Notes receivable are generally collateralized by the products sold and bear interest at contractual rates ranging from 8.0% to 12.0% per year. For non-interest bearing notes with a maturity greater than one year, or those notes which the stated rate of interest is considered a below market rate of interest, the Company imputes interest using prevailing market rates at the note's origination. Cash receipts on impaired notes are applied to reduce the principal amount of such notes until the principal has been recovered and are recognized as interest income thereafter. The Company records interest income on investments in notes receivable on the accrual basis of accounting. The Company does not accrue interest on impaired loans where collection of interest according to the contractual terms is considered doubtful. Among the factors the Company considers in making an evaluation of the collectibility of interest are: (i) the status of the loan; (ii) the fair value of the underlying collateral; (iii) the financial condition of the borrower; and (iv) anticipated future events.

*Inventories.* Inventories are stated at the lower of cost (primarily standard cost, which approximates 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, Equipment and Seismic Rental Equipment.* Property, plant, equipment and seismic rental equipment are stated at cost. Depreciation expense is provided straight-line over the following estimated useful lives:

	<b>Years</b>
Machinery and equipment	3-8
Buildings	10-20
Rental equipment	2-7
Leased equipment and other	1-10

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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 periodically evaluates the net realizable value of long-lived assets, including property, plant, equipment and seismic rental equipment, 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, equipment and seismic rental equipment during 2009, 2008 and 2007.

*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 the years ended December 31, 2009, 2008, and 2007, the Company capitalized, as part of its multi-client data library, \$3.8 million, \$5.4 million, and \$4.3 million, respectively, of direct internal processing costs. At December 31, 2009 and 2008, multi-client data library creation and accumulated amortization consisted of the following:

	<b>December 31,</b>	
	<b>2009</b>	<b>2008</b>
Gross costs of multi-client data creation	\$ 337,516	\$ 247,881
Less accumulated amortization	(206,811)	(158,362)
<b>Total</b>	<b>\$ 130,705</b>	<b>\$ 89,519</b>

The Company's method of amortizing the costs of a multi-client data library available for commercial sale is the greater of (i) the percentage of actual revenue to the total estimated revenue multiplied by the total cost of the project (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 total 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 Accounting Standard Codification (ASC) Topic 360 *Accounting for the Impairment and Disposal of Long-Lived Assets*, 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 2009, 2008 and 2007.

*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, 2009, the total costs of software were \$11.7 million, less accumulated amortization of \$9.7 million.



Amortization expense was \$1.6 million, \$2.0 million and \$2.1 million, respectively, for the years ended December 31, 2009, 2008 and 2007.

*Cost Method Investments.* Certain of the Company's investments are accounted for under the cost method. The cost method investments 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

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of a cost method investment, at Note 8 *Cost Method Investment*. The aggregate carrying amount of cost method investments was \$0.5 million and \$5.0 million at December 31, 2009 and 2008, respectively, and included within Other Assets.

*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 notes receivable, 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 \$286.0 million at December 31, 2009. Approximately \$118.0 million of the Company's revolving credit borrowings and \$101.6 million of the Company's Term Loan were re-negotiated in October 2009. Additionally, the debt under the ICON Loan Agreements totaling \$19.1 million at December 31, 2009 was negotiated in June 2009. As a result, a majority of the Company's principal debt facilities were re-negotiated within the fourth quarter of 2009 using current market rates. Also, a majority of the Company's indebtedness is variable-rate, which approximates fair value.

In 2007, 2008 and 2009, 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.* For purposes of performing the impairment test for goodwill as required by ASC 350, the Company established the following reporting units: Land Imaging Systems (including ARAM Systems, Ltd. ( ARAM )), Sensor Geophone, Marine Imaging Systems, Data Management Solutions, and ION 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 and certain indefinite-lived intangible assets at least annually for impairment, or more frequently if facts and circumstances indicate that 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 contains goodwill, is determined to be less 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 allocating first the current 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 goodwill is less than the carrying value of goodwill, to record an impairment loss of goodwill as the difference between the implied and carrying value amounts on the Consolidated Statements of Operations in the period in which the impairment is determined. See further discussion, including the impairment of goodwill, below at Note 9 *Goodwill*.

The intangible assets other than goodwill relate to proprietary technology, patents, customer relationships, trade names and non-compete agreements 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, below at Note 10 *Intangible Assets*.

Intangible assets amortized on a straight-line basis are:

	<b>Estimated Useful Life (Years)</b>
Proprietary technology	4-8
Customer relationships	8
Patents	5-20
Trade names	5
Non-compete agreements	5

Intangible assets amortized on an accelerated basis are:

	<b>Estimated Economic Life (Years)</b>
Customer relationships	15
Intellectual property rights	5

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*Fair Value.* ASC 820-10, *Fair Value Measurements*, (ASC 820-10) 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 include 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.

*Goodwill and Intangible Assets.* In 2008 and 2009, the Company performed a valuation of its goodwill and intangible asset balances. Both 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 9 *Goodwill* and Note 10 *Intangible Assets*.

*Warrant.* The Warrant issued to BGP in October 2009 had an initial fair value of \$15.4 million, which was comprised of Level 2 inputs and was listed on the balance sheet as a current liability. On December 31, 2009, the Warrant was re-valued at approximately \$44.8 million. For further information, see Note 12 *Notes Payable, Long-Term Debt and Lease Obligations*.

The Warrant is the only material transactions currently requiring recurring fair value calculations. The fair value of the Warrant was estimated using a Black-Scholes model, which includes a variety of inputs. The key inputs for the Black-Scholes model include 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 31, 2010) and the Company stock's historical and implied volatility.

*Cost Method Investments.* In 2009, the Company performed a fair value analysis based upon 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 8 *Cost Method Investment*.

*Revenue Recognition and Product Warranty.* The Company derives revenue from the sale and rental of (i) acquisition systems and other seismic equipment within its Land Imaging Systems and Marine Imaging Systems segments; (ii) imaging services, multi-client surveys and licenses of off-the-shelf data libraries within its ION Solutions segment; and (iii) navigation, survey and quality control software systems within its Data Management Solutions segment.

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.

The Company's Land Imaging Systems segment receives rental income from the rental of seismic equipment. The rental is in the form of operating leases as the lease terms range from a couple of days to several months. Rental revenue is recognized on a straight line basis over the term of the operating lease.

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.

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

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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.

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*, and allocates revenue to each element based upon its vendor-specific objective evidence of fair value, so long as each such element meets the criteria for treatment as a separate unit of accounting. The Company limits the amount of revenue recognized for delivered elements to the amount that is not contingent on the future delivery of products or services. The Company generally does not grant return or refund privileges to its customers. When undelivered elements, such as training courses and engineering services, are inconsequential or perfunctory and not essential to the functionality of the delivered elements, the Company recognizes revenue on the total contract and makes a provision for the costs of the incomplete elements.

For the sales of navigation, survey and quality control software systems, the Company follows the requirements of ASC 985-605 *Software Revenue Recognition*, because in those systems the software is more than incidental to the arrangement as a whole. Following the requirements of ASC 985-605 *Applicability of AICPA Statement of Position 97-2 to Non-Software Deliverables in an Arrangement Containing More-Than-Incidental Software*, the Company considers the hardware within these systems to be a software-related item because the software is essential to the hardware's functionality. As a result, the Company recognizes revenue from sales of navigation, survey and quality control 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 and software-related hardware 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. 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 of fair value of the element or, if vendor-specific objective evidence 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 these time-based licenses, the Company recognizes revenue ratably over the contract term, which is generally two to five years.

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. net deferred tax assets and will continue to reserve for a significant portion of U.S. net 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) and foreign currency translation adjustments, is presented in the Consolidated Statements of Stockholders' Equity and Comprehensive Income (Loss). The

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balance in Accumulated Other Comprehensive Income (Loss) consists of foreign currency translation adjustments. In 2009 and 2008, the Company recorded in Accumulated Other Comprehensive Income (Loss) the tax impact of currency translation adjustments of \$1.0 million and \$2.3 million, respectively.

*Net Income (Loss) per Common Share.* Basic net income (loss) per common share is computed by dividing net income (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. The total number of shares issuable under anti-dilutive options at December 31, 2009, 2008 and 2007 were 7,766,188, 7,893,275 and 1,550,800, respectively.

The Convertible Notes and Warrant entered into on October 23, 2009 were anti-dilutive. See further discussion of these transactions at Note 2 *Term Sheet with BGP and Bridge Financing Transactions*.

There are 70,000 outstanding shares of Series D Cumulative Convertible Preferred Stock, which the Company believes may currently be converted, at the holder's election, into up to 9,669,434 shares of common stock. See further discussion on the resetting of the Series D Preferred Stock conversion provisions at Note 13 *Cumulative Convertible Preferred Stock* and Note 19 *Legal Matters*. The outstanding shares of all Series D Preferred Stock were anti-dilutive for the years ended December 31, 2009, 2008 and 2007.

As shown in the table below, the Company's convertible senior notes that matured on December 15, 2008 were dilutive for the year ended December 31, 2007.

The following table summarizes the calculation of the weighted average number of common shares and weighted average number of diluted common shares outstanding for purposes of the computation of basic net income (loss) per common share and diluted net income (loss) per common share (in thousands, except per share amounts):

	<b>Years Ended December 31,</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
Net income (loss) applicable to common shares	\$ (113,559)	\$ (293,713)	\$ 40,256
Income impact of assumed convertible debt conversion			3,694
Net income (loss) after impact of assumed convertible debt conversion	\$ (113,559)	\$ (293,713)	\$ 43,950
Weighted average number of common shares outstanding	110,516	95,887	81,941
Effect of dilutive stock awards			2,629
Effect of assumed convertible debt conversion			12,751
Weighted average number of diluted common shares outstanding	110,516	95,887	97,321
Net income (loss) per basic share	\$ (1.03)	\$ (3.06)	\$ 0.49
Net income (loss) per diluted share	\$ (1.03)	\$ (3.06)	\$ 0.45

*Foreign Currency Gains and Losses.* Assets and liabilities of the Company's subsidiaries operating outside the United States which 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) in the Consolidated Statements of Stockholders Equity and 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 \$(3.8) million, \$3.1 million and \$(1.8) million for the years ended December 31, 2009, 2008 and 2007, respectively.

*Concentration of Credit and Foreign Sales Risks.* No single customer represented 10% or more of the Company's consolidated net revenues for the years ended December 31 2009, 2008 and 2007; however, the Company's top five customers in total represented approximately 29%, 30% and 31%, 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.

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For the twelve months ended December 31, 2009, the Company recognized \$92.8 million of sales to customers in Europe, \$67.2 million of sales to customers in Asia Pacific, \$25.4 million of sales to customers in Africa, \$42.4 million of sales to customers in the Middle East, \$34.3 million of sales to customers in Latin American countries and \$4.7 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 the years ended December 31, 2009, 2008 and 2007, international sales comprised 64%, 60% and 62%, respectively, of total net revenues. In recent years, the CIS and certain Latin American countries have experienced economic problems and uncertainties. However, given the recent market downturn, more countries and areas of the world have also begun to experience 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 collectibility 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 the twelve months ended December 31, 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 the current year and were therefore recorded in the second quarter of 2009.

*Recent Accounting Pronouncements.* In October 2009, the Financial Accounts Standards Board (FASB) issued Accounting Standard Update (ASU) No. 2009-13 on ASC 605, *Revenue Recognition - Multiple Deliverable Revenue Arrangements - a consensus of the FASB Emerging Issues Task Force* (ASU 2009-13). ASU 2009-13 amended guidance related to multiple-element arrangements which requires an entity to allocate arrangement consideration at the inception of an arrangement to all of its deliverables based on their relative selling prices. The consensus eliminates the use of the residual method of allocation and requires the relative-selling-price method in all circumstances. All entities must adopt the guidance no later than the beginning of their first fiscal year beginning on or after June 15, 2010. Entities may elect to adopt the guidance through either prospective application for revenue arrangements entered into, or materially modified, after the effective date or through retrospective application to all revenue arrangements for all periods presented. The Company is currently evaluating the impact, if any, of ASU 2009-13 on the Company's financial position and results of operations.

In October 2009, the FASB issued ASU No. 2009-14 on ASC 985, *Certain Revenue Arrangements That Include Software Elements* (ASU 2009-14). ASU 2009-14 amended guidance that is expected to significantly affect how entities account for revenue arrangements that contain both hardware and software elements. As a result, many tangible products that rely on software will be accounted for under the revised multiple-element arrangements revenue recognition guidance, rather than the software revenue recognition guidance. The revised guidance must be adopted by all entities no later than fiscal years beginning on or after June 15, 2010. An entity must select the same transition method and same period for the adoption of both this guidance and the revisions to the multiple-element arrangements guidance noted above. The Company is currently evaluating the impact, if any, of ASU 2009-14 on the Company's financial position and results of operations.

In August 2009, the FASB issued ASU 2009-05, *Fair Value Measurements and Disclosures, Measuring Liabilities at Fair Value (Topic 820)* (ASU 2009-05). ASU 2009-05 provides additional clarification on valid valuation

techniques using acquired prices in active markets for identical liabilities. The provisions for ASU 2009-05 were effective for interim period ending after August 2009. The adoption of ASU 2009-05 did not have a material impact to the company's financial position, results of operations or cash flows.

In June 2009, the FASB issued ASC 105-10, *The FASB Accounting Standards Codification and the Hierarchy of Generally Accepted Accounting Principles* a replacement of FASB Statement No. 162 (ASC 105-10). ASC 105-10 is the single, official source of authoritative, nongovernmental GAAP, other than guidance issued by the SEC and is effective for interim or annual financial periods ending after September 15, 2009. The Company adopted this statement on September 15, 2009 and has updated all existing GAAP references to the new codification.

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In April 2009, the FASB issued ASC 825-10-65-1, *Interim Disclosures about Fair Value of Financial Instruments* (ASC 825-10-65-1). ASC 825-10-65-1 provides additional clarification on interim disclosures and require public companies to disclose the fair value of financial instruments whenever companies publish interim financial summary information. The provisions for ASC 825-10-65-1 were effective for interim periods ending after June 15, 2009 with earlier adoption permitted. The Company adopted ASC 825-10-65-1 on the effective date. The adoption of ASC 825-10-65-1 did not have a material impact to the Company's financial position, results of operation or cash flows.

In April 2009, the FASB issued ASC 320-10, *The Meaning of Other-Than-Temporary Impairment and its Application to Certain Investments* (ASC 320-10). ASC 320-10 provides additional guidance designed to create greater clarity and consistency in accounting for and presenting impairment losses on securities. This issuance changes (i) the method for determining whether an other-than-temporary impairment exists for debt securities and for cost method investments; and (ii) the amount of an impairment charge to be recorded in earnings. ASC 320-10 was effective for interim and annual periods ending after June 15, 2009. The adoption of ASC 320-10 did not have a material impact to the Company's financial position, results of operation or cash flows.

In September 2008, the FASB issued ASC 260-10, *Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities* (ASC 260-10), which was effective for fiscal years beginning after December 15, 2008. ASC 260-10 would require unvested share-based payment awards containing non-forfeitable rights to dividends or dividend equivalents (whether paid or unpaid) to be included in the computation of basic earnings per share according to the two-class method. The adoption of ASC 260-10 did not have a material impact on the Company's earnings per share computation.

*Subsequent Events.* In connection with preparation of the consolidated financial statements and in accordance with the recently issued ASC 855-10, *Subsequent Events*, the Company evaluated subsequent events after the balance sheet date of December 31, 2009 through March 1, 2010, the date of the Company's filing of this Form 10-K.

## **(2) Term Sheet with BGP and Bridge Financing Transactions**

On October 23, 2009, the Company entered into the Term Sheet with BGP, which provides for, among other things, the formation of a joint venture between the Company and BGP involving the Company's land-based seismic data acquisition equipment business.

The Term Sheet contemplates that the Company will enter into a purchase agreement with BGP under which (i) BGP will acquire from the Company a 51% equity interest in the joint venture for an aggregate purchase price of \$108.5 million cash to be paid to the Company and the contribution by BGP to the joint venture of certain assets and certain related liabilities of BGP that relate to the joint venture's business and (ii) the Company will retain a 49% interest in the joint venture in exchange for the contribution of certain assets and certain related liabilities that relate to the Company's land business. The assets of each party to be transferred to the joint venture will include seismic recording systems, inventory, certain intellectual property rights and contract rights, all as may be necessary to own and operate the business of the joint venture.

The scope of the joint venture's business is defined in the Term Sheet as being the business of designing, development, engineering, manufacturing, research and development, distribution, sales and marketing and field support of land-based equipment used in seismic data acquisition for the petroleum industry. Excluded from the scope of the joint venture's business will be (x) the analog sensor businesses of the Company and BGP and (y) the businesses of certain companies in which BGP or the Company are currently a minority owner. In addition to these excluded businesses, all of the Company's other businesses including the Marine Imaging Systems, Data Management Solutions and ION Solutions, which includes GXT's Imaging Solutions, Integrated Seismic Solutions (ISS) and BasinSPAN and seismic data libraries will remain owned and operated by the Company and will not comprise a part of the joint venture.

Under the Term Sheet, the parties agreed to use their best efforts to cause the closing of the joint venture and related transactions to occur as soon as practicable following the execution of the definitive transaction documents, and on or before the later to occur of the following dates: (i) December 31, 2009 or (ii) 10 business days following the date on which all necessary regulatory approvals (including receiving clearance from the Committee on Foreign Investment in the United States (CFIUS) to complete the transactions) have been obtained, but in any event, no later than March 31, 2010.

The parties' obligations under the Term Sheet may be terminated (i) by written agreement of the parties, (ii) by either party in the event that such party's conditions have not been satisfied on or before March 31, 2010 (subject to a 15-day cure period) or (iii) by either party in the event that certain mutual conditions have not been satisfied on or before March 31, 2010. In addition, BGP and the

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Company have each agreed to pay the other a break-up fee of \$5.0 million if either party determines to terminate its obligations under the Term Sheet because the other party has failed to satisfy certain conditions (including conditions precedent to closing that (a) the other party has not experienced a material adverse event or condition that has resulted in a material adverse effect on its business, prospects and results of operations change, (b) the other party has not breached any of its representations and warranties contained in the Term Sheet and such representations and warranties continue to be true and correct and (c) with respect to BGP's obligations under the Term Sheet, ION has not suffered any material default or accelerations of any of its liabilities).

On October 27, 2009, the Company borrowed an aggregate of \$40.0 million in the form of revolving credit bridge financing arranged by BGP from Bank of China, New York Branch and evidenced by the Convertible Notes. This borrowing was permitted by the terms of the Sixth Amendment to the Credit Facility, which increased the aggregate revolving commitment amount under the accordion feature provisions of the Amended Credit Facility from \$100.0 million to \$140.0 million and permitted Bank of China to join the Amended Credit Facility as a lender.

The Convertible Notes provide that at the stated initial conversion price of \$2.80 per share, the full \$40.0 million principal amount under the Convertible Notes would be convertible into 14,285,714 shares of Common Stock. The Convertible Notes provide that the conversion price and the number of shares into which the notes may be converted are subject to adjustment on terms and conditions similar to those contained in the Warrant.

As part of BGP arranging for the Bank of China to join the Amended Credit Facility, the Company granted to BGP the Warrant. The Warrant will be exercisable, in whole or in part, at any time and from time to time, subject to the conditions described below. The Warrant will initially entitle the holder thereof to purchase a number of shares of common stock equal to \$40.0 million divided by the exercise price of \$2.80 per share, subject to adjustment as described below. At the initial exercise price of \$2.80 per share, at such time as the Warrant becomes exercisable, it would initially be fully exercisable for 14,285,714 shares of common stock.

The Warrant will only become exercisable and the Convertible Notes will only become convertible upon receipt of certain governmental approvals. Any conversions of the Convertible Notes and prior exercises of the Warrant will reduce the dollar amount under the Warrant into which the exercise price may be divided to determine the number of shares that may be acquired upon exercise.

The exercise price under the Warrant and conversion prices under the Convertible Notes will be subject to adjustment upon the occurrence of a Triggering Event. A Triggering Event will occur in the event that the joint venture transactions cannot be completed by March 31, 2010, solely as a result of the occurrence of a statement, order or other indication from any relevant governmental regulatory agency that (a) the transactions would not be approved, would be opposed, objected to or sanctioned or (b) the transactions or BGP's business and operations would be required to be altered (or upon the earlier abandonment of such transactions due to any such statement, indication or order). In such event, the exercise price and conversion price per share will be adjusted (but not to an amount that exceeds \$2.80 per share) to a price per share that is equal to 75% of the lowest trading price of the Company's common stock over a ten-consecutive-trading-day period, beginning on and inclusive of the first trading day following the public announcement of any failure to complete such transactions (or the abandonment thereof), which failure of abandonment was the result of the Triggering Event. The exercise price of the Warrant and conversion prices of the Convertible Notes are also subject to certain customary anti-dilution adjustment.

The Warrant provides for certain cashless exercise rights that are exercisable by the holder of the Warrant in the event that certain governmental approvals from the People's Republic of China permitting the exercise of the Warrant for cash are not obtained.

See further discussion of the accounting impact of the Warrant at Note 12 *Notes Payable, Long-Term Debt and Lease Obligations*.

Additionally, the Term Sheet provides that when the joint venture transactions are closed:

BGP will have purchased approximately 23.8 million shares of the Company's common stock for \$66.6 million and thereby own, before giving effect to the issuance of those shares, approximately 19.99% of the Company's outstanding common stock.

To the extent that shares are not purchased by BGP under the Warrant prior to closing, the new revolving credit loans from Bank of China, evidenced by the Convertible Notes will convert into approximately 14.3 million shares of ION common stock and will be credited against the approximately 23.8 million shares of ION stock to be purchased by BGP at the transaction closing.

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ION will appoint a designee of BGP to its Board of Directors to serve with the current nine members of ION's Board of Directors.

BGP will arrange for the Company's then-outstanding long-term debt under the Amended Credit Facility (currently \$101.6 million outstanding at February 22, 2009) to be refinanced at the joint venture closing.

ION will use a portion of the proceeds from the transactions to pay off and retire the Company's outstanding indebtedness under its current revolving credit facility (after giving effect to the \$40.0 million in additional revolving credit borrowings under the existing Amended Credit Facility, approximately \$118.0 million, excluding the non-cash debt discount, is currently outstanding at February 22, 2009) and \$35.0 million in seller subordinated indebtedness incurred in connection with the acquisition of ARAM in September 2008.

ION will receive a new \$100 million revolving credit facility at the joint venture closing.

The \$19.1 million (as of December 31, 2009) secured equipment financing transaction with ICON will be assigned to and become indebtedness of the joint venture.

### (3) ARAM Acquisition

In July 2008, the Company signed a share purchase agreement to acquire all of the outstanding shares of ARAM Systems Ltd., a Canadian-based provider of cable-based land seismic recording systems, and its affiliated company, Canadian Seismic Rentals Inc. (sometimes collectively referred to herein as "ARAM"), from their shareholders (the "Sellers"). Founded in 1971, ARAM designs, manufactures, sells and leases land seismic data acquisition systems, specializing in analog cabled systems. On September 17, 2008, the Company, ARAM and the Sellers entered into an Amended and Restated Share Purchase Agreement (the "Amended Purchase Agreement"), which amended the terms of the original share purchase agreement executed in July 2008. On September 18, 2008, the Company, through its acquisition subsidiary, 3226509 Nova Scotia Company ("ION Sub"), completed the acquisition of the outstanding shares of ARAM in accordance with the terms of the Amended Purchase Agreement.

The Company acquired ARAM for the purpose of advancing the Company's strategy and market penetration in the land seismic recording system business. The operations of ARAM were combined with those of the Company as of September 19, 2008. The acquisition was accounted for by the purchase method, with the purchase price allocated to the fair value of assets purchased and liabilities assumed. The allocation of the purchase price, including related direct costs, for the acquisition is as follows (in thousands):

Fair values of assets and liabilities:

Net current assets	\$ 69,827
Property, plant, equipment and seismic rental equipment	24,026
Net other long-term assets	2,480
Intangible assets	101,800
Goodwill	173,836
Deferred tax liability	(31,723)
Capital lease obligations	(3,453)
Total allocated purchase price	336,793
Less non-cash consideration - issuance of common stock	(48,958)
Less issuance of seller notes	(45,000)
Less cash of acquired business	(10,677)
Cash paid for acquisition, net of cash acquired	\$ 232,158



The intangible assets of ARAM relate to customer relationships, proprietary technology, trade names and non-compete agreements, which are being amortized over their estimated useful lives ranging from five to eight years. At December 31, 2008, the Company completed its annual impairment test for goodwill, including its intangible assets. As a result of the overall economic crisis, which significantly decreased the current demand for analog acquisition products, especially in North America and Russia, the Company determined that the goodwill associated with the ARAM acquisition and a portion of ARAM's acquired intangible assets were impaired. At March 31, 2009, the Company performed an interim impairment test on the intangible assets of ARAM based upon the continued depressed market conditions and determined that \$38.0 million of intangibles related to ARAM's proprietary technology

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and customer relationships was impaired. See further discussion of goodwill and intangible assets and the impairment of these assets at Note 9 *Goodwill* and Note 10 *Intangible Assets*.

The following summarized unaudited pro forma consolidated income statement information for the years ended December 31, 2008 and 2007, assumes that the ARAM acquisition had occurred as of the beginning of the periods presented. The Company has prepared these unaudited pro forma financial results for comparative purposes only. These unaudited pro forma financial results may not be indicative of the results that would have occurred if the Company had completed the acquisitions as of the beginning of the periods presented or the results that will be attained in the future.

	<b>Years ending December 31</b>	
	<b>2008</b>	<b>2007</b>
Pro forma net revenues	\$ 741,982	\$ 838,022
Pro forma income (loss) from operations	\$ (201,603)	\$ 91,994
Pro forma net income (loss)	\$ (302,890)	\$ 42,931
Pro forma basic net income (loss) per common share	\$ (3.08)	\$ 0.50
Pro forma diluted net income (loss) per common share	\$ (3.08)	\$ 0.46

**(4) Accounts and Notes Receivable**

A summary of accounts receivable is as follows (in thousands):

	<b>December 31,</b>	
	<b>2009</b>	<b>2008</b>
Accounts receivable, principally trade	\$ 116,720	\$ 156,250
Less allowance for doubtful accounts	(5,674)	(5,685)
Accounts receivable, net	\$ 111,046	\$ 150,565

A summary of notes receivable, accrued interest, and allowance for doubtful notes is as follows (in thousands):

	<b>December 31,</b>	
	<b>2009</b>	<b>2008</b>
Notes receivable and accrued interest	\$ 13,438	\$ 16,103
Less allowance for doubtful notes	(71)	
Notes receivable, net	13,367	16,103
Less current portion notes receivable, net	13,367	11,665
Long-term notes receivable	\$	\$ 4,438

The activity in the allowance for doubtful notes receivable is as follows (in thousands):

	<b>Years Ended December 31,</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
Balance at beginning of period	\$	\$ 3,351	\$ 4,530
Additions charged to bad debt expense	71		
Write-offs charged against the allowance		(3,351)	(1,179)
Balance at end of period	\$ 71	\$	\$ 3,351

**(5) Inventories**

A summary of inventories is as follows (in thousands):

	<b>December 31,</b>	
	<b>2009</b>	<b>2008</b>
Raw materials and subassemblies	\$ 111,022	\$ 104,862
Work-in-process	10,129	20,698
Finished goods	112,068	161,065
Reserve for excess and obsolete inventories	(30,618)	(24,106)
<b>Total</b>	<b>\$ 202,601</b>	<b>\$ 262,519</b>

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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 the years ended December 31, 2009, 2008 and 2007, the Company recorded inventory obsolescence and excess inventory charges of approximately \$9.0 million, \$14.0 million, and \$5.3 million, respectively. In 2009, the majority of the increase in the reserves for excess and obsolete inventory in 2009 related to Marine Imaging Systems mature acquisition systems and source products.

**(6) Supplemental Cash Flow Information and Non-Cash Activity**

Supplemental disclosure of cash flow information is as follows (in thousands):

	Years Ended December 31,		
	2009	2008	2007
Net cash paid during the period for:			
Interest	\$ 24,051	\$ 5,251	\$ 3,370
Income taxes	22,184	14,894	7,470

During the twelve months ended December 31, 2009, the Company transferred approximately \$48.6 million of inventories, at cost, to its seismic rental equipment pool.

In October 2009, the Company entered into a bridge financing that included the Warrant and the Convertible Notes. See further discussion of these transactions at Note 2 *Term Sheet with BGP and Bridge Financing Transactions*. As a result, the Company recorded a \$15.4 million discount on the Convertible Notes associated with the day-one fair value of the Warrant. The Company also recorded a subsequent fair value adjustment of \$29.4 million, reflecting a total non-cash liability associated with the Warrant of \$44.8 million at December 31, 2009.

In September 2008, the Company acquired all of the share capital of ARAM. As part of the consideration for this acquisition, the Company issued to one of the Sellers (i) 3,629,211 shares of the Company's common stock valued at \$49.0 million and (ii) the Senior Seller Note and the Subordinated Seller Note in the aggregate original principal amount of \$45.0 million. See further discussion of this acquisition at Note 3 *ARAM Acquisition above*.

In November 2007, approximately \$52.8 million of the Company's \$60.0 million 5.5% convertible senior notes was converted. This resulted in a non-cash reclassification from long-term debt to stockholders' equity as the Company issued approximately 12.2 million shares. In July 2008, approximately \$4.0 million of the Company's \$7.2 million 5.5% convertible senior notes was converted. This resulted in a non-cash reclassification from long-term debt to stockholders' equity as the Company issued approximately 0.9 million shares.

In 2009, 2008 and 2007, the Company purchased \$0.4 million, \$5.9 million and \$6.0 million, respectively, of computer and other equipment, which were financed through capital leases.

**(7) Property, Plant, Equipment and Seismic Rental Equipment**

A summary of property, plant and equipment is as follows (in thousands):

	December 31,	
	2009	2008
Land	\$ 25	\$ 25
Buildings	15,710	15,697
Machinery and equipment	90,656	103,377
Lease and seismic rental equipment	65,856	18,329
Furniture and fixtures	4,735	4,834
Other	1,187	5,722
Total	178,169	147,984
Less accumulated depreciation	(99,614)	(88,855)
Property, plant, equipment and seismic rental equipment, net	\$ 78,555	\$ 59,129

Total depreciation expense for the years ended December 31, 2009, 2008 and 2007 was \$32.1 million, \$19.2 million and \$16.4 million, respectively. At December 31, 2009, a building of \$6.7 million at cost, less accumulated depreciation of \$4.7 million is

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continuing to be depreciated over its useful life, pursuant to a ten-year non-cancelable lease agreement (see Note 12 *Notes Payable, Long-term Debt and Lease Obligations* ).

#### **(8) Cost Method Investment**

In December 2004, the Company sold all of the capital stock of Applied MEMS, a wholly-owned subsidiary, to Colibrys Ltd. (Colibrys), a privately-held firm based in Switzerland. Colibrys manufactures micro-electro-mechanical-systems (MEMS) accelerometers used in the Company's VectorSeis digital, full-wave seismic sensors, as well as products for applications that include test and measurement, earthquake and structural monitoring, and defense. In exchange for the stock of Applied MEMS, the Company received shares of Colibrys equal to approximately 10% of the outstanding equity of Colibrys (valued at \$3.5 million), and the right to designate one member of the board of directors of Colibrys. Since 2004, the Company had made additional cash contributions to Colibrys of \$1.0 million. The investment is accounted for under the cost method.

To protect the Company's intellectual property rights, the Company retained ownership of its MEMS intellectual property, and in connection with its investment in Colibrys, the Company licensed certain intellectual property to Colibrys on a royalty-free basis. Additionally, the Company received preferential rights to Colibrys' MEMS technology for seismic applications involving natural resource extraction. The Company also entered into a five-year supply agreement with Colibrys and Applied MEMS, which provided for them to supply the Company with MEMS accelerometers on an exclusive basis in the Company's markets at agreed prices consistent with market prices. This supply agreement expired in December 2009, and the Company has no further purchase obligations to buy MEMS from Colibrys.

As part of the periodic cost method investment impairment review, the Company identified its investment in Colibrys as meeting impairment indicators as of December 31, 2009. The Company then calculated the fair value of its investment and based upon the Company's analysis, the Company determined that its investment was fully impaired from its original cost of \$4.5 million.

#### **(9) Goodwill**

On December 31, 2009, the Company completed the annual review of the carrying value of goodwill in the Marine Imaging Systems and Data Management Solutions reporting units and noted no impairments. The annual impairment test for 2009 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 further impairment charges.

On December 31, 2008, the Company completed the annual review of the carrying value of goodwill in the Land Imaging Systems (including ARAM), Marine Imaging Systems, Data Management Solutions and ION Solutions reporting units. For purposes of goodwill, ARAM was considered a separate reporting unit in 2008 since it was acquired late in that year and integration into Land Imaging Systems was not fully completed as of December 31, 2008. The Company determined during the fourth quarter of fiscal 2008 that the continued market and economic decline, the resulting decline in the North American and Russian land systems market, and the uncertainty of future revenues, income and related cash flows had resulted in impairments within its Land Imaging Systems, ARAM and ION Solutions reporting units. As a result of these evaluations, the Company determined the goodwill of these reporting units was fully impaired and recorded a goodwill impairment charge of \$242.2 million at December 31, 2008.

The following is a summary of the changes in the carrying amount of goodwill for the years ended December 31, 2009 and 2008 (in thousands):

	<b>Land</b>	<b>Marine</b>	<b>Data</b>	<b>ION</b>	
	<b>Imaging</b>	<b>Imaging</b>	<b>Management</b>	<b>Solutions</b>	<b>Total</b>
	<b>Systems</b>	<b>Systems</b>	<b>Solutions</b>	<b>Division</b>	
Balance at January 1, 2008	\$ 3,478	\$ 26,984	\$ 32,278	\$ 90,405	\$ 153,145
Goodwill acquired during the year	173,836				173,836
			(730)	(3,496)	(4,226)

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Impact of acquisition net operating losses				
Impact of foreign currency translation adjustments	(22,064)	(8,760)		(30,824)
Impairment losses	(155,250)		(86,909)	(242,159)
Balance at December 31, 2008	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

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During fiscal year 2008, the Company made adjustments to goodwill related to the tax affected portion of the net operating losses (NOLs) utilized with respect to the Company's previous GXT and Concept Systems acquisitions in 2004. These adjustments resulted in reductions of approximately \$4.2 million to the Company's goodwill balances.

#### (10) Intangible Assets

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. In the fourth quarter of 2008, the Company had recorded an intangible asset impairment charge of \$10.1 million, before tax, related to ARAM's customer relationships, trade name and non-compete agreements. This additional impairment during the first quarter of 2009 was the result of the continued overall economic and financial crisis, which has 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. As of December 31, 2009, no further impairment indicators were noted and no additional impairments of the Company's intangible assets had occurred. The Company's net book value associated with ARAM's acquired intangibles was \$34.8 million at December 31, 2009.

A summary of intangible assets, net, is as follows (in thousands):

	<b>December 31, 2009</b>			
	<b>Gross Amount</b>	<b>Accumulated Amortization</b>	<b>Impairments</b>	<b>Net</b>
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
<b>Total</b>	<b>\$ 150,826</b>	<b>\$ (51,016)</b>	<b>\$ (38,044)</b>	<b>\$ 61,766</b>

	<b>December 31, 2008</b>			
	<b>Gross Amount</b>	<b>Accumulated Amortization</b>	<b>Impairments</b>	<b>Net</b>
Proprietary technology	\$ 80,755	\$ (11,997)	\$	\$ 68,758
Customer relationships	50,641	(15,065)	(5,130)	30,446
Trade names	14,516	(4,260)	(4,207)	6,049
Patents	3,689	(2,735)		954
Intellectual property rights	3,050	(2,514)		536
Non-compete agreements	1,575	(89)	(786)	700
<b>Total</b>	<b>\$ 154,226</b>	<b>\$ (36,660)</b>	<b>\$ (10,123)</b>	<b>\$ 107,443</b>

Total amortization expense for intangible assets for the years ended December 31, 2009, 2008 and 2007 was \$13.4 million, \$11.2 million, and \$8.3 million, respectively. A summary of the estimated amortization expense for the next five years is as follows (in thousands):

#### Years Ended December 31,

2010	\$ 12,281
2011	\$ 10,604
2012	\$ 9,334
2013	\$ 8,411



2014

\$ 6,767

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**(11) Accrued Expenses**

A summary of accrued expenses is as follows (in thousands):

	<b>December 31,</b>	
	<b>2009</b>	<b>2008</b>
Compensation, including compensation-related taxes and commissions	\$ 20,144	\$ 24,446
Accrued multi-client data library acquisition costs	13,890	17,654
Accrued taxes (primarily income taxes)	11,159	6,143
Product warranty	5,088	10,526
Other	15,612	18,669
<b>Total accrued expenses</b>	<b>\$ 65,893</b>	<b>\$ 77,438</b>

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 estimated. 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):

	<b>Years Ended December 31,</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
Balance at beginning of period	\$ 10,526	\$ 13,439	\$ 6,255
Opening balance for accruals for warranties for acquired entity		845	
Accruals (expirations) for warranties issued/expired during the period	(2,121)	4,624	13,074
Settlements made (in cash or in kind) during the period	(3,317)	(8,382)	(5,890)
<b>Balance at end of period</b>	<b>\$ 5,088</b>	<b>\$ 10,526</b>	<b>\$ 13,439</b>

**(12) Notes Payable, Long-term Debt and Lease Obligations**

	<b>December 31,</b>	
<b>Obligations</b>	<b>2009</b>	<b>2008</b>
\$140.0 million revolving line of credit	\$ 118,000	\$ 66,000
Term loan facility	101,563	120,313
Secured Equipment Financing	19,080	
Bridge loan		40,816
Amended and restated subordinated seller note	35,000	35,000
Subordinated seller note		10,000
Facility lease obligation	4,174	4,610
Equipment capital leases and other notes payable	8,220	15,170
Unamortized non-cash debt discount	(8,656)	
<b>Total</b>	<b>277,381</b>	<b>291,909</b>
<b>Current portion of notes payable, long-term debt and lease obligations</b>	<b>(271,132)</b>	<b>(38,399)</b>
<b>Non-current portion of notes payable, long-term debt and lease obligations</b>	<b>\$ 6,249</b>	<b>\$ 253,510</b>

*Revolving Line of Credit and Term Loan Amended Credit Facility.* The Company, its subsidiary, ION International S.à r.l. ( ION Sàrl), and certain of the Company's domestic and other foreign subsidiaries (as guarantors) are parties to a \$140.0 million amended and restated revolving credit facility and a \$125.0 million original principal amount term loan facility under the terms of its Amended Credit Facility, which is governed by the terms of its amended credit agreement with its commercial bank lenders. The revolving credit facility terminates on July 3, 2013 and provides additional flexibility for the Company's international capital needs by permitting non-U.S. borrowings by ION Sàrl under the facility and providing the Company and ION Sàrl the ability to borrow in alternative currencies. Under the terms of the Amended Credit Agreement, up to \$84.0 million (or its equivalent in foreign currencies) is available for borrowings by ION Sàrl and up to \$105.0 million is available for borrowings by the Company; however, the total level of outstanding borrowings under the revolving credit facility may not exceed \$140.0 million. The term loan indebtedness was borrowed in September 2008 to fund a portion of the cash consideration for the ARAM acquisition.

The interest rate on borrowings under the Amended Credit Facility is, at the Company's option, (i) an alternate base rate (either the prime rate of HSBC Bank USA, N.A., or a federal funds effective rate plus 0.50%, plus an applicable interest margin) or (ii) for Eurodollar borrowings and borrowings in Euros, pounds sterling or Canadian dollars, a LIBOR-based rate, plus an applicable interest margin. The amount of the applicable interest margin is determined by reference to a leverage ratio of total funded debt to consolidated EBITDA for the four most recent trailing fiscal quarters. The interest rate margins range from 2.875% to 5.5% for alternate base rate borrowings, and from 3.875% to 6.5% for Eurodollar borrowings. As of December 31, 2009, the \$101.6 million in outstanding term loan indebtedness under the Amended Credit Facility and the \$118.0 million in total outstanding revolving credit indebtedness under the Amended Credit Facility accrued interest at an applicable LIBOR-based interest rate of 6.7% per annum. The

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average effective interest rates for the quarter ended December 31, 2009 under the LIBOR-based rates for both the term loan indebtedness and the Amended Credit Facility (as a whole) were 6.2%, respectively.

The Company and its bank lenders entered into a Fifth Amendment to the Amended Credit Facility in June 2009. The principal modifications, excluding the amended financial covenants listed further below, to the terms of the Amended Credit Agreement resulting from the Fifth Amendment were as follows:

Increased applicable maximum interest rate margins in the event that the Company's leverage ratio exceeds 2.25 to 1.0 from 4.5% to up to 5.5% for alternate base rate loans, and from 5.5% to up to 6.5% for LIBOR-rate loans;

Modified a restricted payments covenant, permitting the Company to apply up to \$6.0 million of its available cash on hand to prepay the indebtedness under the Jefferies bridge loan agreement;

Added a requirement for the Company to apply 50% of its Excess Cash Flow, if any, calculated with respect to a just-completed fiscal year, to the prepayment of the term loan under the Amended Credit Agreement if the Company's fixed charge coverage ratio or its leverage ratio for the just-completed fiscal year did not meet certain requirements; and

Modified the Amended Credit Agreement to prohibit any increase in the revolving commitments under the Amended Credit Facility until the Company had delivered its compliance certificate for the period ending September 30, 2009, and then only if certain fixed charge coverage ratio and leverage ratio requirements were met.

The Amended Credit Agreement contains covenants that restrict the Company, subject to certain exceptions, from:

Incurring additional indebtedness (including capital lease obligations), granting or incurring additional liens on the Company's properties, pledging shares of the Company's subsidiaries, entering into certain merger or other similar transactions, entering into transactions with affiliates, making certain sales or other dispositions of assets, making certain investments, acquiring other businesses and entering into certain sale-leaseback transactions with respect to certain of the Company's properties; or

Paying cash dividends on the Company's common stock and repurchasing and acquiring shares of the Company's common stock unless (i) there is no event of default under the Amended Credit Facility and (ii) the amount of cash used for cash dividends, repurchases and acquisitions does not, in the aggregate, exceed an amount equal to the excess of 30% of ION's domestic consolidated net income for the Company's most recently completed fiscal year over \$15.0 million.

The Amended Credit Facility also requires the Company to be in compliance with certain financial covenants, including requirements for the Company and its domestic subsidiaries to:

Maintain a minimum fixed charge coverage ratio (which must be not less than 1.10 to 1.0 for the fiscal quarter ended December 31, 2009; 1.15 to 1.0 for the fiscal quarter ending March 31, 2010; 1.25 to 1.0 for the fiscal quarter ending June 30, 2010; 1.35 to 1.0 for the fiscal quarter ending September 30, 2010; and 1.50 to 1.0 the fiscal quarter ending December 31, 2010 and thereafter);

Not exceed a maximum leverage ratio (3.00 to 1.0 for each of the fiscal quarters ended December 31, 2009; 2.75 to 1.0 for the fiscal quarter ending March 31, 2010 and June 30, 2010; 2.5 to 1.0 for the fiscal quarter ending September 30, 2010; and 2.25 to 1.0 the fiscal quarter ending December 31, 2010 and thereafter); and

Maintain a minimum tangible net worth of at least 80% of the Company's tangible net worth as of September 18, 2008 (the date that the Company completed its acquisition of ARAM), plus 50% of the Company's consolidated net income for each quarter thereafter, and 80% of the proceeds from any mandatorily convertible notes and preferred and common stock issuances for each quarter thereafter.

On October 23, 2009, the Company and ION S.à.r.l. entered into a Sixth Amendment to the Amended and Restated Credit Agreement that, among other things, (i) increased the aggregate revolving commitment amount under the Amended Credit Facility from \$100.0 million to \$140.0 million, (ii) permitted Bank of China, New York Branch, to join the Amended Credit Facility, (iii) modified, or provided limited waivers of, certain of the financial and other covenants contained in the Amended Credit Facility (including waivers to the extent necessary to permit the issuance of the BGP Warrant) and (iv) permitted the principal amount of the new revolving credit loans from Bank of China (as evidenced by the Convertible Notes) to be convertible into shares of our common

stock. See further discussion on the proposed joint venture above at Note 2 *Term Sheet with BGP and Bridge Financing Transactions*.

The execution of the Sixth Amendment, which included waivers of the financial covenants contained in the Amended Credit Facility for the fiscal quarters ending September 30, 2009, December 31, 2009, March 31, 2010 and June 30, 2010, should enable the Company to conduct its operations without defaulting under the Amended Credit Facility until the transactions with BGP are completed, which the Company currently believes will occur in March 2010. Without these waivers, the Company would not have been in compliance with certain of its financial covenants at September 30, 2009 or at December 31, 2009. However, any failure to comply with the Company's other covenants under the Amended Credit Facility could result in an event of default that, if not cured or waived, could have a material adverse effect on the Company's financial condition, results of operations and debt service capabilities.

If the proposed transactions under the Term Sheet with BGP are not completed by March 31, 2010, then the current waivers, upon notice from the lenders after a designated period of time, would cease to be effective and the Company at that time would likely not be in compliance with certain of the financial covenants contained in the Amended Credit Facility, which could then result in an event of default. As the current waivers cover a period of less than twelve months from December 31, 2009, the Company has classified its long-term indebtedness under its revolving line of credit and term loan facility under the Amended Credit Facility as current at December 31, 2009. As a result of the cross-default provisions in its secured equipment financing and its amended and restated subordinated seller note, the Company has also classified these long-term obligations as current at December 31, 2009.

The term loan indebtedness under the Amended Credit Facility is subject to scheduled quarterly amortization payments of \$4.7 million per quarter until December 31, 2010. Commencing on December 31, 2010, the quarterly principal amortization increases to \$6.3 million per quarter until December 31, 2012, when the quarterly principal amortization amount increases to \$9.4 million for each quarter until maturity on September 17, 2013. The term loan indebtedness matures on September 17, 2013, but the terms of the Amended Credit Facility allow the administrative agent to accelerate the maturity date to a date that is six months prior to the maturity date of additional debt financing that the Company may incur to refinance certain indebtedness incurred in connection with the ARAM acquisition.

The Amended Credit Facility contains customary events of default provisions (including an event of default upon any change of control event affecting the Company), the occurrence of which could lead to an acceleration of ION's payment obligations under the Amended Credit Facility.

The Amended Credit Facility includes a \$35.0 million sub-limit for the issuance of documentary and stand-by letters of credit, of which \$1.2 million was outstanding at December 31, 2009. As of December 31, 2009, the Company had available \$20.0 million of additional revolving credit borrowing capacity, which can be used solely for funding additional letters of credit under the Amended Credit Facility.

The obligations of the Company and ION Sàrl under the Amended Credit Facility are guaranteed by certain domestic and foreign subsidiaries of the Company and are secured by security interests in stock of the domestic guarantors and certain first-tier foreign subsidiaries, and by substantially all of the Company's other assets and those of the guarantors. The obligations of ION Sàrl and the foreign guarantors are secured by security interests in all of the stock of the foreign guarantors and the domestic guarantors, and substantially all of the Company's assets and the other assets of the foreign guarantors and the domestic guarantors.

*Convertible Notes and Warrant.* On October 27, 2009, the Company borrowed an aggregate of \$40.0 million in the form of revolving credit bridge financing arranged by BGP from Bank of China, New York Branch and evidenced by the Convertible Notes. This borrowing was permitted by the terms of the Sixth Amendment to the Credit Facility, which increased the aggregate revolving commitment amount under the accordion feature provisions of the Amended Credit Facility from \$100.0 million to \$140.0 million and permitted Bank of China to join the Amended Credit Facility as a lender. As further described above, the total outstanding indebtedness under the Amended Credit Facility, which includes the Bank of China bridge loans, was \$118.0 million, excluding the non-cash debt discount, at December 31, 2009.

The Convertible Notes, issued in October 2009 in connection with the execution of the Term Sheet with BGP, provide that at the stated initial conversion price of \$2.80 per share, the full \$40.0 million principal amount under the Convertible Notes would be convertible into 14,285,714 shares of Common Stock. The Convertible Notes provide

that the conversion price and the number of shares into which the notes may be converted are subject to adjustment on terms and conditions similar to those contained in the Warrant.

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As part of BGP arranging for the Bank of China to join the Amended Credit Facility, the Company granted the Warrant to BGP. The Warrant will be exercisable, in whole or in part, at any time and from time to time, subject to the conditions described below. The Warrant will initially entitle the holder thereof to purchase a number of shares of common stock equal to \$40.0 million divided by the exercise price of \$2.80 per share, subject to adjustment as described below. At the initial exercise price of \$2.80 per share, at such time as the Warrant becomes exercisable, it would initially be fully exercisable for 14,285,714 shares of common stock.

The Warrant will only become exercisable and the Convertible Notes will only become convertible upon receipt of certain governmental approvals. Any conversions of the Convertible Notes and prior exercises of the Warrant will reduce the dollar amount under the Warrant into which the exercise price may be divided to determine the number of shares that may be acquired upon exercise.

The exercise price under the Warrant and conversion prices under the Convertible Notes will be subject to adjustment upon the occurrence of a Triggering Event. A Triggering Event will occur in the event that the proposed joint venture transactions with BGP cannot be completed by March 31, 2010, solely as a result of the occurrence of a statement, order or other indication from any relevant governmental regulatory agency that (a) the transactions would not be approved, would be opposed, objected to or sanctioned or (b) the transactions or BGP's business and operations would be required to be altered (or upon the earlier abandonment of such transactions due to any such statement, indication or order). In such event, the exercise price and conversion price per share will be adjusted (but not to an amount that exceeds \$2.80 per share) to a price per share that is equal to 75% of the lowest trading price of our common stock over a ten-consecutive-trading-day period, beginning on and inclusive of the first trading day following the public announcement of any failure to complete such transactions (or the abandonment thereof), which failure or abandonment was the result of the Triggering Event. The exercise price of the Warrant and conversion prices of the Convertible notes are also subject to certain customary anti-dilution adjustments.

The Warrant provides for certain cashless exercise rights that are exercisable by the holder of the Warrant in the event that certain governmental approvals from the People's Republic of China permitting the exercise of the Warrant for cash are not obtained.

At the same time as the closing of the joint venture transactions, all of the then-outstanding principal amounts under the Convertible Notes will be automatically converted into shares of common stock unless, at the option of the holder of the Warrant, the holder elects to exercise the Warrant in whole or in part, in lieu of the full conversion of such remaining principal amounts under the Convertible Notes.

Assuming that no adjustments occur to the exercise or conversion prices of (or the number of shares to be issued under) the Warrant or the Convertible Notes prior to closing the joint venture transactions, the Term Sheet provides that at the closing of the transactions, BGP would purchase directly from the Company a number of shares of Common Stock at a purchase price of \$2.80 per share such that, when added to the total number of shares of Common Stock that may have been issued pursuant to conversion of the Convertible Notes and /or exercise of the Warrant, BGP (and its transferees and permitted assignees) would own, together, 19.99% of the Company's issued and outstanding shares of Common Stock (i.e. 23.8 million shares) before giving effect to the issuance of those shares.

As discussed above, the exercise price of the Warrant is subject to adjustment resulting from Triggering Event. Following the guidance of ASC 815 *Determining Whether an Instrument (or Embedded Feature) Is Indexed to an Entity's Own Stock*, the Company determined that the Warrant is not considered indexed to the Company's own stock and is therefore 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 associated with the day-one fair value of the Warrant, which is being amortized over the expected term of the notes (March 31, 2010). Approximately \$6.7 million of this non-cash debt discount was recognized as interest expense during the year ended December 31, 2009. The Company also recorded a subsequent non-cash fair value adjustment of \$29.4 million, reflecting a total non-cash liability associated with the Warrant of \$44.8 million at December 31, 2009.

*Secured Equipment Financing.* On June 29, 2009, the Company entered into a \$20.0 million secured equipment financing transaction with ICON. Two master loan agreements were entered into with ICON in connection with this financing transaction: (i) the Company, ARAM Rentals Corporation, a Nova Scotia unlimited company (ARC), and ICON entered into a Canadian Master Loan and Security Agreement dated as of June 29, 2009 with regard to certain

seismic equipment leased to customers by ARC, and (ii) the Company, ARAM Seismic Rentals, Inc., a Texas corporation ( ASRI ), and ICON entered into a Master Loan and Security Agreement (U.S.) dated as of June 29, 2009 with regard to certain seismic equipment leased to customers by ASRI (collectively, the ICON Loan Agreements ). All borrowed indebtedness under the ICON Loan Agreements is scheduled to mature on July 31, 2014. The Company used the proceeds of the secured term loans for working capital and general corporate purposes.

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Under the ICON Loan Agreements, ICON advanced \$12.5 million on June 29, 2009 and \$7.5 million on July 20, 2009. The indebtedness under the ICON Loan Agreements is secured by first-priority liens in (a) certain ARAM seismic rental equipment owned by ARC or ASRI located in the United States and Canada (subject to certain exceptions), and certain additional and replacement seismic equipment owned by such subsidiaries from time to time, (b) written leases or other agreements evidencing payment obligations relating to the leasing by ARC or ASRI of this equipment to their respective customers, including their related receivables, (c) the cash or cash equivalents held by such subsidiaries and (d) any proceeds thereof.

The repayment obligations of each of ARC and ASRI under the ICON Loan Agreements are guaranteed by the Company under a Guaranty dated as of June 29, 2009 (the Guaranty). The indebtedness under the ICON Loan Agreements and the Guaranty constitute permitted indebtedness under the Amended Credit Facility.

Under both ICON Loan Agreements, interest on the outstanding principal amount will accrue at a fixed interest rate of 15% per annum calculated monthly, and is payable monthly on the first day of each month. Principal and interest are payable, commencing on September 1, 2009, in 60 monthly installments until the maturity date, when all remaining outstanding principal and interest will be due and payable. Pursuant to the ICON Loan Agreements, ICON received a non-refundable upfront fee of \$0.3 million. In addition, ICON will receive an administrative fee equal to 0.5% of the aggregate principal amount of advances under the ICON Loan Agreements, payable at the end of each of the first four years during their terms. Inclusive of these additional fees, the effective interest rate on the secured equipment financing was 16.3% as of December 31, 2009.

Beginning on August 1, 2012, and continuing until January 31, 2014, the outstanding principal balances of the loans may be prepaid in full by giving ICON 30 days prior written notice and paying a prepayment fee equal to 3.0% of the then-outstanding principal amount of the loans. Commencing on February 1, 2014, the loans may be prepaid in full by giving ICON 30 days prior written notice and without payment of any prepayment penalty or fee.

The ICON Loan Agreements contain certain cross-default provisions with respect to defaults under the Company's Amended Credit Facility. Therefore, similar to the current classification of the Amended Credit Facility indebtedness, the Company has also classified this long-term indebtedness as current.

Assuming that the BGP joint venture transaction is completed as planned, the Company anticipates that the obligations under the Guaranty will be assumed by a joint venture entity, although it is also expected that the Company would remain secondarily liable on the Guaranty.

*Amended and Restated Subordinated Seller Note.* As part of the purchase price for the ARAM acquisition, in September 2008, the Company's acquisition subsidiary (ION Sub) issued an unsecured senior promissory note in the original principal amount of \$35.0 million (the Senior Seller Note) to one of the selling shareholders of ARAM, now known as Maison Mazel Ltd. On December 30, 2008, in connection with acquisition refinancing transactions that were completed on that date, the terms of the Senior Seller Note were amended and restated pursuant to an Amended and Restated Subordinated Promissory Note dated December 30, 2008 (the Amended and Restated Subordinated Note). The principal amount of the Amended and Restated Subordinated Note is \$35.0 million, which matures on September 17, 2013. The Company also entered into a guaranty dated December 30, 2008, whereby the Company guaranteed on a subordinated basis, ION Sub's repayment obligations under the Amended and Restated Subordinated Note. Interest on the outstanding principal amount under the Amended and Restated Subordinated Note accrues at the rate of 15% per annum, and is payable quarterly.

The terms of the Amended and Restated Subordinated Note provide that the particular covenants contained in the Amended Credit Agreement (or in any successor agreement or instrument) that restrict the Company's ability to incur additional indebtedness will be incorporated into the Amended and Restated Subordinated Note. However, under the Amended and Restated Subordinated Note, neither Maison Mazel nor any other holder of the Amended and Restated Subordinated Note have a separate right to consent to or approve any amendment or waiver of the covenant as contained in the Amended Credit Facility.

In addition, ION Sub agreed that if it incurs indebtedness under any financing that: qualifies as Long Term Junior Financing (as defined in the Amended Credit Agreement), results from a refinancing or replacement of the Amended Credit Facility such that the aggregate principal indebtedness (including revolving commitments) thereunder would be in excess of \$275.0 million, or



qualifies as unsecured indebtedness for borrowed money that is evidenced by notes or debentures, has a maturity date of at least five years after the date of its issuance and results in total gross cash proceeds to the Company of not less than \$40.0 million,

then ION Sub is obligated to repay in full from the total proceeds from such financing the then-outstanding principal of and interest on the Amended and Restated Subordinated Note.

The indebtedness under the Amended and Restated Subordinated Note is subordinated to the prior payment in full of the Company's Senior Obligations, which is defined in the Amended and Restated Subordinated Note as the principal, premium (if any), interest and other amounts that become due in connection with:

the Company's obligations under the Amended Credit Facility,

the Company's liabilities with respect to capital leases and obligations that qualify as a Sale/Leaseback Agreement (as that term is defined in the Amended Credit Agreement),

guarantees of the indebtedness described above, and

debentures, notes or other evidences of indebtedness issued in exchange for, or in the refinancing of, the Senior Obligations described above, or any indebtedness arising from the payment and satisfaction of any Senior Obligations by a guarantor.

In April 2009, ION Sub assigned the Amended and Restated Subordinated Note to the Company, and the related guaranty by the Company of ION Sub's repayment obligations was terminated. In connection with this assignment, ION Sub was released from its obligations under the Amended and Restated Subordinated Note.

The Amended and Restated Subordinated Seller Note contains certain cross-default provisions with respect to defaults and acceleration of indebtedness under the Company's Amended Credit Facility. Therefore, similar to the current classification of the Amended Credit Facility, the Company has also classified this long-term indebtedness as current.

*Bridge Loan.* On December 30, 2008, the Company and certain of its domestic subsidiaries (as guarantors) entered into the Bridge Loan Agreement with Jefferies Finance LLC (Jefferies). Under the Bridge Loan Agreement, the Company borrowed \$40.8 million in unsecured indebtedness (the Bridge Loan) to refinance certain outstanding short-term indebtedness that had been loaned to the Company by Jefferies in connection with the completion of the Company's acquisition of ARAM in September 2008. The maturity date of the Bridge Loan was January 31, 2010. In June 2009, the Company repaid the entire outstanding Bridge Loan indebtedness using the net proceeds of \$38.2 million from a private placement of its common stock and \$2.6 million of operating cash. Under the Bridge Loan Agreement, the Company was required to pay to Jefferies a non-refundable initial duration fee of 3.0% of the aggregate principal amount of the Bridge Loan outstanding (if any) on June 30, 2009 and a non-refundable additional duration fee of 2.0% of the aggregate principal amount of the Bridge Loan outstanding (if any) on September 30, 2009. However, due to the prepayment in June 2009, no such duration fees were required to be paid to Jefferies. The annual interest rate on the Bridge Loan at the time of its repayment was 15%. Inclusive of these additional fees (and an upfront fee previously paid of 5.0%), the effective interest rate on the Bridge Loan was 25.3% at the time of its repayment.

*Subordinated Seller Note.* As part of the purchase price for the ARAM acquisition in September 2008, ION Sub also issued to Maison Mazel, Ltd., one of the selling shareholders of ARAM, an unsecured promissory note in the principal amount of \$10.0 million. In connection with the refinancing transactions that occurred in December 2008, the obligations of ION Sub and the Company under this note and a related guaranty were terminated and extinguished in exchange for the Company's assignment to Maison Mazel, Ltd. of the Company's rights to a Canadian federal income tax refund (the Refund Claim). However, while the indebtedness under this note was legally extinguished, the liability for financial accounting purposes could not be extinguished on the Company's consolidated balance sheet, and was included as short-term debt. In May 2009, the Company received and submitted to Maison Mazel, Ltd. the final Refund Claim. In June 2009, the remaining balance of \$0.7 million of this indebtedness was paid.

*Facility Lease Obligation.* In 2001, the Company sold its facilities, located in Stafford, Texas, for \$21.0 million. 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.

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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 \$4.2 million was outstanding at December 31, 2009. 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 equipment loans that are due in installments for the purpose of financing the purchase of computer equipment, in the form of capital leases expiring in various years through 2012. Interest charged under these loans range from 1.3% to 8.0% and the leases are collateralized by liens on the computer equipment. The assets and liabilities under these capital leases are recorded at the lower of the present value of the minimum lease payments or the fair value of the assets. 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.

The following table was compiled based upon the current presentation of the Company's debt in its balance sheet and not on the original terms and maturity dates of the respective debt instruments. A summary of future principal obligations under the notes payable, long-term debt and equipment capital lease obligations are as follows (in thousands):

<b>Years Ended December 31,</b>	<b>Notes Payable and Long-Term Debt</b>	<b>Capital Lease Obligations</b>
2010	\$ 275,905	\$ 4,182
2011	610	2,425
2012	714	295
2013	832	
2014	966	
2015 and thereafter	535	
Less: Unamortized non-cash debt discount	(8,656)	
<b>Total</b>	<b>\$ 270,906</b>	<b>6,902</b>
Imputed interest		(427)
Net present value of equipment capital lease obligations		6,475
Current portion of equipment capital lease obligations		3,884
Long-term portion of equipment capital lease obligations		\$ 2,591

### **(13) Cumulative Convertible Preferred Stock**

During 2005, the Company entered into an Agreement dated February 15, 2005 with Fletcher International, Ltd. (Fletcher) (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 the remaining 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 as the Series D Preferred Stock. Fletcher remains the sole holder of all of the Company's outstanding shares of Series D Preferred Stock.

Until November 2008, all shares of Series D Preferred Stock had substantially similar terms, except for their conversion prices, which were as follows:

The conversion price for the Series D-1 Preferred Stock was \$7.869 per share;

The conversion price for the Series D-2 Preferred Stock was \$16.0429 per share; and

The conversion price for the Series D-3 Preferred Stock was \$14.7981 per share.

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The terms of the Series D Preferred Stock had provided that the shares could be redeemed for cash or in shares of common stock, calculated based upon the prevailing market price of the Company's common stock at the time of redemption. Dividends on the shares of Series D Preferred Stock could be payable, at the Company's election, in cash or in shares of the Company's common stock. To date, all dividends paid on the Series D Preferred Stock have been paid in cash.

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 and elect to either:

satisfy all future redemption obligations by distributing only cash, or a combination of cash and common stock, or reset the conversion prices of all of the outstanding shares of Series D Preferred Stock to the Minimum Price, in which event Fletcher would have no further rights to redeem its shares of Series D Preferred Stock.

In addition, the Fletcher Agreement provided that upon the Company's delivery of the Reset Notice, the Company would thereafter be required to pay all future dividends on shares of Series D Preferred Stock in cash.

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 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 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.

As a result of these elections and notices:

Fletcher is no longer permitted to redeem its shares of Series D Preferred Stock,

the Company is required to pay all future dividends on the Series D Preferred Stock in cash and may not pay such dividends in shares of its common stock, and

the Maximum Number of shares of common stock into which the shares of Series D Preferred Stock may be converted is 9,669,434 shares.

The conversion prices and number of shares of common stock to be acquired upon conversion are also subject to customary anti-dilution adjustments.

The accounting impact as a result of these elections and notices were as follows:

**Beneficial conversion charge** The reset of the conversion prices triggered a contingent beneficial conversion feature. Following the guidance of ASC 470-20, *Application of Issue No. 98-5 to Certain Convertible Instruments*, the Company recorded a beneficial conversion charge of \$68.8 million during the year ended December 31, 2008. This charge was calculated at its intrinsic value at the original commitment date. The total charge was limited to the amount of proceeds allocated to the convertible instruments.

**Classification of preferred stock** The Company originally classified the preferred stock outside of stockholders equity on the balance sheet below total liabilities. However, with the termination of the redemption rights, there are no other provisions that could require cash redemption. Therefore, in the fourth quarter of 2008, the Company reclassified the preferred stock to stockholders equity.

Elimination of rights of redemption The outstanding shares of the Series D-2 Preferred Stock and the Series D-3 Preferred Stock were subject to the accounting guidance contained in ASC Topic 815-10: *Determining the Nature of a Host Contract Related to a Hybrid Financial Instrument Issued in the Form of a Share under FASB Statement No. 133* (ASC 815-10). ASC 815-10 became effective on a prospective basis on July 1, 2007, and the additional guidance and clarification of ASC 815-10 applies to transactions occurring after July 1, 2007. Under ASC 815-10, the redemption features of the Series D-2 Preferred Stock and the Series D-3 Preferred Stock were embedded derivatives that were required to be bifurcated and accounted for separately at their fair value. The fair value of the redemption features had been classified as a liability on the balance sheet of the Company and, on a quarterly basis, changes in the fair value of these redemption features had been reflected in the income statement below income from operations. However, after the resetting of the conversion prices, Fletcher has no further rights to redeem its shares. Therefore, the redemption obligation was eliminated, resulting in a positive fair value adjustment of \$1.2 million for the year ended December 31, 2008.

On September 15, 2009, Fletcher delivered a second notice to the Company that purported 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 gave Fletcher the right to issue only one notice to increase the Maximum Number (which Fletcher had exercised in November 2008). 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 is permitted to deliver only one notice to increase the Maximum Number and that its purported second notice is legally invalid. See further discussion of this action and other legal actions between Fletcher and the Company at Note 19 *Legal Matters*.

#### **(14) 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 their 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, 2009, there were 7,766,188 shares issued or committed for issuance under outstanding options under the Company's stock option plans, and 410,873 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:

	<b>Option Price per Share</b>	<b>Outstanding</b>	<b>Vested</b>	<b>Available for Grant</b>
January 1, 2007	\$ 1.73-\$30.00	6,824,648	4,335,587	696,286
Increase in shares authorized				2,400,000



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Granted	13.52-16.03	1,381,200		(1,381,200)
Vested			968,250	
Exercised	1.73-12.45	(1,036,794)	(1,036,794)	
Cancelled/forfeited	3.35-30.00	(329,413)	(66,601)	279,544

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	<b>Option Price per Share</b>	<b>Outstanding</b>	<b>Vested</b>	<b>Available for Grant</b>
Restricted stock granted out of option plans				(473,708)
Restricted stock forfeited or cancelled for employee minimum income taxes and returned to the plans				90,122
December 31, 2007	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

Stock options outstanding at December 31, 2009 are summarized as follows:

<b>Option Price per Share</b>	<b>Outstanding</b>	<b>Weighted Average Exercise Price of Outstanding Options</b>	<b>Weighted Average Remaining Contract Life</b>	<b>Vested</b>	<b>Weighted Average Exercise Price of Vested Options</b>
\$1.07 \$1.73	33,522	\$ 1.34	5.5	13,522	\$ 1.73
2.49 3.80	1,892,850	\$ 2.97	7.9	669,288	\$ 2.93
3.85 5.81	844,441	\$ 5.31	7.1	326,691	\$ 5.10
5.94 9.01	2,350,375	\$ 6.60	4.1	2,326,625	\$ 6.58
9.08 14.03	1,326,350	\$ 10.36	5.7	1,081,353	\$ 10.27

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14.10	16.39	1,318,650	\$	15.17	8.1	625,203	\$	15.29
Totals		7,766,188	\$	7.65	6.3	5,042,682	\$	7.86

Additional information related to the Company's stock options is as follows:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Life in Years	Aggregate Intrinsic Value (000 \$)
Total outstanding at January 1, 2009	7,893,275	\$ 8.11		7.1	
Options granted	635,750	\$ 4.90	\$ 3.17		
Options exercised	(9,837)	\$ 2.17			
Options cancelled	(186,300)	\$ 10.04			
Options forfeited	(566,700)	\$ 10.28			
Total outstanding at December 31, 2009	7,766,188	\$ 7.65		6.3	\$ 6,263
Options exercisable and vested at December 31, 2009	5,042,682	\$ 7.86		5.0	\$ 2,327

The total intrinsic value of options exercised during the twelve months ended December 31, 2009, 2008 and 2007 was less than \$0.1 million, and approximately \$4.8 million and \$13.5 million, respectively. Cash received from option exercises under all share-based payment arrangements for the twelve months ended December 31, 2009 and 2008 was less than \$0.1 million and approximately \$6.3 million, respectively. The weighted average grant date fair value for stock option awards granted during the twelve months ended December 31, 2009, 2008 and 2007 was \$3.17, \$3.02, and \$7.55 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, 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. Except for these restrictions, the grantee of an award of shares of restricted stock has all the rights of a common stockholder, including the right to vote such shares.

The status of the Company's restricted stock and restricted stock unit awards for the year ended December 31, 2009 is as follows:

	<b>Number of Shares/Units</b>
Total nonvested at January 1, 2009	876,542
Granted	574,874
Vested	(531,043)
Forfeited	(142,368)
 Total nonvested at December 31, 2009	 778,005

At December 31, 2009, the intrinsic value of restricted stock and restricted stock unit awards was approximately \$4.6 million. The weighted average grant date fair value for restricted stock and restricted stock unit awards granted during the twelve months ended December 31, 2009, 2008 and 2007 was \$4.79, \$5.79 and \$14.97 per share. The total fair value of shares vested during the twelve months ended December 31, 2009, 2008 and 2007 was \$4.7 million, \$5.3 million, and \$6.5 million, respectively.

**Employee Stock Purchase Plan**

In April 1997, the Company adopted an Employee Stock Purchase Plan (ESPP), which allowed all eligible employees to authorize payroll deductions at a rate of 1% to 15% of base compensation for the purchase of the Company's common stock. The purchase price of the common stock was 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 was six months and commenced on January 1 and July 1 of each year. The ESPP was considered a compensatory plan under ASC 718. The Company recorded compensation expense of approximately \$0.4 million during the years ended December 31, 2008 and 2007, respectively. The expense represented 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. There were 109,943 and 113,763 shares purchased by employees during the years ended December 31, 2008 and 2007, respectively. Effective December 31, 2008, the ESPP was terminated. While the plan was terminated on December 31, 2008, the shares purchased (109,650) on January 1, 2009 were recorded and included in the financial statements as of December 31, 2009.

**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.

In December 2008, the Company granted to three individuals a total of 575,000 SAR awards with a weighted average exercise price of \$6.24. The Company recorded \$0.8 million and \$0.2 million, respectively, of share-based compensation expense during the twelve months ended December 31, 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.

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**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					
	2009		2008		2007	
Risk-free interest rates	1.6%	2.4%	1.5%	3.4%	3.4%	4.9%
Expected lives (in years)	3.6	5.5	4.7	5.0	4.5	5.0
Expected dividend yield		0%		0%		0%
Expected volatility	75.0%	91.9%	44.7%	83.2%	45.0%	53.3%

The computation of expected volatility during the twelve months ended December 31, 2009, 2008 and 2007 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 2009, 2008 and 2007 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.

**(15) Segment and Geographic Information**

In order to allow for increased visibility and accountability of costs and more focused customer service and product development, the Company evaluates and reviews results based on four segments: three of these segments—Land Imaging Systems, Marine Imaging Systems and Data Management Solutions—make up the ION Systems Division, and the fourth segment is the ION Solutions Division. The Company's land sensors business unit, which specializes in the design and manufacture of geophones, and its land imaging systems business unit have been aggregated to form the Land Imaging Systems segment. The Company measures segment operating results based on income from operations.

A summary of segment information for the years ended December 31, 2009, 2008 and 2007, is as follows (in thousands):

	Years Ended December 31,		
	2009	2008	2007
Net revenues:			
ION Systems Division:			
Land Imaging Systems	\$ 103,038	\$ 200,493	\$ 325,037
Marine Imaging Systems	103,024	182,710	177,685
Data Management Solutions	33,733	37,240	37,660
Total ION Systems Division	239,795	420,443	540,382
ION Solutions Division	179,986	259,080	172,729
Total	\$ 419,781	\$ 679,523	\$ 713,111
Income (loss) from operations:			
ION Systems Division:			
Land Imaging Systems	\$ (39,126)	\$ (13,662)	\$ 28,681
Marine Imaging Systems	29,632	52,624	44,727
Data Management Solutions	19,970	22,298	17,290

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Total ION Systems Division	10,476	61,260	90,698
ION Solutions Division	27,747	40,534	21,646
Corporate and other	(58,395)	(62,334)	(48,450)
Impairment of goodwill and intangible assets	(38,044)	(252,283)	
Total	\$ (58,216)	\$ (212,823)	\$ 63,894

Depreciation and amortization (including multi-client data library):

ION Systems Division:			
Land Imaging Systems	\$ 26,204	\$ 9,094	\$ 4,036
Marine Imaging Systems	1,456	1,655	1,383
Data Management Solutions	2,665	3,145	3,329
Total ION Systems Division	30,325	13,894	8,748
ION Solutions Division	62,930	96,995	53,220
Corporate and other	3,105	2,695	2,461
Total	\$ 96,360	\$ 113,584	\$ 64,429

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	<b>December 31,</b>	
	<b>2009</b>	<b>2008</b>
Total assets:		
ION Systems Division:		
Land Imaging Systems	\$ 316,895	\$ 398,473
Marine Imaging Systems	107,883	146,877
Data Management Solutions	40,133	41,293
Total ION Systems Division	464,911	586,643
ION Solutions Division	221,596	222,206
Corporate and other	61,679	52,582
Total	\$ 748,186	\$ 861,431

	<b>December 31,</b>	
	<b>2009</b>	<b>2008</b>
Total assets by geographic area:		
North America	\$ 520,454	\$ 644,165
Europe	56,413	63,560
Middle East	111,056	113,324
Latin America	50,374	34,608
Other	9,889	5,774
Total	\$ 748,186	\$ 861,431

The Company's results of operations and financial condition have been affected by the acquisition of ARAM in September 2008 and impairments of assets during the periods presented, which may affect the comparability of the financial information. 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 all facilities that are jointly utilized by segments. 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):

	<b>Years Ended December 31,</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
North America	\$ 152,995	\$ 272,567	\$ 267,673
Europe	92,760	202,170	179,064
Asia Pacific	67,199	57,470	131,683
Commonwealth of Independent States (CIS)	4,739	30,051	52,247
Africa	25,435	31,693	37,116
Middle East	42,403	32,872	29,311
Latin America	34,250	52,700	16,017
Total	\$ 419,781	\$ 679,523	\$ 713,111

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.

**(16) Income Taxes**

The sources of income (loss) before income taxes are as follows (in thousands):

	<b>Years Ended December 31,</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
Domestic	\$ (91,646)	\$ (82,811)	\$ 36,453
Foreign	(38,398)	(137,096)	19,014
Total	\$ (130,044)	\$ (219,907)	\$ 55,467

Components of income taxes are as follows (in thousands):

	<b>Years Ended December 31,</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
Current:			
Federal	\$ 526	\$ 58	\$ 2,499
State and local	74	208	(222)
Foreign	17,565	18,414	7,586
Deferred (U.S. and foreign)	(38,150)	(17,549)	2,960
Total income tax (benefit) expense	\$ (19,985)	\$ 1,131	\$ 12,823

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A reconciliation of the expected income tax expense on income (loss) before income taxes using the statutory federal income tax rate of 35% for the years ended December 31, 2009, 2008 and 2007 to income tax expense is as follows (in thousands):

	<b>Years Ended December 31,</b>		
	<b>2009</b>	<b>2008</b>	<b>2007</b>
Expected income tax expense at 35%	\$ (45,515)	\$ (76,967)	\$ 19,414
Alternate minimum tax	526	58	2,499
Foreign taxes (tax rate differential and foreign tax differences)	4,288	2,367	29,865
Nondeductible financing	12,646		
Nondeductible goodwill		84,756	
State and local taxes	74	269	(282)
Deferred tax asset valuation allowance	6,531	(9,613)	(39,266)
Nondeductible expenses	1,465	261	593
<b>Total income (benefit) tax expense</b>	<b>\$ (19,985)</b>	<b>\$ 1,131</b>	<b>\$ 12,823</b>

The tax effects of the cumulative temporary differences resulting in the net deferred income tax asset (liability) are as follows (in thousands):

	<b>December 31,</b>	
	<b>2009</b>	<b>2008</b>
Current deferred:		
Deferred income tax assets:		
Accrued expenses	\$ 5,428	\$ 8,812
Allowance accounts	10,965	9,557
Inventory	(257)	(103)
<b>Total current deferred income tax asset</b>	<b>16,136</b>	<b>18,266</b>
Valuation allowance	(5,405)	(4,401)
<b>Net current deferred income tax asset</b>	<b>10,731</b>	<b>13,865</b>
Deferred income tax liabilities:		
Unbilled receivables	(4,945)	(9,877)
<b>Net current deferred income tax asset (liability)</b>	<b>\$ 5,786</b>	<b>\$ 3,988</b>
Non-current deferred:		
Deferred income tax assets:		
Net operating loss carryforward	\$ 26,268	\$ 4,632
Basis in research and development	26,087	26,674
Basis in property, plant, equipment and seismic rental equipment	3,492	2,122
Tax credit carryforwards and other	11,836	9,533
<b>Total non-current deferred income tax asset</b>	<b>67,683</b>	<b>42,961</b>
Valuation allowance	(27,721)	(24,697)

Net non-current deferred income tax asset	39,962	18,264
Deferred income tax liabilities:		
Basis in identified intangibles	(14,802)	(29,220)
Net non-current deferred income tax asset (liability)	\$ 25,160	\$ (10,956)

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. 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 until there is sufficient evidence to warrant reversal. In the event the Company's expectations of future operating results or the availability of certain tax planning strategies 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, 2009, the

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Company had net operating loss carry-forwards of approximately \$85.4 million, the majority of which expires beyond 2027. In 2008, approximately \$3.5 million of tax benefits related to acquired net operating losses were recorded as reductions of goodwill of the acquired companies.

As a result of the implementation of ASC Topic 740-10, *Accounting for Uncertainty in Income Taxes* an Interpretation of FASB Statement No. 109 (ASC 740-10) adopted on January 1, 2007, the Company recorded no adjustment to beginning retained earnings because there were no unrecognized tax benefits. As of December 31, 2009, 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 2005 and subsequent years remain subject to examination by tax authorities. The Company is no longer subject to IRS examination for periods prior to 2005, although carryforward attributes that were generated prior to 2005 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 2006 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 \$112.0 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.

During 2004, the Company recorded \$52.9 million and \$21.4 million as identifiable intangible assets related to its purchase of GXT and Concept Systems, respectively. During 2008, the Company recorded \$101.8 million as identifiable intangible assets related to its purchase of ARAM Systems. At December 31, 2008 and March 31, 2009, the Company recorded impairment charges related to these assets of \$10.1 million and \$38.0 million, respectively. These intangible assets are not deductible for federal income taxes. The deferred tax liability related to the GXT intangibles is included in the December 31, 2009 and 2008 deferred tax balances. The deferred tax liability related to the Concept Systems intangibles totaled \$1.4 million and \$1.9 million at December 31, 2009 and 2008, respectively. The deferred tax liability related to the ARAM intangibles totaled \$9.7 million and \$21.9 million, respectively, at December 31, 2009 and 2008.

#### **(17) Operating Leases**

*Lessee.* The Company leases certain equipment, offices, and warehouse space under non-cancelable operating leases. Rental expense was \$14.3 million, \$14.8 million, and \$11.7 million for the years ended December 31, 2009, 2008 and 2007, respectively.

A summary of future rental commitments over the next five years under non-cancelable operating leases is as follows (in thousands):

#### **Years Ended December 31,**

2010	\$ 12,603
2011	10,075
2012	8,394
2013	4,608
2014	3,410
Total	\$ 39,090

#### **(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. However, in April 2009, the Company suspended its match to employee's 401(k) plan contributions. Company contributions to the plans were

\$0.7 million, \$1.6 million, and \$1.5 million, during the years ended December 31, 2009, 2008 and 2007, respectively.

*Supplemental executive retirement plan.* The Company previously had 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

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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 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 asserted that WesternGeco misappropriated the Company's proprietary technology and breached a confidentiality agreement between the parties by using the Company's technology in its patents and products and 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.

*Fletcher.* During 2009, three lawsuits were filed in Delaware involving Fletcher International, Ltd. (Fletcher), the holder of shares of the Series D Preferred Stock.

On July 10, 2009, Fletcher filed a books and records proceeding in the Delaware Court of Chancery under Section 220(b) of the Delaware General Corporation Law, styled *Fletcher International, Ltd. v. ION Geophysical Corporation f/k/a Input/Output, Inc.* Fletcher's complaint asked the Court to require the Company to produce for its inspection a broad range of the Company's documents and records related to the ARAM acquisition and other matters. Section 220(b) allows stockholders of a Delaware corporation to make a demand on the corporation for access to certain books and records of the corporation, provided that such demand is made with appropriate specificity and is made for a proper purpose. The Company responded by asserting that Fletcher had not requested the information with appropriate specificity or for a proper purpose as required by law. After a hearing on December 23, 2009, the court determined that most of Fletcher's stated purposes for requesting the information were not valid or did not constitute proper purposes and issued a ruling denying in significant part the inspection sought by Fletcher.

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 purported to deliver a second notice to the Company that purported 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 gave Fletcher the right to issue only one notice to increase the Maximum Number (which Fletcher had exercised in November 2008). 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 is permitted to deliver only one notice to increase the Maximum Number and that its purported second notice is legally invalid.

On November 25, 2009, Fletcher filed a lawsuit against the Company and each 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,*

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*John Seitz, G. Thomas Marsh And Nicholas G. Vlahakis*, Fletcher alleges, among other things, that the Company violated Fletcher's consent rights by ION International S.à r.l., an indirect wholly-owned subsidiary of ION Geophysical Corporation, issuing a 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 International S.à r.l. to issue the note without Fletcher's consent. Fletcher is seeking a court order requiring ION International S.à r.l. to repay the \$10 million advanced to ION International S.à r.l. under the bridge loan and unspecified monetary damages. In the lawsuit, Fletcher is not claiming that it had a right to consent to any note issued by ION Geophysical Corporation, including the issuance by ION Geophysical Corporation of a \$30 million promissory note to the Bank of China on October 27, 2009, as part of the bridge loan. The Company believes that Fletcher did not have the right to consent to the issuance of the bridge loan note by ION International S.à r.l. or any other promissory note and that the claims asserted by Fletcher in the lawsuit are without merit. The Company further believes 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 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 two-week 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 \$21.7 million in compensatory damages. On October 13, 2009, the presiding trial judge signed and entered the judgment, awarding the Company the amount of the jury verdict. Under applicable law, the Company also entitled to receive legal interest from the date of filing the lawsuit, plus the Company's attorneys' fees and costs. Through December 22, 2009, accrued legal interest totaled \$11.2 million, and interest will continue to accrue at the statutory annual rate of 8.5% until paid. Including the verdict amount and accrued interest, the total amount owed under the judgment as of December 22, 2009 was \$32.9 million plus the Company's attorneys' fees and costs. The judgment is currently on appeal. The Company has not accrued any amounts related to this gain contingency as of December 31, 2009.

*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. The Company's products that use the VectorSeis technology include the Company's 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. The Company has asked the court to issue a permanent injunction to prohibit Sercel from making, using, selling, offering for sale or importing any infringing products into the United States. The Company has not accrued any amounts related to this gain contingency as of December 31, 2009.

*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**

During 2009, the Company continued its restructuring program that was initiated in the fourth quarter of 2008. Under this program, the Company has reduced its employee headcount by a total of approximately 26% (or 384 positions). When terminated independent contractors are included, the Company has reduced its headcount by a total of 489 positions, or 27%. At December 31, 2008, the Company had accrued \$1.8 million related to severance costs. In 2009, the Company accrued an additional \$3.1 million related to severance costs and made cash payments to employees of \$4.1 million, resulting in an accrual as of December 31, 2009 of \$0.8 million. Of the amount expensed for the year ended December 31, 2009, approximately \$2.1 million was included in operating

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expenses, with the remaining \$1.0 million included in cost of sales. During 2010, the Company will continue to evaluate its staffing needs and may reduce its employee headcount further as necessary.

In April 2009, the Company initiated a salary reduction program that reduced employee base salaries. The salary reductions ranged from 12% for the Company's chief executive officer, chief operating officer and chief financial officer, 10% for all other executives and senior management, and 5% for most other employees. The Company's Board of Directors also elected to implement a 15% reduction in director fees. In addition to the salary reduction program, the Company suspended its match to employee 401(k) plan contributions.

Following the October 23, 2009 announcement of the Company and BGP entering into the Term Sheet, which provides for, among other things, the formation of a joint venture between the Company and BGP involving the Company's land-based seismic data acquisition equipment business (see further discussion at Note 2 *Term Sheet with BGP and Bridge Financing Transactions*), the Company's management decided to reinstate all employees salaries and director fees on a prospective basis.

### (21) Selected Quarterly Information (Unaudited)

A summary of selected quarterly information is as follows (in thousands, except per share amounts):

Year Ended December 31, 2009	Three Months Ended			
	March 31	June 30	September 30	December 31
Product revenues	\$ 59,476	\$ 52,038	\$ 51,263	\$ 74,887
Service revenues	47,414	37,219	51,107	46,377
Total net revenues	106,890	89,257	102,370	121,264
Gross profit	33,696	29,976	34,629	33,837
Impairment of intangible assets	38,044			
Income (loss) from operations	(44,576)	(7,511)	(1,559)	(4,570)
Interest expense, including amortization of a non-cash debt discount	(7,417)	(6,861)	(6,380)	(15,013)
Fair value adjustment of the warrant				(29,401)
Impairment of cost method investment				(4,454)
Interest and other income	462	(5,869)	2,120	985
Income tax expense (benefit)	(13,963)	(4,510)	131	(1,643)
Preferred stock dividends	875	875	875	875
Net income (loss) applicable to common shares	\$ (38,443)	\$ (16,606)	\$ (6,825)	\$ (51,685)
Net income (loss) per basic and diluted share	\$ (0.39)	\$ (0.16)	\$ (0.06)	\$ (0.44)

  

Year Ended December 31, 2008	Three Months Ended			
	March 31	June 30	September 30	December 31
Product revenues	\$ 93,034	\$ 104,360	\$ 140,332	\$ 79,785
Service revenues	47,125	76,305	78,197	60,385
Total net revenues	140,159	180,665	218,529	140,170
Gross profit	48,394	58,021	72,621	28,712
Impairment of goodwill and intangible assets				252,283
Income (loss) from operations	10,295	19,736	31,574	(274,428)
Interest expense	(487)	(652)	(1,592)	(9,992)

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Interest and other income	789	793	(364)	4,421
Income tax expense (benefit)	2,059	3,524	3,760	(8,212)
Preferred stock dividends	910	908	925	1,146
Preferred stock beneficial conversion charge				68,786
Net income (loss) applicable to common shares	\$ 7,628	\$ 15,445	\$ 24,933	\$ (341,719)
Net income (loss) per basic share	\$ 0.08	\$ 0.16	\$ 0.26	\$ (3.43)
Net income (loss) per diluted share	\$ 0.08	\$ 0.16	\$ 0.25	\$ (3.43)

**(22) Related Parties**

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

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equipment and modular conveyor belts. Mr. Lapeyre and Laitram together owned approximately 8.1% of the Company's outstanding common stock as of February 22, 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 2009, the Company paid Laitram a total of approximately \$4.0 million, which consisted of approximately \$3.2 million for manufacturing services, \$0.7 million for rent and other pass-through third party facilities charges, and \$0.1 million for other services. For the 2008 and 2007 fiscal years, the Company paid Laitram a total of approximately \$4.3 million and \$4.9 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.

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**SCHEDULE II**  
**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**  
**VALUATION AND QUALIFYING ACCOUNTS**

<b>Year Ended December 31, 2007</b>	<b>Balance at Beginning of Year</b>	<b>Charged (Credited) to Costs and Expenses      Deductions (In thousands)</b>		<b>Balance at End of Year</b>
Allowances for doubtful accounts	\$ 2,801	\$ 437	\$ (563)	\$ 2,675
Allowances for doubtful notes	4,530		(1,179)	3,351
Warranty	6,255	13,074	(5,890)	13,439
Valuation allowance on deferred tax assets	76,324	(39,266)	355	37,413

<b>Year Ended December 31, 2008</b>	<b>Balance at Beginning of Year</b>	<b>Acquired Reserves during the period</b>	<b>Charged (Credited) to Costs and Expenses      Deductions (In thousands)</b>		<b>Balance at End of Year</b>
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

<b>Year Ended December 31, 2009</b>	<b>Balance at Beginning of Year</b>	<b>Charged (Credited) to Costs and Expenses      Deductions (In thousands)</b>		<b>Balance at End of Year</b>
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

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EXHIBIT INDEX

- 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 Designation of Series D-3 Cumulative Convertible Preferred Stock dated February 20, 2008, filed on February 22, 2008 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 4.6 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.
- 4.7 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.
- 4.8 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.
- 4.9 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.
- 4.10 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.
- 4.11 Warrant to Purchase Shares of the Common Stock of ION Geophysical Corporation dated October 27, 2009, issued by ION Geophysical Corporation to BGP Inc., China National Petroleum Corporation,

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filed on October 29, 2009 as Exhibit 4.1 to the Company's Current Report on Form 8-K/A and incorporated herein by reference.

4.12 Convertible Promissory Note, dated October 23, 2009, issued by ION Geophysical Corporation to the Bank of China, New York Branch, filed on October 29, 2009 as Exhibit 4.2 to the Company's Current Report on Form 8-K/A and incorporated herein by reference.

4.13 Convertible Promissory Note, dated October 23, 2009, issued by ION International S.à r.l. to the Bank of China, New York Branch, filed on October 29, 2009 as Exhibit 4.3 to the Company's Current Report on Form 8-K/A 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

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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 Fourth Amended and Restated 2004 Long-Term Incentive Plan, filed as Appendix A to the definitive proxy statement for the 2008 Annual Meeting of Stockholders of ION Geophysical Corporation, filed on April 21, 2008, 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.
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- \*\*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
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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.
- \*\*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 Consulting Services Agreement dated as of October 19, 2006, by and between GX Technology Corporation and Michael K. Lambert, filed on October 24, 2006 as Exhibit 10.2 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
- \*\*10.39 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.
- \*\*10.40 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.
- \*\*10.41 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.

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- 10.42 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.
- 10.43 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.
- 10.44 Amended and Restated Share Purchase Agreement, dated as of September 17, 2008, by and among ION Geophysical Corporation, Aram Systems Ltd., Canadian Seismic Rentals Inc. and the Sellers party thereto, filed on September 23, 2008 as Exhibit 2.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 10.45 Assignment Agreement dated as of December 30, 2008 by and among 3226509 Nova Scotia Company, ARAM Systems Ltd., Canadian Seismic Rentals Inc., Maison Mazel Ltd. and ION Geophysical Corporation, filed on January 5, 2009 as Exhibit 10.1 to the Company's Current
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Report on Form 8-K and incorporated herein by reference.

- 10.46 Release Agreement dated as of December 30, 2008 by and among ION Geophysical Corporation, 3226509 Nova Scotia Company, ARAM Systems Ltd., Canadian Seismic Rentals Inc., Maison Mazel Ltd. and the Sellers party thereto, filed on January 5, 2009 as Exhibit 10.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- 10.47 Amended and Restated Subordinated Promissory Note dated December 30, 2008, made by 3226509 Nova Scotia Company in favor of Maison Mazel Ltd., filed on January 5, 2009 as Exhibit 10.6 to the Company's Current Report on Form 8-K and incorporated herein by reference.
- \*\*10.48 ION Stock Appreciation Rights Plan dated November 17, 2008.
- 10.49 Form of Purchase Agreement dated as of June 1, 2009, for the offering and sale of 18,500,000 shares of common stock of ION Geophysical Corporation in privately-negotiated transactions to accredited investors (as defined in Rule 501 under the Securities Act of 1933, as amended), by and between ION Geophysical Corporation and the Purchasers named therein, filed on August 6, 2009 as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2009, and incorporated herein by reference.
- 10.50 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.
- 10.51 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.
- \*10.52 Term Sheet dated as of October 23, 2009 by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation.
- \*10.53 Warrant Issuance Agreement dated as of October 23, 2009 by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation.
- \*10.54 Registration Rights Agreement dated as of October 23, 2009 by and between ION Geophysical Corporation and BGP Inc., China National Petroleum Corporation.
- \*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.