ION GEOPHYSICAL CORP
Form 10-K
March 02, 2009

Table of Contents

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

(Mark One)

þ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Fiscal Year Ended December 31, 2008

or

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

Commission file number 1-12691
ION Geophysical Corporation
(Exact Name of Registrant as Specified in Its Charter)

Delaware	**22-2286646**
(State or Other Jurisdiction of Incorporation or Organization)	*(I.R.S. Employer Identification No.)*

2105 CityWest Blvd
Suite 400
Houston, Texas 77042-2839
(Address of Principal Executive Offices, Including Zip Code)
(281) 933-3339
(Registrant s Telephone Number, Including Area Code)

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

Title of Each Class	**Name of Each Exchange on Which Registered**
Common Stock, $0.01 par value	New York Stock Exchange
Rights to Purchase Series A Junior Participating Preferred Stock	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:
None

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

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 o No þ

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 þ No o

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. o

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):

Accelerated filer o

Large accelerated filer þ	Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o

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

As of June 30, 2008 (the last business day of the registrant s second quarter of fiscal 2008), the aggregate market value of the registrant s common stock held by non-affiliates of the registrant was $1.481 billion 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, 99,735,028 shares outstanding as of February 12, 2009.

DOCUMENTS INCORPORATED BY REFERENCE

Document	**Parts Into Which Incorporated**
Portions of the Proxy Statement for the Annual Meeting of Stockholders to be held May 27, 2009	Part III

TABLE OF CONTENTS

Table of Contents

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 Annual Report on 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.

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, which enables 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 are able to serve oil and gas companies in all major energy producing regions of the world from strategically located offices in 22 cities on five continents. 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 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.

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 2008 and early 2009.

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.

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).

Table of Contents

Data Management Solutions software 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, our marine seismic data libraries, and our Integrated Seismic Solutions (ISS) services.

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*. We make our website content available for information purposes only. It should not be relied upon for investment purposes, nor is it 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* 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 a streamer cable on 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, 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

Table of Contents

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 allowed 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.

The fundamentals of the oil and gas exploration and production industry and the seismic sector improved markedly beginning in 2004. As commodity prices increased, E&P companies increased their capital investment programs, which drove higher demand for our products and services. In July 2008, oil prices reached an all-time high of nearly $150 per barrel. Sentiment changed dramatically in September 2008 as adverse global economic conditions began to affect demand for a wide variety of products and services throughout the world, including the demand for both oil (and refined products, such as gasoline) and natural gas. By the end of 2008, oil prices had fallen to roughly $40 per barrel, and E&P companies began to curtail their investment programs, announcing spending cuts that exceeded 30% in some cases. As a consequence, seismic acquisition contractors began to scale-back their investments in new seismic hardware and software, while E&P companies moved to optimize their spending on seismic data processing services and the purchase of seismic data libraries. See Item 7 *Management s Discussion and Analysis of Financial Condition and Results of Operations* for further information.

ION Geophysical s Business Strategy

Beginning in 2004 and continuing until the fourth quarter of 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. Additionally, E&P companies were focusing on hydrocarbon reservoirs 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, 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. Moreover, as E&P companies may increasingly use seismic data to enhance production from known fields by repeating time-lapse seismic surveys over a defined area, we believe that seismic companies such as ION can benefit because the repeat application of seismic extends the utility of subsurface imaging beyond exploration and into production monitoring, which can last for decades.

We also believe that E&P companies will 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 companies will rely less on undifferentiated, mass

Table of Contents

seismic studies created using analog sensors and traditional processing technologies that do not adequately identify geologic complexities.

In 2004, we acquired two companies, which were important in our evolution from being primarily a seismic equipment provider to becoming a broad-based seismic solutions provider:

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.

The dramatic changes that occurred in the fourth quarter of 2008 and continued into 2009 have caused us to re-evaluate and refine our business strategy. During late 2008, disruption in the U.S. financial markets prompted a global economic crisis, which 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 prolonged worldwide economic recession and a slow recovery in the credit markets.

Since the global economic crisis began to unfold, crude oil prices have rapidly declined from a peak oil price of $147 per barrel in July 2008 to approximately $40 per barrel in December 2008. Hydrocarbon price erosion has caused E&P companies to decrease their capital expenditure plans for exploration and production activities, which, in turn, adversely impacts the demand for many of our products and services. Unlike many other seismic companies, we participate only in the technology side of the business and are mainly involved in the planning, processing and interpretation of data services. We do not provide the actual contracting services, and, as a result, do not have large capital expenditures that are required to fund land and marine seismic crews. Our costs are therefore much more variable than most other seismic companies, which provides greater flexibility in difficult economic times.

During the fourth quarter of 2008 and continuing into 2009, we have been re-evaluating our business strategy to ensure that it remains consistent with the commercial realities of our customers and a market guided by dramatically lower commodity prices. We also have re-evaluated and made necessary reductions in our cost structure to better align with necessary changes in strategy and to adjust to the current levels of demand. For example, we observed a severe slowdown in sales activity for our land acquisition systems in North America and Russia. As a result, we have reduced employee headcount across our company by approximately 13% in December 2008 and January 2009, with the most reduction concentrated within the Land Imaging Systems segment. We believe that our current headcount is sufficient to manage our business and serve our customers needs during 2009 in all segments, but we may make further adjustments as market conditions and our strategy dictate.

In addition to analyzing 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 complex imaging problems around the world efficiently. The recent declines in oil and natural gas prices do not change the universally accepted facts 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 started with the 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

Table of Contents

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 possess an intimate understanding of the unique challenges in their areas.

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

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

- Expanding our 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 emerging 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;

- Utilizing our recent ARAM acquisition as a framework to increase our market share and profitability in cable-based land acquisition systems; and

- Furthering the commercialization of FireFly®, our cableless full-wave land data acquisition system, through sales and also through a services/rental model to advance the diffusion rate.

The rapid decline of oil and natural gas prices in late 2008 makes 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.

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

Table of Contents

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 that replaced our System Four® system in late 2006;

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 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.

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 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, our marine seismic data libraries, and our 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 14 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 2008 and early 2009.

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

Table of Contents

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.

Scorpion is capable of recording full-wave seismic data. Digital sensors, while more expensive than traditional analog geophones, 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.

Scorpion contains numerous enhancements that are designed to reduce our manufacturing costs, improve system reliability and productivity, and enable higher station count acquisition. During 2007, we delivered 14 Scorpion land acquisition systems to Oil and Natural Gas Corporation Limited, the national oil company of India. Each Scorpion system is capable of recording with digital, full-wave VectorSeis sensors or analog geophones.

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 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 an early version 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 the more advanced version of our FireFly system was called Durham Ranch, after one of the large, privately held ranches in this ecologically sensitive area. In early 2009, ION sold its first commercial FireFly system, which will be used in a producing hydrocarbon basin containing reservoirs that have been difficult to image with conventional seismic techniques.

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.

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®, 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.

Table of Contents

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 first DigiSTREAMER system, our next-generation towed streamer system, was successfully commissioned at the start of the North Sea season in 2008. The second DigiSTREAMER system was delivered during 2008. 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. During 2008, we completed the delivery of our fifth VSO system to RXT. We have entered into a multi-year agreement with RXT under which RXT has agreed to purchase a minimum of $160 million in VSO systems and related equipment from us through 2011. Approximately $122.0 million in purchase commitments remain under the agreement. The agreement also 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. In turn, the agreement grants RXT exclusive rights to this product line through 2011. In 2008, we recognized $2.4 million of royalty income under this agreement.

Marine Positioning Systems. Our DigiCOURSE® marine streamer positioning system includes streamer cable depth control devices, lateral control devices, compasses, acoustic positioning systems, and other auxiliary sensors. This equipment is designed to control the vertical and horizontal positioning of the streamer cables and provides acoustic, compass, and depth measurements to allow processors to tie navigation and location data to geophysical data to determine the location of potential hydrocarbon reserves. DigiFIN, our advanced lateral streamer control system, saw significant acceptance by the industry in 2008 with a total of nine systems delivered during the year. 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 successor 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, ION s new marine streamer acquisition system. SPECTRA® is Concept Systems legacy integrated navigation and survey control software system for towed streamer-based 2-D, 3-D, and 4-D seismic survey operations.

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

Table of Contents

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 its SPRINT® navigation processing and quality control software for marine geophysical surveys, and its 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

Table of Contents

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 basins worldwide, including the northern Gulf of Mexico, in the southern Caribbean, off the northern coast of South America, offshore West Africa, offshore Colombia, offshore India and offshore northern Canada and Alaska. In 2008, we completed the acquisition of our latest basin-scale seismic survey library for the Eastern Java Sea and the Makassar Straits, two prospective areas offshore Indonesia and Malaysia. Data for nearly 10,000 kilometers was acquired during the acquisition phase of this project. Additionally, we successfully completed the acquisition phase of a multi-client seismic imaging project using our FireFly cableless land acquisition system at Durham Ranch in Northwest Colorado. Additional SPANS 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 2008, we principally focused our research and development efforts on commercialization of our FireFly system and on DigiSTREAMER, our solid streamer cable for marine acquisition. FireFly was deployed in July 2008 on a multi-client survey at Durham Ranch, and we delivered the first commercial FireFly system in early 2009. A DigiSTREAMER system was deployed in an open-water test by Fugro, a Netherlands company, early in 2008 and was sold to Fugro shortly thereafter.

As a result of current economic and market conditions, in 2009 we intend to reduce our overall spending on research and development projects. During 2009, 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 ARIES II and FireFly. The effort on ARIES II involves making the current all-analog system compatible with VectorSeis; the effort on FireFly involves making the current all-digital system compatible with analog geophones. 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, 2008, 2007 and 2006, no single customer accounted for 10% or more of our consolidated net revenues.

Until September 2008, worldwide exploration activities had increased in response to increased hydrocarbon demand and diminishing supply from many regions. As a result, the utilization of both land and marine seismic data

acquisition products and services had increased significantly, with seismic contractors expanding their acquisition asset base and retrofitting existing assets with newer, more efficient technologies. Since the global economic crisis began to unfold late in the third quarter of 2008, demand for products and services has fallen in all industrial sectors and in all regions. The E&P industry has been affected by a rapid fall-off in

Table of Contents

prices for both natural gas and crude oil, with the latter falling from a peak of $147 per barrel in July 2008 to approximately $40 per barrel in December 2008. 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 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, 2008, 2007 and 2006, sales to destinations outside of North America accounted for approximately 60%, 62% and 68% 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 under a new entity operating in Dubai. Dubai is geographically better positioned to ensure that we are close to our customers in the most active oil and gas centers of the world. Associated with this change will be a more effective tax structure that better reflects our global operations and better operational efficiencies for our international customers.

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 14 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 also entered into a five-year supply agreement with Colibrys that provides for Colibrys to supply us with products on an exclusive basis in our markets. Colibrys manufactures micro-electro-mechanical system (MEMS) products, including accelerometers, for our VectorSeis sensors, and for other applications, including test and measurement, earthquake and structural monitoring, and defense. While we continue to believe that MEMS-based sensors like our VectorSeis sensors will increasingly be used in seismic imaging, we also believe that improvements in the design and manufacture of MEMS technology will also likely occur, that will require additional financial and human capital to achieve. By outsourcing our MEMS manufacturing operations to a MEMS-based technology firm such as Colibrys, we believe that we are better positioned to leverage the research and development of these products and industries, improve gross margins on our VectorSeis-based products, and reduce our future investment requirements in MEMS technology. We have no further obligations to fund Colibrys with regard to any mandatory assessments or additional capital contribution requirements but we may choose to invest further capital into Colibrys from time to time.

13

Table of Contents

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 155 by year-end 2010, compared to approximately 124 at December 31, 2008. 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. 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 2 and 5 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, no one patent is considered essential to our success.

Table of Contents

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.

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, DigiSHOT, DigiCOURSE, GATOR, SPECTRA, Orca, Scorpion, SPRINT, and REFLEX refer to our VECTORSEIS®, VECTORSEIS SYSTEM FOUR®, SYSTEM FOUR®, FIREFLY®, ARIES®, DIGISHOT®, XVIB®, DIGICOURSE®, GATOR®, SPECTRA®, ORCA®, SCORPION®, SPRINT®, and REFLEX® registered marks, and the terms AZIM, ArcticSPAN, True Digital, DigiRANGE II, DigiSTREAMER, CompassBIRD, SM-24, AHV-IV, Vib Pro, DigiFIN, Autobahn, and SWAT refer to our AZIM, ArcticSPAN, True 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, 2008, we had 1,413 regular, full-time employees, 851 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.

In the fourth quarter of 2008, we initiated a restructuring program, which included plans for reducing our headcount by approximately 13%, or 188 positions. As of December 31, 2008, we had reduced our headcount by 83 employees. In the first quarter of 2009, we completed our restructuring program, eliminating the remaining 105 positions. During 2009, we will continue to evaluate our staffing needs and may further reduce our headcount.

Financial Information by Segment and Geographic Area

For a discussion of financial information by business segment and geographic area, see Note 14 of *Notes to Consolidated Financial Statements.*

Table of Contents

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, ex plan, anticipate, believe, estimate, predict, potential, or continue or the negative of such terms or other com terminology. Examples of other forward-looking statements contained or incorporated by reference in this report include statements regarding:

our expectations for future financing and the refinancing of our existing indebtedness;

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

future levels of spending by our customers;

compliance with our debt financial covenants;

expected net revenues, income from operations and net income;

expected gross margins for our products and services;

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

future growth rates for certain of our products and services;

future sales to our significant customers;

our ability to continue to leverage our costs by growing our revenues and earnings;

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

expectations regarding future mix of business and future asset recoveries;

the timing of anticipated sales;

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;

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

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;

Table of Contents

the adequacy of our future liquidity and capital resources;

future oil and gas commodity prices;

future opportunities for new products and projected research and development expenses;

success in integrating our acquired businesses;

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:

The current economic and credit environment and lower oil and natural gas prices could have a continuing adverse affect on demand for certain of our products and services, our results of operations, our cash flows, our financial condition, our ability to borrow and our stock price.

Commencing in late 2008, global market and economic conditions became, and continue to be, disrupted and volatile. Concerns over energy costs, geopolitical issues, the availability and cost of credit, the U.S. mortgage market and a declining residential real estate market in the U.S. have contributed to this increased volatility and diminished expectations for the economy and the markets going forward. These factors, combined with volatile oil prices, declining business and consumer confidence and increased unemployment, have precipitated a global recession. In the past, downturns in the U.S. economy have 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 be reduced if the level of exploration expenditures is reduced. 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 recent 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 have a material adverse effect on our ability to refinance all or a portion of our indebtedness in connection with the ARAM acquisition and to otherwise fund our operational requirements.

Interest rates have fluctuated recently, have increased the costs of financing and will likely reduce our and our customers profits and expected returns on investment. Given the current credit environment, particularly the tightening of the 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

Table of Contents

financial condition and results of operations, and we may be subject to increased disputes and litigation because of these events and issues.

Stock markets, in general, have experienced in recent months, and 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.

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.

As a result of the ARAM acquisition, we have increased our indebtedness significantly. As of December 31, 2008, we had outstanding total indebtedness of approximately $291.9 million, including capital lease obligations. Total indebtedness on that date included $120.3 million in borrowings under five-year term indebtedness and $66.0 million in borrowings under our revolving credit facility, in each case incurred under our amended commercial banking credit facility (the Amended Credit Facility). We also had as of that date $40.8 million of indebtedness outstanding under a Bridge Loan Agreement, dated as of December 30, 2008, with Jefferies Finance LLC (Jefferies) as administrative agent, sole bookrunner, sole lead arranger and lender (the Bridge Loan Agreement), which indebtedness matures on January 31, 2010. In addition, we had $35.0 million of subordinated indebtedness outstanding under an amended and restated subordinated promissory note (the Amended and Restated Subordinated Note) that we issued to one of ARAM s selling shareholders in exchange for a previous promissory note we had issued to that selling shareholder as part of the purchase price consideration for the acquisition of ARAM.

As of December 31, 2008, we had available $34.0 million (without giving effect to $1.2 million of outstanding letters of credit) of additional revolving credit borrowing capacity under our Amended Credit Facility. However, as of February 23, 2009, we had available only $0.8 million of additional revolving credit borrowing capacity, which can be used only to fund further letters of credit under the 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.

Although we currently believe we will maintain compliance with our covenants throughout 2009, there are certain scenarios where we could fall out of compliance with our financial covenants under our Amended Credit Facility and our Bridge Loan Agreement.

Table of Contents

See Item 7. *Management s Discussion and Analysis of Financial Condition and Results of Operations Executive Summary Our Current Debt Levels and Liquidity and Capital Resources Sources of Capital Meeting our Liquidity Requirements*.

If we fail to make any required payment under our Amended Credit Facility, the Bridge Loan Agreement or the Amended and Restated Subordinated Note, or if we fail to comply with any of the financial and operating covenants included in those debt 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.

Our ability to obtain any financing, including any additional debt financing, whether through the issuance of new debt securities or otherwise, and the terms of any such financing are dependent on, among other things, our financial condition, financial market conditions within our industry, credit ratings and numerous other factors. There can be no assurance that we will be able to obtain financing on acceptable terms or within an acceptable time, if at all. If we are unable to obtain financing on terms and within a time acceptable to us (or to negotiate extensions with our lenders on terms acceptable to us), it could, in addition to other negative effects, have a material adverse effect on our operations, financial condition, ability to compete or ability to comply with regulatory requirements. Such defaults, if not rescinded or cured, would have a materially adverse effect on our operations, financial condition and cash flows.

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 ability to make payments on and to refinance our indebtedness, including our acquisition debt, 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, including our acquisition debt, or to fund our other liquidity needs. We will need to refinance all or a portion of our indebtedness, including our acquisition debt, 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.

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;

Table of Contents

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 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 (a) maintain a minimum fixed charge coverage ratio in an amount equal to 1.50 to 1 for each fiscal quarter beginning in 2009, (b) not exceed a maximum leverage ratio of 2.25 to 1 for each fiscal quarter beginning in 2009, and (c) maintain a minimum tangible net worth of at least 80% of the 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.

As of December 31, 2008, we were in compliance with all covenants under the Amended Credit Facility. We believe that, based on our 2009 operating plan and results to date in fiscal 2009, we will remain in compliance with the financial covenants during 2009. As with any operating plan, however, there are risks associated with our ability to execute our 2009 plan. In addition, our ability to remain in compliance with the financial covenants can be affected by events beyond our control, including further declines in E&P company and seismic contractor spending, significant write-downs of accounts receivable, changes in certain exchange rates and other factors. Our failure to comply with such covenants 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 capability. If we were not able to satisfy all of the financial 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 financial covenants and are unable to obtain 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. 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 Bridge Loan Agreement contains terms that incorporate many of the same covenants from the Amended Credit Facility. In addition, the Amended and Restated Subordinated Note contains additional restrictions on our ability to incur additional debt. Any additional debt financing we obtain is likely to have similarly restrictive covenants.

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.

Given the reduced budgets for capital expenditures by E&P companies, demand for our products and services and our results of operations will be adversely affected.

Demand for our 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;

Table of Contents

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.

The level of oil and gas exploration and production activity has been volatile in recent years. Previously forecasted trends in oil and gas exploration and development activities may not continue and demand for our products and services may not reflect the level of activity in the industry. Any prolonged substantial reduction in oil and gas prices would likely affect oil and gas production levels and therefore adversely affect demand for the products and services we provide.

We derive a substantial amount of our revenues from foreign operations and sales, which pose additional risks.

Sales to customers outside of North America accounted for approximately 60% of our consolidated net revenues for the year ended December 31, 2008, 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;

Table of Contents

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, 2008, the $120.3 million in term loan indebtedness under the Amended Credit Facility accrued interest using the LIBOR-based interest rate of 6.02% per annum, while $66.0 million in total revolving credit indebtedness under the Amended Credit Facility accrued interest using the alternate base rate of 6.88% per annum. The average effective interest rate for the quarter ended December 31, 2008 under the LIBOR-based and alternate based rates was 5.7%.

Assuming that no revolving indebtedness is repaid and that $66.0 million in revolving loans are outstanding, a 1.00% increase in the floating interest rate on the outstanding principal amount of the term loan indebtedness would result in increased interest expense of $0.7 million per year. Assuming that no term loan indebtedness is repaid and that $120.3 million in loans are outstanding, a 1.00% increase in the floating interest rate on the outstanding principal amount of the term loan indebtedness would result in increased interest expense of $1.2 million per year.

Outstanding borrowings under our Bridge Loan Agreement will bear interest at either the one-month LIBOR rate plus 13.25% per annum or the alternate base rate plus 12.25%, if the LIBOR-based rate cannot be determined. The interest rates shall not be less than 15.0% per annum nor greater than 17.0% per annum. Additionally, we have agreed to pay the lender a non-refundable initial duration fee of 3.0% of the aggregate principal amount of the bridge loans 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 loans outstanding (if any) on September 30, 2009. Inclusive of these additional fees (and an upfront fee previously paid), the effective interest rate was 20.0% as of December 31, 2008. Assuming that no indebtedness under the Bridge Loan Agreement is repaid, a 1.00% increase in the effective floating interest rate on the outstanding principal amount would result in increased interest expense of $0.4 million per year. As of December 31, 2008, the weighted average interest rate on our outstanding indebtedness of $291.9 million was 9.6%.

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.

Table of Contents

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 may not gain rapid market acceptance for our full-wave digital products, which could materially and adversely affect our results of operations and financial condition.

We have spent considerable time and capital developing our full-wave equipment product lines that incorporate our VectorSeis, FireFly, Scorpion, and associated technologies. Because these products rely on a new digital sensor, our ability to sell these products will depend on acceptance of our digital sensor and technology solutions by geophysical contractors and E&P companies. If our customers do not believe that our digital sensor delivers higher quality data with greater operational efficiency, our results of operations and financial condition will be materially and adversely affected.

The introduction of new seismic technologies and products has traditionally involved long development cycles. Because our full-wave digital products incorporate new technologies, we have experienced slow market acceptance and market penetration for these products. For these reasons, we have continued to be unable to foresee and accurately predict future sales volumes, revenues, and margins for these new products from period to period with the certainty we have desired. See Item 7. *Management s Discussion and Analysis of Financial Condition and Results of Operations Liquidity and Capital Resources*.

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.

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.

Our outstanding shares of Series D-1 Cumulative Convertible Preferred Stock, Series D-2 Cumulative Convertible Preferred Stock and Series D-3 Cumulative Convertible Preferred Stock are convertible into shares of our common stock. The conversion of these securities would result in substantial dilution to existing stockholders, and sales in the open market of the shares of common stock acquired upon conversion may have the effect of reducing the then-current market prices for our common stock.

Table of Contents

The conversion of our outstanding shares of 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) into shares of our common stock will dilute the ownership interests of existing stockholders. Sales in the public market of shares of common stock issued upon conversion would likely apply downward pressure on prevailing market prices of our common stock. In addition, the very existence of the outstanding shares of the Series D Preferred Stock represents potential issuances of common stock upon their conversion, and could represent potential sales into the market of our common stock to be acquired on conversion, which could also depress trading prices for our common stock.

Technologies and businesses that we acquire (including those in connection with the ARAM acquisition) may be difficult to integrate, disrupt our business, dilute stockholder value or divert management attention.

Our acquisition of ARAM is part of our current business strategy, which is to seek new technologies, products and businesses to broaden the scope of our existing and planned product lines and technologies. This acquisition involves the integration of two companies that previously have operated independently, which is a complex and time consuming process. While we believe that the ARAM acquisition will complement our technologies and our general business strategy, there can be no assurance that we will achieve the expected benefit of the acquisition. This and future acquisitions 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 ARAM acquisition and future acquisitions expose us to:

- increased costs associated with the acquisition and operation of the new businesses or technologies and the management of geographically dispersed operations;
- risks associated with the assimilation of new technologies (including incorporating ARAM s land seismic acquisition products with our existing product lines), 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 ARAM s customers, partners and vendors;
- risks that any technology we acquire may not perform as well as we had anticipated;
- the diversion of management s attention and other resources from existing business concerns;
- the potential inability to replicate operating efficiencies in the acquired company s operations;
- potential impairments of goodwill and intangible assets;
- the inability to generate revenues to offset associated acquisition costs;
- the requirement to maintain uniform standards, controls and procedures;
- the impairment of relationships with employees and customers as a result of any integration of new and inexperienced management personnel; and
- the risk that acquired technologies do not provide us with the benefits we anticipated.

Integration of the acquired businesses requires significant efforts from each entity, 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 acquisition. The process of combining an acquired business with our business could cause an interruption of, or loss of momentum in, the activities of the combined company s business

and the loss of key personnel and distract management s attention from the day-to-day operation of the combined companies. If we are unable to successfully integrate the operations of acquired businesses, our future results will be negatively impacted.

Table of Contents

ARAM s land data acquisition systems have been a direct competitor of our Scorpion land acquisition systems and their predecessors in recent years. The integration of the Scorpion and the ARAM land acquisition system product lines may prove to be difficult, involving issues concerning marketing strategies, product roadmaps, preservation of the existing bases of installed products and coordination of the different development and engineering teams. No prediction can be made as to the degree of success (if any) we may experience in the timely integration of these product lines.

In addition, while the ARAM acquisition is consistent with our strategy to increase our market share in cable-based land acquisition systems, the acquisition will present challenges for us in terms of a modified roadmap for the further development of our Scorpion land acquisition system.

Goodwill and other intangible assets that we have recorded in connection with our acquisitions are subject to mandatory annual impairment evaluations and as a result, we could be required to write-off additional goodwill and other intangible assets, which may adversely affect our financial condition and results of operations.

In accordance with Statement of Financial Accounting Standard (SFAS) 142, *Goodwill and Other Intangible Assets* (SFAS 142), we are required 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. 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 $242.2 million of goodwill related to our Land Imaging Systems (including ARAM) and ION Solutions reporting units was impaired. We recorded the expense as of December 31, 2008 and reduced the carrying amount of our goodwill. 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.

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.

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 has been granted exclusive rights to this product line through 2011.

For the year ended December 31, 2008 and 2007, $49.0 million, or 7.2%, and $60.9 million, or 8.5%, respectively, of our consolidated net revenues, were attributable to marine equipment sales to RXT. The loss of RXT as a customer

or a 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

Table of Contents

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 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 2008, we invested $110.4 million in our multi-client data library. Our customers generally commit to licensing the data prior to our initiating a new data library acquisition program. However, the aggregate amounts of future licensing fees for this data are sometimes uncertain and depend on a variety of factors, including the market prices of oil and gas, customer demand for seismic data in the library, and the availability of similar data from competitors. For example, the rapid decline of oil and natural gas prices in late 2008 could 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.

Table of Contents

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, 2008, 2007 and 2006; however, our top five customers in total represented approximately 30%, 31% and 29%, 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.

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

Table of Contents

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 104,000-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.

Table of Contents

Under our five-year supply agreement with Colibrys Ltd., we have committed to purchase a minimum number of MEMS accelerometers with an agreed upon cost of between $5.0 million to $8.0 million per year through 2009. If demand for our VectorSeis products, of which MEMS accelerometers are a component, proves to be less than we originally forecasted, we could be required to purchase MEMS accelerometers that we may never utilize.

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.

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.

If we, our option holders or our existing stockholders holding registration rights sell additional shares of our common stock in the future, the market price of our common stock could decline.

The market price of our common stock could decline as a result of sales of a large number of shares of common stock in the market in the future, or the perception that such sales could occur. These sales and 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 prices that we deem appropriate.

At December 31, 2008, we had outstanding stock options to purchase up to 7,893,275 shares of our common stock. In addition, at that date there were 876,542 shares of common stock reserved for issuance under outstanding restricted stock awards.

In addition, under our agreement dated February 15, 2005 with Fletcher International, Ltd. (Fletcher), Fletcher has the ability to sell up to 9,669,434 shares of our common stock that may be issued to it upon conversion of our Series D Preferred Stock. See Item 7. *Management s Discussion and Analysis of Financial Condition and Results of Operations*

Liquidity and Capital Resources.

Table of Contents

Shares of our common stock are also subject to 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.

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.

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.

Table of Contents

Item 2. ***Properties***

Our principal operating facilities at December 31, 2008 were as follows:

Operating Facilities	Square Footage	Segment
Stafford, Texas	281,000	Land and Marine Imaging Systems
Calgary, Canada	131,000	Land Imaging Systems and ION Solutions
Houston, Texas	106,000	Global Headquarters and ION Solutions
Harahan, Louisiana	104,000	Marine Imaging Systems
Lacombe, Louisiana	87,000	Marine Imaging Systems
Jebel Ali, Dubai, United Arab Emirates	47,000	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
	829,000	

Each of these operating facilities is leased by us under a long-term lease agreement. These lease agreements have terms that expire ranging from 2009 to 2018. See Note 16 of *Notes to Consolidated Financial Statements.*

In addition, we lease offices in Cranleigh and Norwich, England; Bahrain; 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***

We have been named in various lawsuits or threatened actions that are incidental to our ordinary business. Such lawsuits and actions could increase in number as our business has expanded and we have grown larger. 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. ***Submission of Matters to a Vote of Security Holders***

Not applicable.

Table of Contents

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.

	Price Range	
Period	**High**	**Low**
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
Year ended December 31, 2007:		
Fourth Quarter	$16.85	$13.28
Third Quarter	17.02	11.86
Second Quarter	17.30	13.32
First Quarter	14.82	11.47

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, 2008, there were 417 holders of record of our common stock.

During the three months ended December 31, 2008, 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:

			(d) Maximum Number (or Approximate Dollar
		(c) Total Number of Shares Purchased	**Value) of Shares That**

Period	(a) Total Number of Shares Acquired	(b) Average Price Paid Per Share	as Part of Publicly Announced Plans or Program	May Yet Be Purchased Under the Plans or Program
October 1, 2008 to October 31, 2008		$	Not applicable	Not applicable
November 1, 2008 to November 30, 2008		$	Not applicable	Not applicable
December 1, 2008 to December 31, 2008	23,145	$ 2.81	Not applicable	Not applicable
Total	23,145	$ 2.81		

Table of Contents

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, 2008, 2007, 2006, 2005 and 2004, and with respect to our consolidated balance sheets at December 31, 2008, 2007, 2006, 2005 and 2004 have been derived from our audited consolidated financial statements. Our results of operations and financial condition have been affected by acquisitions of companies and impairments of assets during the periods presented, which may affect the comparability of the financial information. In particular, the selected financial data set forth below reflects our acquisitions of GXT in June 2004 and ARAM in September 2008. Our results of operations for the year ended December 31, 2008 were negatively impacted from the impairment of our goodwill and intangibles assets totaling $252.3 million and from the beneficial conversion charge of $68.8 million associated with our outstanding convertible preferred stock. 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.

	Years Ended December 31,	
Total	$ (17,133)	$ 268
Included in accompanying balance sheet:		
Unbilled costs and estimated earnings on uncompleted contracts included in accounts receivable	$ 25,711	$ 42,984
Billings in excess of costs and estimated earnings on uncompleted contracts	(42,844)	(42,716)
Total	$ (17,133)	$ 268

APPLIED ENERGETICS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
March 31, 2010
(Unaudited)

3. INVENTORY

Our inventories consist of the following:

	March 31, 2010	December 31, 2009
Raw materials	$ 95,901	$ 103,451
Work-in-process	720,796	704,028
Provision for loss on project	(51,000)	(22,000)
Total	$ 765,697	$ 785,479

4. PROPERTY AND EQUIPMENT

Our property and equipment consist of the following:

	March 31, 2010	December 31, 2009
Land and buildings	$ 2,072,215	$ 2,072,215
Equipment	2,657,429	2,677,926
Furniture and building improvements	848,797	858,379
Software	800,566	800,566
Total	6,379,007	6,409,086
Less accumulated depreciation and amortization	(3,642,108)	(3,563,479)
Net property and equipment	$ 2,736,899	$ 2,845,607

Periodically, we evaluate general impairment of assets. As an element of our annual business planning process conducted in the fourth quarter of each year, we consider expected revenues and resulting cash flow from operations. Revenue planning is based upon actual and expected contract awards as the majority of our revenues are sourced from Government contracts. During this process, we evaluate the current carrying values of all long-lived assets on our books. We compare these values against business plans to determine if carrying values are recoverable.

Our most recent asset impairment test was performed on February 15, 2010, when we determined that as of December 31, 2009 the net book values of long-lived assets were recoverable through expected undiscounted business cash flows based on anticipated and actual future revenue bookings and backlog. We will continue to evaluate the carrying values in the future. We evaluate impairments as such circumstances warrant.

APPLIED ENERGETICS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
March 31, 2010
(Unaudited)

5. SHARE-BASED COMPENSATION

Share-Based Compensation – Employees and Directors

For the three months ended March 31, 2010 and 2009, share-based compensation expense totaled $526,000 and $877,000, respectively.

There was no related income tax benefit recognized because our deferred tax assets are fully offset by a valuation allowance.

During the three months ended March 31, 2010, the compensation committee granted 460,000 shares of common stock to the members of the Board of Directors, which were fully vested upon grant. The shares were valued at the closing market price for the date of grant, or $0.60, for an aggregate value of $276,000. As of March 31, 2010, $260,000 of total unrecognized compensation cost related to restricted stock is expected to be recognized over a weighted average period of approximately .67 years.

The compensation committee granted options to purchase an aggregate of 1,347,000 shares of our common stock during the three months ended March 31, 2010. The options are exercisable at a price per share of $0.60 and expire on March 23, 2015. One-third of the options became exercisable on March 23, 2010. An additional one-third of the shares will become exercisable on March 23, 2011, and the final one-third on March 23, 2012.

The weighted average grant-date fair value of all outstanding option grants was $0.22 and $0.35, per share, for the three months ended March 31, 2010 and 2009, respectively. We determine the fair value of share-based awards at their grant date, using a Black-Scholes Option-Pricing Model applying the assumptions in the following table.

	Three Months Ended March 31,	
	2010	2009
Expected life (years)	2.9 - 3 years	2 years
Dividend yield	0.0%	0.0%
Expected volatility	93.6%	67.3%
Risk free interest rates	1.5%	1.3%
Weighted average fair value of options at grant date	$ 0.22	$ 0.35

During the three months ended March 31, 2010, we granted 40,000 shares of restricted stock to two non-employee consultants, which vest December 10, 2010. The weighted average fair value of the restricted stock grants of $0.61 per share is being expensed over the requisite service period.

During the three months ended March 31, 2010, 112,507 shares of restricted stock vested and 16,074 shares of restricted stock were forfeited, and 114,833 options were exercised. The cash proceeds from the settlement of an option exercise, which were not paid as of the balance sheet date, were received on April 9, 2010. The receivable, which totaled $49,083, is included in the other receivables caption on the balance sheet.

Warrants – Non-Employees

At March 31, 2010 and December 31, 2009 there were outstanding warrants to purchase approximately 1.0 million shares of common stock, which were either (i) issued in connection with the August 2006 financing, or (ii) issued to outside consultants. The exercise price of the warrants ranges from $9.15 to $12.00.

APPLIED ENERGETICS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
March 31, 2010
(Unaudited)

6. SIGNIFICANT CUSTOMERS

Approximately 100% of revenues for the three-month periods ended March 31, 2010 and 2009, are generated from either the U.S. Government or contractors to the U.S. Government.

7. NET LOSS PER SHARE

Basic net income (loss) per common share is computed by dividing net income (loss) available to common shareholders by the weighted average number of common shares outstanding during the period before giving effect to stock options, stock warrants, restricted stock units and convertible securities outstanding, which are considered to be dilutive common stock equivalents. Diluted net income (loss) per common share is calculated based on the weighted average number of common and potentially dilutive shares outstanding during the period after giving effect to convertible preferred stock, stock options, warrants and restricted stock units. Contingently issuable shares are included in the computation of basic earnings (loss) per share when issuance of the shares is no longer contingent. Due to the losses from continuing operations for the three months ended March 31, 2010 and 2009, basic and diluted loss per common share were the same, as the effect of potentially dilutive securities would have been anti-dilutive.

Potentially dilutive securities not included in the diluted loss per share calculation, due to net losses from continuing operations, were as follows:

	Three Months Ended March 31,	
	2010	2009
Options to purchase common shares	5,382,432	2,690,519
Warrants to purchase common shares	1,024,939	1,091,605
Unvested restricted stock units	-	339,742
Convertible preferred stock	135,572	135,572
Total potentially dilutive securities	6,542,943	4,257,438

APPLIED ENERGETICS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
March 31, 2010
(Unaudited)

8. DIVIDENDS

As of March 31, 2010, we had 135,572 shares of our 6.5% Series A Convertible Preferred Stock outstanding. A dividend was declared and paid in common stock on May 1, 2010 to the holders of record as of April 15, 2010.

Dividends on Preferred Stock are accrued when the amount and kind of the dividend is determined and are payable quarterly on the first day of February, May, August and November, in cash or shares of common stock, at the discretion of the company.

9. COMMITMENTS AND CONTINGENCIES

LITIGATION

On February 1, 2010, NewOak Capital Markets, LLC, formerly known as J. Giordano Securities, LLC, the placement agent for our October 2005 private placement of preferred stock, commenced an arbitration proceeding against us with Financial Industry Regulatory Authority ("FINRA"). NewOak alleges that we made material misrepresentations between May 2005 and May 10, 2006 concerning the status of its products.

We previously settled class action and derivative lawsuits relating to the alleged misrepresentations. NewOak, however, opted out of the class action and alleges that the alleged misrepresentations constituted breaches of its agreement with the company and that we breached warranties we made to NewOak in connection with the 2005 private placement. NewOak seeks indemnification and recovery for alleged breach of contract, unjust enrichment, quantum meruit, fraudulent misrepresentation, tortuous interference with prospective economic relations and violation of Section 10(b) of the Exchange Act and Rule 10b-5 promulgated thereunder, and seeks an award of monetary damages in excess of $10 million, plus punitive damages and attorney's fees and costs.

We filed a petition in the Supreme Court of the State of New York, New York County to stay the arbitration on the ground that the claims are not subject to arbitration. NewOak removed the proceeding to the United States District Court, Southern District of New York, and filed a motion to compel arbitration.

We intend to defend ourselves vigorously in any arbitration or legal proceedings and believe we have substantial defenses to the claims.

In addition, we may from time to time be involved in legal proceedings arising from the normal course of business. As of the date of this report, we have not received notice of any other legal proceedings.

10. SUBSEQUENT EVENTS

On April 29, 2010, we entered into agreements with two stockholders to issue an aggregate of 10,000 shares of our common stock in exchange for the return for cancellation of 1,000 shares of our Series A Redeemable Convertible Preferred Stock.

On May 13, 2010, we were awarded increased funding for our contract from the U.S. Army's Research, Development and Engineering Command (U.S. Army RDECOM – Picatinny, NJ) for the continued development and advancement of

our LGE technology in the amount of $1.8 million.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Our discussion and analysis of the financial condition and results of operations should be read in conjunction with the unaudited condensed consolidated financial statements and the related disclosures included elsewhere herein and in Management's Discussion and Analysis of Financial Condition and Results of Operations included as part of our Annual Report on Form 10-K for the year ended December 31, 2009.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this Quarterly Report on Form 10-Q constitute forward-looking statements within the meaning of the securities laws. Forward-looking statements include all statements that do not relate solely to the historical or current facts, and can be identified by the use of forward looking words such as "may", "believe", "will", "would", "could", "should", "expect", "expected", "project", "anticipate", "estimates", ""possible", "plan", "strategy", "target" "prospect" or "continue" and other similar terms and phrases. These forward looking statements are based on the current plans and expectations of our management and are subject to a number of uncertainties and risks that could significantly affect our current plans and expectations, as well as future results of operations and financial condition and may cause our actual results, performances or achievements to be materially different from any future results, performances or achievements expressed or implied by such forward-looking statements. Important factors that could cause our actual results to differ materially from our expectations are described in Item 1A. (Risk Factors) of our Annual Report on Form 10-K, as amended, for the year ended December 31, 2009. In making these forward-looking statements, we claim the protection of the safe-harbor for forward-looking statements contained in the Private Securities Reform Act of 1995. Although we believe that the expectations reflected in such forward-looking statements are reasonable, there can be no assurance that such expectations will prove to have been correct. We do not assume any obligation to update these forward-looking statements to reflect actual results, changes in assumptions, or changes in other factors affecting such forward-looking statements.

OVERVIEW

Applied Energetics is a leader in the development and manufacture of applied energy systems for military and commercial applications. Through our efforts in developing our core technology, Laser Guided Energy ("LGE"™), we have gained expertise and proprietary knowledge in high performance lasers, high-voltage electronics, advanced dynamic optics and atmospheric and plasma interactions. We apply these technologies to deliver innovative solutions to urgent military requirements, including neutralizing improvised explosive devices ("IEDs") and other high priority missions of U.S. and allied military forces. We have developed an effective and robust counter-IED ("CIED") technology as a result of our research and development. Additionally, we develop and manufacture high-voltage and laser products for government and commercial customers for a range of applications.

During the first quarter of 2010, we continued our focus on fulfilling our US Marine Corps ("USMC") customers' CIED requirements by focusing on providing further operational assessment of the technology, developing additional systems, providing training and field support for systems, developing a smaller version of the technology for installation on other military platforms and vehicles, and upgrading the engineering documentation of the system. This work is being performed under the $10.4 million contract modification received in January of 2010. On March 31, the Operational Assessment portion of the contract was completed. We continue to provide extended field operational support for this mission at the request of the USMC Field Commander.

During the first quarter of 2010, we continued the development and advancement of our LGE technology by working with our customer, the U.S. Army's Research, Development and Engineering Command. We also continued our work on the U.S Navy ultra-short pulse laser system, which is scheduled for delivery in the second quarter of 2010. We

also made progress in discussions with other large defense contractors in developing teaming arrangements to support the next generation of CIED systems. We expect that utilizing the resources and capabilities of established Department of Defense ("DoD") contractors will allow us to focus on the technology development within our core capabilities. These organizations have experience and a sound track record in delivering fully qualified military systems and the associated documentation and certifications to DoD customers. We will continue to concentrate our efforts on maintaining the excellent customer relationships that have been established over the past 2 years.

RECENT ACCOUNTING PRONOUNCEMENTS

The Financial Accounting Standards Board (“FASB”) has issued Accounting Standards Update (“ASU”) No. 2010-09, "Amendments to Certain Recognition and Disclosure Requirements" ("ASU 2010-09"), which amends ASU Topic 855, "Subsequent Events." The amendments to ASC Topic 855 does not change existing requirements to evaluate subsequent events, but: (i) defines a "SEC Filer," which we are; (ii) removes the definition of a "Public Entity"; and (iii) for SEC Filers, reverses the requirement to disclose the date through which subsequent events have been evaluated. ASU 2010-09 was effective for us upon issuance. The adoption of the standard is not expected to have a significant impact on the company’s consolidated financial statements.

The FASB has issued ASU 2010-17, “Revenue Recognition – Milestone Method”. ASU 2010-17 provides guidance on the criteria that should be met for determining whether the milestone method of revenue recognition is appropriate. We can recognize consideration that is contingent upon achievement of a milestone in its entirety as revenue in the period in which the milestone is achieved only if the milestone meets all criteria to be considered substantive. ASU 2010-17 will be effective for us beginning July 2010. The adoption of the standard is not expected to have a significant impact on the company’s consolidated financial statements.

The FASB has issued ASU 2009-13, “Multiple Deliverable Revenue Arrangements”. ASU 2009-13 clarified the criteria for separating revenue between multiple deliverables. This statement is effective for new revenue arrangements or materially modified arrangements in periods subsequent to adoption. Adoption is required for fiscal years beginning on or after June 15, 2010, but early adoption is allowed. We originally anticipated adopting ASU 2009-13 as of January 1, 2010 for new commercial revenue arrangements, but will defer adoption until adoption is required. The adoption of the standard is not expected to have a significant impact on the company’s consolidated financial statements.

RESULTS OF OPERATIONS

COMPARISON OF OPERATIONS FOR THE THREE MONTHS ENDED MARCH 31, 2010 AND 2009:

	2010	2009
Revenue	$ 3,594,778	$ 2,587,398
Cost of revenue	3,368,676	2,401,446
General and administrative	1,077,232	2,435,723
Selling and marketing	71,654	238,023
Research and development	32,862	517,661
Other (expense) income:		
Interest expense	(1,667)	(19)
Interest income	2,462	31,027
Net loss	$ (954,851)	$ (2,974,447)

REVENUE

Revenue increased approximately $1.0 million to $3.6 million for the three months ended March 31, 2010 compared to $2.6 million for the three months ended March 31, 2009. Revenues from the CIED product line increased by $1.5 million to $2.2 million due to the contract modification of $10.4 million received in January 2010. Additional revenue of $565,000 was derived from our new Laser product line. LGE revenues decreased by $1.0 million to $838,000 for the three months ended March 31, 2010 compared to the three months ended March 31, 2009.

COST OF REVENUE

Cost of revenue includes manufacturing labor, benefits and overhead, and an allocation of allowable general and administration and research and development costs in accordance with the terms of our government contracts.

Cost of revenue increased approximately $967,000 to $3.4 million for the three months ended March 31, 2010, compared to $2.4 million for the three months ended March 31, 2009. The increase in cost of revenue is directly tied to the increase in sales activity of 39%, and to provisions for losses on current contracts of approximately $29,000. By product line, CIED cost of revenue increased by approximately $1.3 million, Laser cost of revenue increased by $558,000 and LGE cost of revenue decreased by approximately $936,000.

GENERAL AND ADMINISTRATIVE

General and administrative expenses decreased approximately $1.3 million to $1.1 million for the three months ended March 31, 2010 compared to $2.4 million for the three months ended March 31, 2009. Salaries and wages decreased by approximately $791,000 as a result of downsizing in the second quarter of 2009, non-cash compensation costs decreased by approximately $77,000, travel expenses decreased by approximately $26,000 and directors and officers insurance costs decreased by approximately $18,000. These were offset by an increase in legal expenses of approximately $100,000, a decrease in applied labor, overhead and material handling costs allocated to cost of revenue of approximately $38,000 and to asset disposals associated with leasehold improvement of approximately $18,000.

SELLING AND MARKETING

Selling and marketing expenses decreased approximately $166,000 to $72,000 for the three months ended March 31, 2010 compared to $238,000 for the three months ended March 31, 2009. The decrease was mostly due to decreases in labor allocation and travel related to business development activities of $136,000 and to a decrease in bids and proposal costs of $30,000. Overall spending in this area reduced significantly as our short- and long-term strategy has become more focused. New sales orders and contracts of approximately $10.7 million were added to the backlog in the three months ended March 31, 2010.

RESEARCH AND DEVELOPMENT

Internal research and development expenses decreased by approximately $485,000 to $33,000 during the three months ended March 31, 2010 as compared to $518,000 for the three months ended March 31, 2009. Our internal research and development costs involve experimentation, design, development and enhancement of proprietary technologies and new products. The decrease in internal research and development expense is primarily due to the closure of the St. Louis facility in 2009 and the deployment of key technical personnel to fulfilling current contracts.

INTEREST INCOME AND INTEREST EXPENSE

Net interest income for the three months ended March 31, 2010 was lower by approximately $29,000 as compared to the three months ended March 31, 2009 primarily due to the lower balance of invested funds.

NET LOSS

Our operations for the three months ended March 31, 2010 resulted in a net loss of approximately $955,000, a reduction of approximately $2.0 million compared to the $3.0 million loss for the three months ended March 31, 2009.

LIQUIDITY AND CAPITAL RESOURCES

At March 31, 2010, we had approximately $8.9 million of cash and cash equivalents, and $225,000 in a certificate of deposit. Our cash position decreased during the first quarter of 2010 by approximately $722,000. During the first three months of 2010, we used $708,000 of cash in operating activities, which is primarily comprised of our net loss

of $955,000, and increases in accounts receivables and other receivables of approximately $1.4 million. Partially offsetting these amounts were non-cash compensation expense of $526,000, an increase in accounts payable and accrued expenses of $789,000, a decrease in prepaid expenses of $203,000, and depreciation and amortization of approximately $111,000. Additionally, investing activities used approximately $14,000.

We anticipate that short-term and long-term funding needs will be provided by existing cash and cash equivalents and the cash flows from servicing our government contracts. We believe that we have sufficient working capital to fulfill existing contracts and expected contracts in 2010 and into 2011. The government contracts, which currently represent a major portion of our current activity, are on a cost plus fixed fee basis. This means all work performed is done at our Government-approved rates, which include general and administrative costs, overhead, labor and materials, fees and profit. These costs are accrued as incurred and billed monthly.

BACKLOG OF ORDERS

At March 31, 2010, we had a backlog (workload remaining on signed contracts) of approximately $10.4 million, to be completed within the next twelve months. As of May 14, 2010, our backlog is $11.3 million.

ITEM 4. CONTROLS AND PROCEDURES

EVALUATION OF DISCLOSURE CONTROLS AND PROCEDURES

Our management, with the participation of our Principal Executive Officer and Principal Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2010. Based on that evaluation, our Principal Executive Officer and Principal Financial Officer have concluded that our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms.

During the three months ended March 31, 2010, there was no significant change in our internal controls over financial reporting that has materially affected or which is reasonably likely to materially affect our internal controls over financial reporting.

PART II – OTHER INFORMATION

ITEM 1A. RISK FACTORS

We have outstanding options to purchase a significant number of shares of our common stock which are exercisable at a price below the current market price of our common stock.

We currently have outstanding options to purchase approximately 5.4 million shares of common stock. The exercise price of these options range from $ 0.40 to $ 0.60 and options to purchase approximately 3.0 million shares of common stock are exercisable below the market price of our common stock on May 14, 2010. Substantially all of these shares may be sold in the public market by their holders upon exercise. The number of shares that may be exercised may be significant to the current trading value of our common stock when they are exercised and, therefore, could adversely affect the price of our common stock. In addition, to the extent options are exercised, your ownership percentage in our company will be diluted.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Issuer Purchases of Equity Securities

Period	(a) Total number of Shares (or Units) Surrendered	(b) Average Price Paid per Share (or Unit)	(c) Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
Mar. 2010	115,000	$ 0.60	115,000	Undetermined

ITEM 6. EXHIBITS

EXHIBIT NUMBER	DESCRIPTION
31.1	Certification of Principal Executive Officer pursuant to Rule 13a-14 or 15d-14 of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer pursuant to Rule 13a-14 or 15d-14 of the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Principal Executive Officer Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Principal Financial Officer Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

APPLIED ENERGETICS, INC.

By /s/ Joseph C. Hayden
Joseph C. Hayden
Chief Operating Officer and Principal Executive Officer

Date: May 17, 2010