

2007 ANNUAL REPORT



LEADING THE CHARGE

**ion**

# [ A BRAND REVOLUTION ]

I/O is now ION. ION has evolved significantly since its founding nearly 40 years ago. While proud of our legacy as developers of breakthrough seismic instrumentation, we have moved beyond our equipment roots. Today's company looks very different from the I/O of the past. We still develop seismic equipment, but now offer a full suite of command & control software, seismic imaging services, and data libraries to oil & gas companies as well as seismic acquisition contractors.

Our transformation called for a fresh corporate identity. In late 2007, the company rebranded to become ION Geophysical Corporation. An ion by definition is charged with energy and always in motion, characteristics of both our corporate culture and the spirit of our employees.

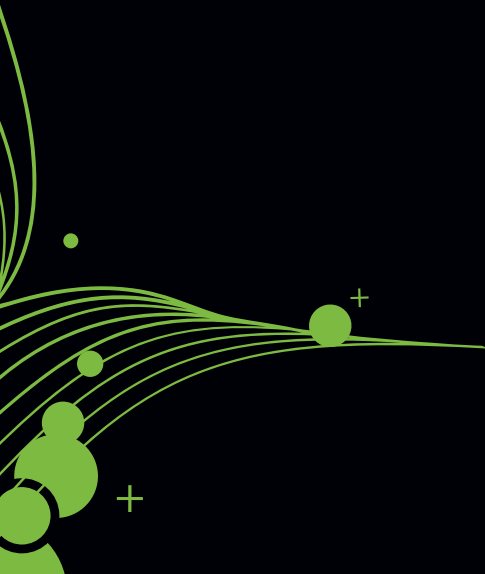
ION's restless passion to transform the E&P industry through game-changing seismic solutions continued during 2007.

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## 2007 MILESTONES

- Rebranded the company under the single flagship name ION Geophysical
- Increased revenues, net income, EPS, and EBITDA by 35% or more
- Saw the first two FireFly® seismic surveys acquired by BP and Apache
- Deployed more VectorSeis®-based systems than in all prior years combined
- Delivered 14 VectorSeis-equipped land recording systems to ONGC
- Sold the largest individual land seismic system in company history to an E&P company operating in China
- Awarded the largest seismic data processing contract in company history for a project in West Africa
- Sold the largest marine positioning system in company history to PGS
- Extended exclusivity period with our full-wave seabed acquisition partner, Reservoir Exploration Technology ASA (RXT)
- Formed a joint venture for permanent, full-wave marine reservoir monitoring systems with StatoilHydro and Reservoir Innovation ASA
- Continued record-setting sales performance with IndiaSPAN™ and ArcticSPAN™
- Drove step-change cycle time improvements in reverse time migration (RTM)
- Named to the Deloitte Technology Fast 500



[LETTER TO THE SHAREHOLDERS]



BOB PEEBLER

**ION performed well during 2007. Buoyed by high commodity prices, increased seismic activity, and heightened customer demand for our products and services, ION's revenues increased 42% to \$713 million.**

Net income increased 50% to \$40.3 million (or \$0.45 per diluted share), bolstered by record fourth-quarter revenue and operating income performance. Excluding one-time expenses\*, full-year earnings per diluted share rose to \$0.52 from \$0.33 in 2006.

We believe our momentum will continue into 2008. Driven by a continuation of the current up-cycle in the E&P industry and our ongoing commercialization of game-changing geophysical products and services, ION's 2008 consolidated revenues are expected to range between \$780 and \$830 million and earnings to range from \$0.70 to \$0.85 per diluted share. We believe industry spending will remain robust as E&P firms move to capitalize on high prices for crude oil and natural gas, and attempt to replace their hydrocarbon reserves in an era characterized by both increased competition for resource access and emboldened sovereign asset holders.

We entered 2007 by reorganizing around our two main customer segments. ION Systems focuses on the seismic

acquisition contractors. Our Systems group is the home of the hardware and software products used by contractors during acquisition in both land and marine operations, and includes offerings such as energy source systems, recording systems, sensors, and command & control software.

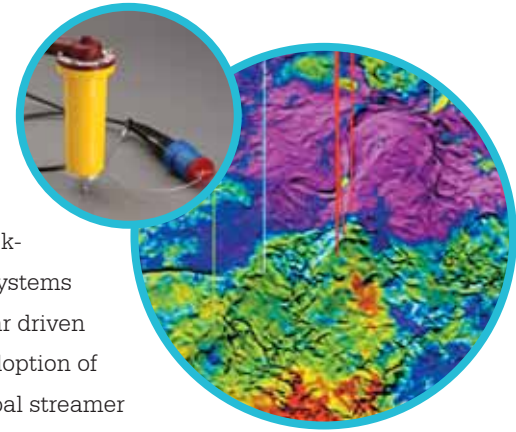
ION Solutions focuses on the oil & gas companies. Our Solutions group is the home of the products and services used by oil & gas companies during exploration, development, and production, and includes offerings such as data processing, seismic data libraries, and advanced reservoir analysis services. Our Solutions group is also chartered to work directly with the oil & gas companies on their most difficult imaging challenges. Technical professionals from ION Solutions collaborate with frontier explorationists and asset team geoscientists in the E&P companies to identify customized packages of geophysical hardware, software, and services from both ION and a network of third-party partners.

\*Related to our debt conversion and our global reorganization, details of which are more fully described in Notes 10 and 14 of Notes to Consolidated Financial Statements

## ■ ION Systems

ION Systems had an outstanding year. Revenues increased to \$540 million, a 51% increase versus 2006. Moreover, Systems' operating income margin increased by 250 basis points during the year as we better leveraged our operating expenses, including the investments we have been making in game-changing products such as VectorSeis. For the year, ION Systems delivered \$91 million in operating income, an increase of 77% versus 2006. Financial performance improvements were delivered by almost every business line within ION Systems, with strong fundamentals in both marine and land arenas.

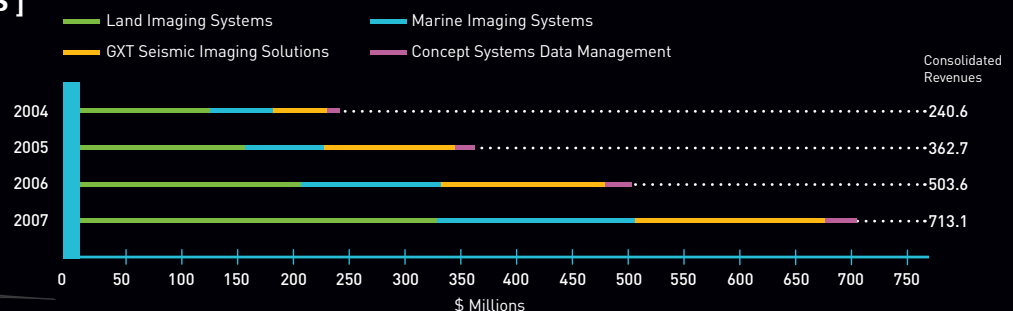
On the marine front, ION Systems is benefiting from a broad portfolio of hardware and software offerings for both streamer and seabed acquisition and a dynamic marine seismic marketplace. The streamer market has been especially robust lately, driven by the commissioning of new streamer acquisition vessels and technology upgrades throughout the global fleet. One noteworthy trend is the move toward complex acquisition geometries, which are designed to deliver improved seismic images in challenging subsurface environments such as sub-salt. We believe that our marine streamer toolkit – including our Orca® command & control software system and products such as DigiRANGE II® and DigiFIN™ – is well positioned to capitalize on the tough technology requirements of complex acquisition.




Against this backdrop, Concept Systems had a record year driven by increasing adoption of Orca on the global streamer vessel fleet. We continued to work with PGS on further commercializing our DigiFIN streamer-steering system and, in the fourth quarter, sold PGS the largest DigiRANGE II positioning system in ION history. We also made good progress with DigiSTREAMER™; late in the year, we signed a launch partner agreement with Fugro Geoteam. After open-water sea trials with our launch partner, we expect to commercialize DigiSTREAMER during the second quarter of 2008. Once DigiSTREAMER is added to our portfolio, we believe we will have a unique, highly integrated system for marine streamer acquisition.

On the seabed front, ION Systems delivered its fourth VectorSeis Ocean (VSO) system to our exclusive operating partner, Reservoir Exploration Technology ASA (RXT). RXT continues to attract significant interest from oil & gas companies that are seeking more efficient ways to acquire full-wave seismic images from the seabed. The demand for VSO and RXT acquisition services is coming from some of the largest E&P firms in the world, in a variety of regions, and for some of their most important reservoirs, including Kashagan in the Caspian Sea. Since first deploying VSO in 2004, RXT has been adding an average of one VSO system

## [ ANNUAL REVENUES ]





to its fleet per year. By the end of 2008, we expect RXT to have a 50% share in a \$500 million (and growing) seabed imaging market.

On the land front, ION Systems performed well. The land engineering team was busy working to refine our two major acquisition platforms – Scorpion® and FireFly – and made substantial progress on each. On the Scorpion side, two major imperatives were cost of goods sold and reliability. Our engineers made good progress on the cost of goods side throughout the year and continue to refine our design, procurement, and manufacturing approaches. While some benefits were obtained in 2007, we expect to capture even greater uplift in 2008. We believe we have addressed the field reliability issue through a series of software updates and some changes to the ground electronics and central recorder. Based upon the metrics we track, customer problems seem to have diminished significantly.

We incorporated many of the Scorpion learnings into the 14 systems we delivered to ONGC, the national oil company of India. We believe that the systems ONGC received in 2007 – all VectorSeis equipped – provide them with the greatest full-wave acquisition capability in the world. In December, we delivered a 10,000 station Scorpion system to Sinopec, the second largest energy company in China. This system represents the largest single VectorSeis-equipped recording platform ever sold by ION.

The Sinopec sale embodies two important trends within land acquisition. The first is the move toward higher station counts. The more stations deployed on the surface, the better the quality of the recorded seismic energy. When combined with the second trend – the transition to full-wave recording sensors such as VectorSeis – the result should

be a much improved image at the ‘reservoir level,’ which means detecting subtle changes in rock types, fracture patterns, and fluid distributions. As a consequence, seismic technologies generally – and ION technologies such as VectorSeis, Scorpion, and FireFly – should find themselves in increasing demand as they prove themselves not only in exploration situations, but also in reservoir appraisal, development, and production applications.

If one considers the multi-system ONGC sale, the Scorpion sale to Sinopec, and the FireFly system that was used by BP and Apache earlier in the year, nearly 50,000 VectorSeis stations were committed to by ION land customers in 2007. This roughly equates to all the VectorSeis stations that have ever been sold by ION and is, I believe, a sign that the full-wave era is beginning to take hold.

### ■ ION Solutions

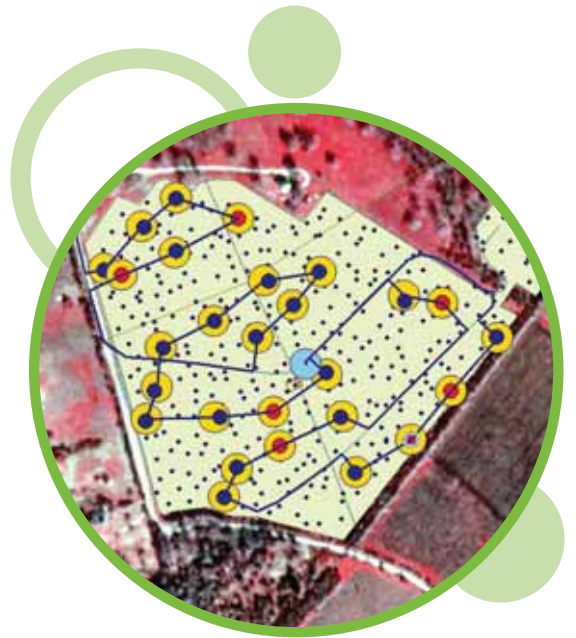
Our ION Solutions group had a very good year in 2007. On the financial side, ION Solutions generated \$173 million in revenues, an increase of 18% versus 2006. Operating income for 2007 was \$22 million, down \$7 million from the prior year due to some strategic, low margin data library programs, and an exceptionally high number of data library sales in 2006.



Our GXT Imaging Solutions business performed well, driven by a roughly 20% year-over-year increase in data processing revenues. Our implementation of the state-of-the-art reverse time migration (RTM) technique for depth imaging has been especially noteworthy, with the E&P companies benefiting from the improved images that RTM can provide in areas of complex subsurface geology, including sub-salt. While RTM has always been considered the 'Holy Grail' of depth migration, its adoption was impeded by its inherent computational intensity. Our scientists have made several step-change improvements in how they implement RTM, which allows ION to deliver differentiated subsurface images to our clients in greatly reduced periods of time. The streamlined turnarounds are extremely important to the E&P companies, which often use the results to high-grade their exploration portfolios in advance of time-sensitive lease sales around the world. Given what we have achieved in the area of RTM, the technique has now become the primary depth migration offering within our data processing portfolio.

Another team at GXT was busy advancing our capabilities for full-wave imaging, including algorithms, workflows, data management engines, and advanced geophysical and reservoir analyses. Their work helped us deliver truly impressive insights to Sinopec for a fractured gas reservoir in XinChang, China. You can read more about XinChang later in this Annual Report, so I won't get into it here other than to say that the results played a major role in driving the year end, 10,000 station Scorpion sale I

mentioned previously. In my opinion, XinChang has become the rallying flag for ION and what our company is capable of when people from



across the organization come together to solve problems directly for our oil & gas company clients.

In the marine imaging area, our GXT Imaging Solutions team was awarded a multi-year data processing contract in West Africa. We will be processing data that is acquired using VectorSeis Ocean by RXT on behalf of a supermajor oil & gas company operating in the area. We believe the total contract could deliver in excess of \$20 million in data processing revenues over its life, making it the largest single data processing award ever received by ION.

Data libraries have been an important growth engine for ION since the acquisition of GXT in 2004. Historically, our data libraries have centered upon the BasinSPAN™ – ultra-deep, basin-scale imaging programs that cover entire petroleum systems. During 2007, we benefited from several programs that were completed in prior years, including IndiaSPAN and ArcticSPAN. Both of these programs, for which acquisition was completed in late 2006, continued to be in high demand by oil & gas company customers looking for new frontiers for exploration. IndiaSPAN has become our largest program in terms of both library size and revenues – you can read more about it later in this

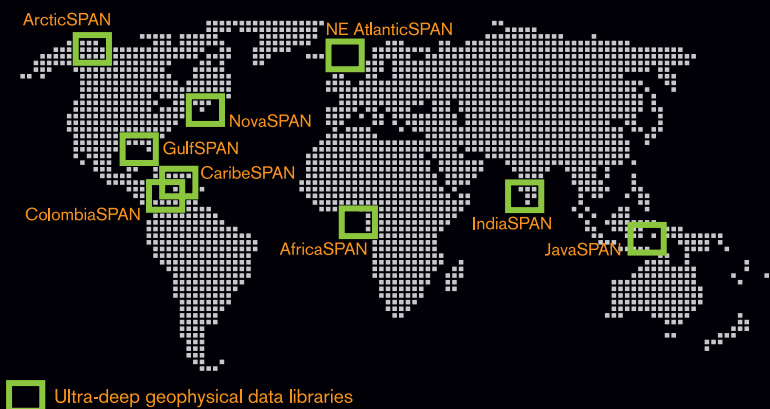
Annual Report. We have plans to continue extending ArcticSPAN in the years ahead and are conducting a series of tests on behalf of several E&P companies that envision a new way of imaging the potential hydrocarbon basins believed to exist in the Arctic region.

We launched additional BasinSPAN programs during 2007, including Northeast AtlanticSPAN™ offshore Norway, Ireland, and the Faroes and Shetland Islands, as well as JavaSPAN™ offshore Indonesia. We are in the final stages of originating additional SPAN programs offshore South America and in Southeast Asia. Our Integrated Seismic Solutions (ISS) team is also busy extending our multi-client business in areas beyond the BasinSPAN. For instance, we have been working very closely with a supermajor to design an advanced, full-wave imaging program along the Gulf Coast and have also been working with several groups of E&P companies who are interested in full-wave, multi-client seismic surveys in the Rocky Mountains and the Pacific Northwest.

Many of these potential multi-client programs involve our full-wave platforms – Scorpion, FireFly, and VSO – with our ISS team working to aggregate regional demand among

groups of interested oil & gas companies. Our FireFly and Seabed teams have also been working to generate demand for full-scope, full-wave imaging programs on a proprietary basis for E&P companies across the world, including North America, the Middle East, North Africa, China, and Central Asia. As a consequence, we believe that our pipeline of full-wave opportunities continues to expand and that our strategy of building multiple internal and external sales channels is working well.

We expect our growing pipeline of full-wave projects, including FireFly-related surveys, will prove timely as we prepare to release our second version of the system in mid-2008. You can read more about our first two field application projects with BP and Apache later in this Annual Report, but the headline is that the lessons learned from these early field deployments should serve us well as we move to full commercialization. After finishing the second field project with Apache in April 2007, we spent the remainder of the year incorporating the input of both oil & gas companies and their contractors into a version two design. We have been making the necessary refinements to FireFly and feel more confident than ever in our ability to satisfy the industry's increasing demand for cableless, high station count surveys.



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## ■ ION Rebranding

Given all of the changes that have transformed the company since I became CEO in April 2003, we took the decision to rebrand the company as ION Geophysical Corporation in September 2007. We were no longer the Input/Output that provided only seismic instrumentation to acquisition contractors, but had become a company whose offerings encompassed software as well as data processing and data library products delivered directly to oil & gas companies. The rebranding has been well received by our customers and, perhaps more importantly, has served to unify employees within the company. While our employees still have an affinity toward their legacy companies, they are affiliating more and more with our concept of 'One ION Family' and our mission of becoming 'The Geophysical Technology Company for the 21st Century.'

## ■ 2008 – The Breakout Year

As we look toward 2008 and beyond, I have focused my senior leadership team on delivering the bottom-line results from the strategy and technology portfolio we have put in place. We have made the requisite investments in a series of potentially game-changing technology platforms such as FireFly, Orca, DigiFIN, and VectorSeis Ocean, and have developed the sales, marketing, and administrative

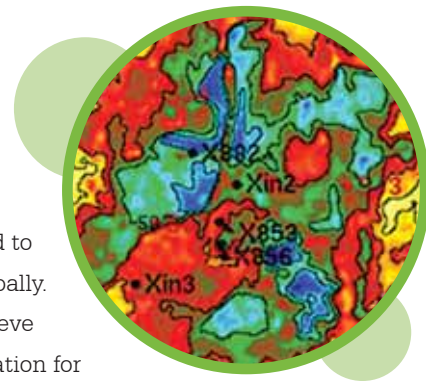
infrastructure required to scale the business globally.

As a result, I believe we now have a foundation for delivering what I am calling 'The Breakout Year.' I expect 2008 will be a period in which our advanced geophysical products and services continue to gain acceptance in a robust market for hydrocarbon exploration and production. Based on market dynamics and our own internal actions, I envision a world in which both our revenues and our margins continue to expand, while our internal expenses grow at a pace slower than they have in the past.

With our technologies and the team we have put in place, I truly believe ION is poised to deliver a breakout year to you, our shareholders. Thank you, as always, for your ongoing support.



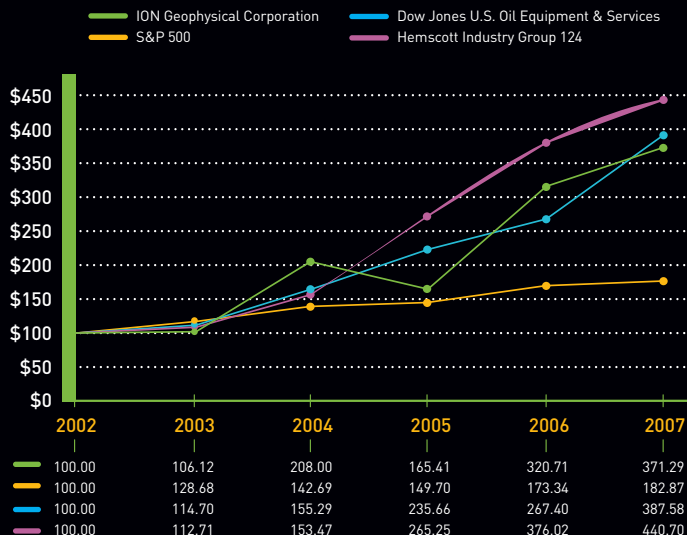
Robert P. Peebler  
President and CEO



## [ STRONG PERFORMANCE ]

This graph compares our cumulative total stockholder return on our common stock for the five years ending December 31, 2007, assuming reinvestment of dividends, with (i) the S&P 500 Index and (ii) the Dow Jones U.S. Oil Equipment and Services Index, an index of companies that we believe are comparable in terms of industry and their lines of business. In the stock performance graph contained in our 2007 Annual Report to Shareholders, we compared our cumulative stockholder return with the S&P 500 Index and with the Hemscott Industry Group 124 - Oil and Gas Equipment and Services Index, another index of oil and gas companies, so we have included the Hemscott index in this stock performance chart as well. After considering changes in our business and in the businesses and market capitalizations of the companies included in the Hemscott index, we concluded that a more meaningful comparison would be the Dow Jones U.S. Oil Equipment and Services Index.

The graph assumes that \$100 was invested in our common stock and the above indices on January 1, 2003. We have not paid any dividends on our common stock during the applicable period. Historic stock price performance is not necessarily indicative of future stock price performance.



# [ LEADING THE CHARGE ]

Over the years, ION has made great progress toward a strategy of delivering game-changing solutions to help the industry address its most challenging imaging and operations environments. The following pages highlight six real-world stories in which ION demonstrates how it is helping our E&P customers unlock new subsurface insights and hydrocarbon resources by working across boundaries inside and outside of ION. The common thread throughout the stories is the innovative technologies utilized in these projects and the exceptional people who helped make them possible. Read on to see how ION is leading the charge in seismic imaging around the world.



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10 | Best Well in the Province



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# Spanning the **Globe**

## BasinSPAN programs deliver new insights as E&P companies evaluate exploration targets

■ GX Technology pioneered the BasinSPAN approach in 2001 when our first basin-scale seismic data library – GulfSPAN™ – was delivered. Since then, the ION family of companies has completed 17 BasinSPAN programs, validating our belief that oil & gas companies require new insights into how petroleum systems were formed. Unlike traditionally gridded 2D seismic data libraries, SPANs are customized to image over an entire petroleum province, look deep within the geologic section, and identify the areas of highest prospectivity. By using SPANs, geoscientists have the tools to trace the basin-scale history of a petroleum system to determine where source rocks are most prevalent, where sediment fairways are located, and where the most promising migration paths from source to reservoir exist.

■ We approached the Directorate General of Hydrocarbons (DGH) several years ago to discuss the potential for a BasinSPAN program in India. Our challenges were many, not the least of which was the fact that no foreign

company had ever arranged a multi-client seismic survey on both operated and non-operated blocks within the same program. However, India was facing its own set of challenges. Despite a long history of hydrocarbon exploration, India's rapid economic growth had forced it to import nearly two million barrels of oil equivalent (BOE) per day. The DGH took several steps to shrink this import requirement, including inviting outside oil & gas companies to bid on prospective acreage, especially in the under-explored offshore regions. This process has been a brilliant success, doubling the number of foreign E&P firms operating in the country and uncovering three new hydrocarbon basins. It also opened the door to launch IndiaSPAN.

■ As with all SPAN programs, IndiaSPAN required us to orchestrate a delicate balance among governmental agencies, the national oil company (ONGC), domestic and international E&P companies, and the seismic contractor(s) we would need to acquire the data on our behalf. During 2005, we negotiated the required commercial agreements



[IndiaSPAN is one of our largest BasinSPAN programs, comprised of nearly 18,000 km of long-offset, long record-length data.]



and, in November 2006, announced that acquisition had been completed. IndiaSPAN is one of our largest SPAN programs, comprised of nearly 18,000 km of long offset, long record-length data. The long offsets and long records, along with a specially designed seismic source, allowed us to illuminate the basin and rift architecture of the Indian margin. Evidence of frontier petroleum systems was identified in three deepwater areas.

■ The success of the program can be measured in the number of IndiaSPAN customers we have obtained and the level of sales we have achieved to date. IndiaSPAN has alerted the world to the hydrocarbon prospectivity of India and established the foundation for rapidly increasing exploration in frontier and under-explored basins throughout the

country. Our work with the DGH and with ONGC helped us to build relationships and awareness into the Indian petroleum sector, which likely played a part in ION being awarded a tender by ONGC for our largest-ever multi-system sale of land seismic technology in late 2006. Further, our experience in processing data in the Indian offshore has led to significant work for our London data processing center.

■ The end of our BasinSPAN runway is not yet in sight. We are extending our SPAN programs in both West and East Africa as well as the Arctic, and have begun to put the finishing touches on SPANs in Southeast Asia, South America, and the Northeast Atlantic. We have a lot more running room with SPAN programs, and a lot more value to deliver to our clients as a result.

WANT TO LEARN MORE? [IONGEO.COM/2007ARV1](http://IONGEO.COM/2007ARV1)



**// IndiaSPAN: Ken Williamson, Sujata Venkatraman, Vijay Singh**

Ken Williamson is Senior Vice President of Integrated Seismic Solutions (ISS) and manages our portfolio of BasinSPAN programs. Sujata Venkatraman is a Business Developer of BasinSPAN programs. Vijay Singh is Imaging Services Manager for GXT Imaging Solutions.





# Best Well in the Province

## A full-wave solution helps Sinopec optimize its drilling program for a fractured gas reservoir

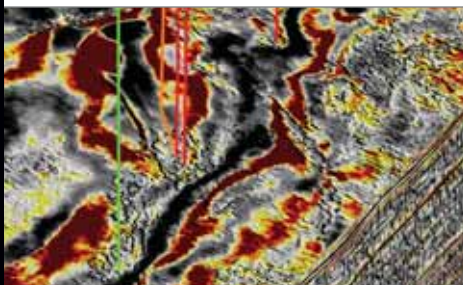
■ Last year, our Annual Report to Shareholders provided an interim update on our full-wave imaging project for Sinopec at their XinChang gas field in China. In August 2007, we delivered our final images of the XinChang reservoir, along with our interpretation of the ‘sweet spots’ (areas that should prove most productive if penetrated by new wells). We are pleased to report that the project has been a tremendous success. Sinopec was able to drill three new producing wells, including one that tested as the most prolific in an area that accounts for 40% of Sinopec’s domestic production. The Chinese media declared this discovery “a result of world-class seismic technology in a tough exploration area.” Sinopec is just getting started, with another 16 wells to be drilled in the months ahead and the upcoming launch of our second full-scope imaging project.

■ To recap a bit of history, ION began discussions in 2003 with an operating subsidiary of Sinopec – Southwest Petroleum Branch (SWPB) – about applying full-wave seismic to optimize a drilling program planned for this tight

gas reservoir. Traditional seismic methods had generated satisfactory images of the structural geology at XinChang; however, they were insufficient for truly characterizing the reservoir’s lithology (rock type) variations and the fracture network that Sinopec’s geoscientists knew were the primary determinants of individual well production.

■ As the second largest producer of natural gas in China, Sinopec was under tremendous pressure in 2003 to increase domestic production. The SWPB geoscience team and senior leadership group believed the application of the latest E&P technologies would give them the best chance to satisfy the objectives of their key stakeholders. Full-wave seismic became an integral part of their technology program.

■ ION and SWPB geophysicists modeled the improvements that full-wave imaging techniques could provide. The joint team determined that full-wave seismic would improve the quality of the recorded data and deliver insights into both lithology and fracture patterns within the reservoir intervals. Acquisition began in October 2004



[We were able to extract attributes from the seismic data that explained broad regional stress fields and the impact these tectonic forces have on reservoir fracture patterns at XinChang.]



with 6,000 VectorSeis sensors and a field acquisition crew consisting of 1,466 people and 133 vehicles. The survey size, amount of data acquired, and scale of the field operation made XinChang the largest full-wave project ever undertaken.

■ In 2006, ION's GXT Imaging Solutions group was awarded the data processing and reservoir analysis contract. We had been investing heavily in the algorithms and infrastructure to process full-wave data, but the scope and complexity of the project challenged even our capabilities. We worked in close collaboration with the geoscientists and engineers from SWPB and, in 2007, a clearer picture began to emerge. We were able to extract attributes from the seismic data that explained broad regional stress fields and the impact these tectonic

forces have on the reservoir fracture patterns at XinChang. By integrating well data from cores, logs, and production histories, the ION team was able to characterize reservoir properties and propose the optimal locations for new wells.

■ While the chapter could have been closed in August 2007 when the XinChang results were delivered, our collaboration with Sinopec continues. Just before the close of the year, Sinopec commissioned a high-station count, VectorSeis-enabled full-wave survey to characterize a nearby reservoir, and plans to use the same team to process and interpret the results. We look forward to answering the bell for Round II.

WANT TO LEARN MORE? [IONGEO.COM/2007ARV2](http://IONGEO.COM/2007ARV2)



**// XinChang: David Meng, Pete Stewart, John Tinnin**

David Meng is Vice President of the China region and responsible for all operational activities within the country. Pete Stewart is Chief Geophysicist for GXT Imaging Solutions and John Tinnin is Director of GXT Reservoir Solutions.





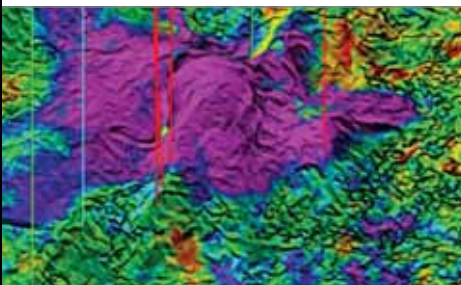
# Unlocking the Unconventional

## FireFly field applications demonstrate the potential to transform geophysics in challenging onshore environments

■ As we wrapped up 2006, our first FireFly system was being deployed in the high desert of Wyoming on its first field application by BP. This marked a significant milestone in our fast-track development effort to move from concept to field deployment in less than two years. As you may know, FireFly is our revolutionary system for high-density land seismic acquisition without cables. The field projects by BP and later Apache validated the potential for FireFly and, importantly, showed us how to refine and improve the system. Perhaps Craig Cooper, BP's Land Seismic Coordinator for North America, said it best shortly after the Wamsutter acquisition concluded: "The flashes of brilliance we saw at Wamsutter make it exciting to think about how to more tightly integrate FireFly into our field development plans. [The system] will give us more information and a better chance of characterizing our reservoirs. We have an opportunity to use this technology to fundamentally change the way we perform."

■ The Wamsutter field project tested the limits of our first system. The high desert of Wyoming normally sees only a few inches of snow each winter, but BP encountered several feet from late 2006 through early 2007. The snow and extreme cold provided some challenges to both equipment and BP's field personnel, yet nearly 7,000 shot points of full-wave seismic data were ultimately recorded using more than 8,000 FireFly units.

■ From Wamsutter, the FireFly system moved to East Texas with Apache for the second field application. Instead of record snows, Apache faced record rainfall. The cold of Wyoming was replaced with the heat and humidity that makes Texas infamous. Apache was working with a second acquisition contractor that faced a tough environment in terms of terrain (flooded areas, dense foliage) and culture (farms). Again, Apache pushed the limits of both equipment and personnel, but still recorded more than 4,300 shot points. Both the BP and Apache datasets have been processed by



["The flashes of brilliance we saw at Wamsutter make it exciting to think about how to more tightly integrate FireFly into our field development plans."]

Craig Cooper, BP's Land Seismic Coordinator for North America



our GXT Imaging Solutions group. The results appear promising and are now in the hands of interpreters who are using the insights to tune their reservoir development plans.

■ In the end, the environmental extremes and large-scale deployments tested FireFly in ways we couldn't have simulated in the lab. These insights, however, should accelerate our further commercialization of the system. So what did we learn? For one thing, our data communications backbone wasn't yet perfected, which affected the overall reliability of the system and the productivity of field operations. We also discovered that our power management system needed some improvement. Neither of these learnings was unexpected, as the FireFly architecture removes the cables that normally serve as the communications and power networks within a traditional seismic system.

■ During 2007, we've been working hard to enhance the communications and power backbones that underpin the FireFly ecosystem. We believe we now have an approach that will deliver significantly more reliability and operational efficiencies than our original design. We're expecting these updates, along with several other refinements, to be complete in mid-2008 when we deliver our second version of the system. We believe that these hardware and software enhancements, along with the advancements we have made in full-wave processing, attribute analysis, and data management from other projects, should ultimately provide us with an end-to-end solution that is capable of transforming land seismic around the world.

WANT TO LEARN MORE? [IONGEO.COM/2007ARV3](http://IONGEO.COM/2007ARV3)



**// FireFly: Robert Mott, Gregg Hofland, Andy Bull**

The ION FireFly team includes Robert Mott who is Vice President of Engineering, Gregg Hofland who is Solutions Architect, and Andy Bull who is the Systems Architect.





# Simplifying the **Complex**

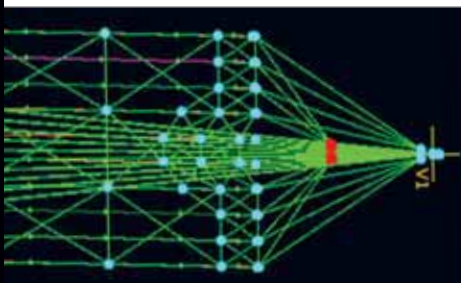
## Enabling the next era of marine streamer acquisition via an intelligent toolkit of technologies

■ The marine seismic market continued to sizzle in 2007. Buoyed by high oil & gas prices, E&P companies continued to conduct an ever-increasing number of offshore surveys. The announcements of basin-changing discoveries in the Gulf of Mexico (Jack) and Brazil (Tupi) only served to reinforce the industry's excitement about marine exploration. Benefiting from high commodity prices and fleet utilization, seismic contractors were cash-rich and confident about the future. They announced new-build vessels and moved to upgrade the technology systems carried on existing boats. At the same time, new contractors entered the market with plans to build multi-vessel fleets in the years ahead. Several of these new contractors ended up being acquired, in some cases before they had shot a single line of seismic data.

■ Given all this activity, it would be easy to lose sight of one of the most important trends in marine seismic today—the move toward complex acquisition. There are many variants of complex acquisition, with acronyms like WAZ (Wide-Azimuth) and WATS (Wide-Azimuth Towed Streamer)

becoming commonplace; reservoir monitoring using time-lapse (4D) seismic also qualifies as a type of complex marine survey. Regardless of the name, the fundamental premise of complex acquisition is to improve the quality and utility of the seismic image by using multiple vessels and multiple vessel passes over targets of interest.

■ Designing and implementing a complex survey isn't easy. One has to simulate how image quality might change with different acquisition geometries. Multiple source and streamer recording vessels must be orchestrated to ensure each is in the right place at the right time. Advanced systems are required to determine where the streamer cables are and where they should be, and steer them into the proper place. All of this must occur with no compromises to acquisition efficiency or adverse impacts upon the health and safety of the acquisition crew or the environment. As a technology-focused solutions provider, the challenge of simplifying the complex is something we yearn for. Given that we have two of the top names in marine seismic



[As a technology-focused solutions provider, the challenge of simplifying the complex is something we yearn for.]



technology within the ION family – Concept Systems and DigiCOURSE® – we are well positioned to deliver against the industry’s complex survey requirements.

■ Concept Systems, the leader in marine command & control systems, has seen its Orca software product become an integral part of complex survey operations. Seismic operators view Orca as the brain of an emerging ‘intelligent acquisition’ network that controls everything from the energy sources to the positioning and control of the streamer cables. Perhaps even more importantly, Orca helps coordinate multiple source and recording vessels on the survey.

■ DigiCOURSE is the second part of the equation, providing vessel operators with advanced in-water instru-

mentation and dry-end recording systems. DigiSHOT® (energy source control), DigiRANGE II (streamer positioning), DigiBIRD® and DigiFIN (vertical and lateral streamer control), and by mid-2008, DigiSTREAMER (streamer cables and recording system) all act as key enablers in our complex marine solution.

■ As we continue to enhance and integrate these component technologies, and as seismic acquisition contractors grow ever more skeptical of buying technology from one of their direct competitors, we believe we have an opportunity to become the preferred supplier to the global marine streamer fleet.

WANT TO LEARN MORE? [IONGEO.COM/2007ARV4](http://IONGEO.COM/2007ARV4)



**// Streamer: Dale Lambert, André Olivier, Susanne Preissler**

Dale Lambert is Vice President of Marine Engineering and André Olivier is a Mechanical Engineering Manager. Susanne Preissler is a Software Engineer for Concept Systems.





# Charging to the Seabed

## VectorSeis Ocean is proving its ability to enable full-wave imaging from the ocean bottom

■ Our platform for redeployable imaging from the seabed – VectorSeis Ocean (VSO) – continued to show its promise as a game-changer during 2007. We delivered our fourth VSO system to our exclusive acquisition partner – Reservoir Exploration Technology ASA (RXT) – marking the fourth consecutive year in which RXT accepted delivery on a new system. RXT is so convinced of the potential of VSO that in May 2007 they extended their exclusivity agreement with ION. As part of the extension, RXT committed to gain-sharing by providing ION with a 2.1% royalty on the revenues it derives from VSO acquisition services.

■ From a venture-backed start in 2003, RXT has grown to be the market share leader in ocean-bottom cable (OBC) acquisition. We are projecting that they will obtain a 50% market share at some point in 2008. RXT is not only capturing market share, but also capturing share in a market that we believe will double from 2006 through 2008, and that we believe will double again over the subsequent four to five years. These share gains haven't come from

small jobs for small customers on small fields. They are coming from the provision of full-wave acquisition services to some of the largest oil & gas companies in the world, in key provinces like the Gulf of Mexico, North Sea, West Africa, and the Caspian, while covering elephant reservoirs like Kashagan, the largest field to be discovered in the world in the last 30 years.

■ While ION is delighted to have contributed to RXT's success, neither of us is content to rest. During the year, we moved to tighten our collaboration by forming a joint development team, with members seconded from both companies. This group is tasked with developing the next generation of VSO, a system designed to record even larger seabed surveys with improved levels of operational efficiency.

■ Our work won't stop with next-generation VSO, however. The joint development team will also be looking at integration opportunities between VSO and FireFly in what is called the transition zone (TZ), a market space that has proven challenging for the E&P industry. TZ is



[From a venture-backed start in 2003, RXT has grown to be the market share leader in ocean-bottom cable (OBC) acquisition.]



the 'fuzzy gray area' between where continental land masses end and oceans begin. By developing an integrated recording system – based on the core VSO and FireFly architectures – ION can unlock a truly high-potential market.

■ Another area of interest is called EM (Electromagnetics). The E&P industry's widely used well logging tool is based on EM technology and the simple physical principle that a reservoir filled with hydrocarbons doesn't transmit electrical current as well as one filled with salt water. Unfortunately, a well log assumes one very fundamental thing – that one has drilled a well that can be logged. In the exploration space, we aren't afforded that

luxury. Although several EM players have appeared in recent years, RXT is pursuing an alternative and, we think, more promising approach. Their goal is to integrate seismic and EM in an OBC architecture that simultaneously measures both rock and fluid properties in target reservoirs; ION is helping RXT make their EM system compatible with VSO so they can deliver seamless geophysical services to their oil & gas company customers.

■ We clearly have a lot going on as we lead the charge to the seabed. We'll keep you posted on our progress.

WANT TO LEARN MORE? [IONGEO.COM/2007ARV5](http://IONGEO.COM/2007ARV5) 

**// VSO: Tim Rigsby, Felix Bircher, Chris Walker**

Tim Rigsby is Senior Vice President of Seabed Solutions and Felix Bircher is the Product Manager for VectorSeis Ocean (VSO). Chris Walker is Vice President of Geophysics at Reservoir Exploration Technology ASA (RXT), our exclusive seabed partner.





# The Virtuous Cycle

## Our collaboration with a local partner drives a series of successes in West Africa

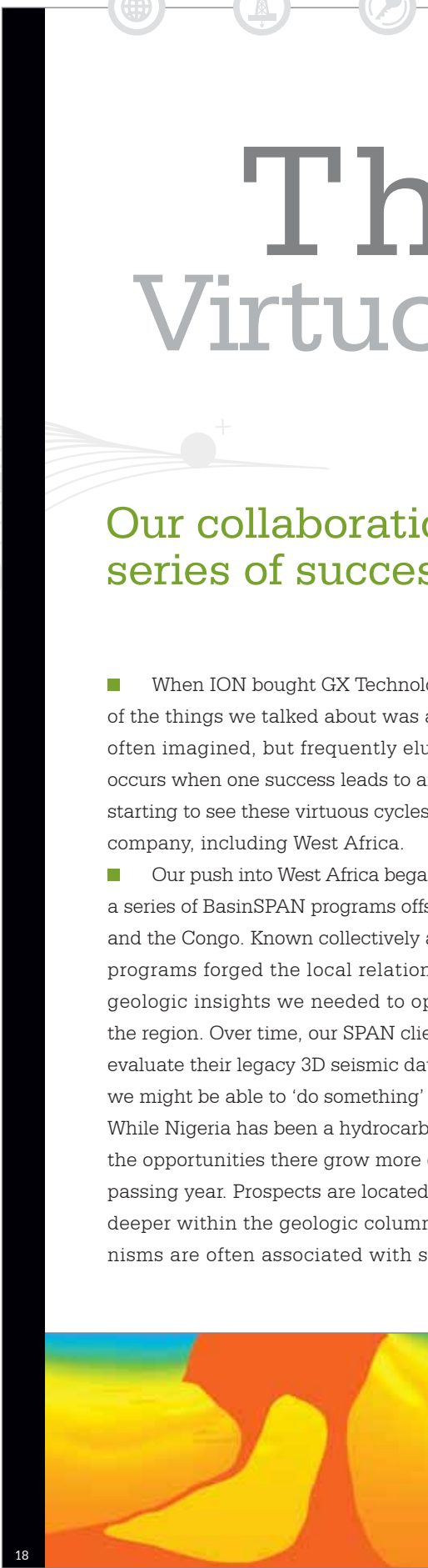
■ When ION bought GX Technology (GXT) in 2004, one of the things we talked about was a virtuous cycle – that often imagined, but frequently elusive condition that occurs when one success leads to another. We think we’re starting to see these virtuous cycles in many areas of the company, including West Africa.

■ Our push into West Africa began several years ago with a series of BasinSPAN programs offshore Nigeria, Angola, and the Congo. Known collectively as AfricaSPAN™, these programs forged the local relationships and built the geologic insights we needed to operate successfully in the region. Over time, our SPAN clients began to ask us to evaluate their legacy 3D seismic datasets and see whether we might be able to ‘do something’ to improve their quality. While Nigeria has been a hydrocarbon center for decades, the opportunities there grow more challenging with each passing year. Prospects are located in deeper waters and deeper within the geologic column. Oil trapping mechanisms are often associated with subtle changes in rock

types. Target reservoirs are difficult to discriminate from the steeply dipping shales that are interbedded among them. And echoes off the seafloor, called multiples, can interfere with the recorded seismic signals.

■ In short, this is just the kind of complex environment in which ION likes to operate. It also is the kind of place where the full suite of our imaging skills can be brought to bear. Our expertise in areas like multiple elimination, Gaussian beam migration, and the cutting-edge reverse time migration (RTM) technique is proving invaluable as we take on the complex imaging challenges of the West African margin.

■ As demand for our GXT data processing services grew, we knew we needed a local partner to help us better navigate the complex business climate within Nigeria. We turned to a long-standing provider of geological data management solutions – Bulwark Services Ltd – and forged an alliance that has served us well since its formation in May 2005. Over the last three years, GXT-Bulwark Services



[We believe that we have only begun to scratch the surface of what the ION family of companies can achieve in West Africa.]



Nigeria has expanded its customer base, service offerings, and employee population. Today, our geophysical services center in Port Harcourt is capable of handling jobs of the highest complexity and delivering a product that is the equal of any GXT service center around the world. Our Port Harcourt center also reflects our commitment to sustainability, including transferring advanced technologies and best practices to local communities where we operate. Our Port Harcourt center is managed by our local Nigerian partner and staffed primarily with geophysical professionals of Nigerian heritage.

■ We believe that we have only begun to scratch the surface of what the ION family of companies can achieve

in West Africa. RXT has just moved a large VSO crew into Nigeria and has begun acquiring data under a multi-year contract for a supermajor; separately, GXT was awarded the full-wave processing portion of this project. The entire West African margin provides numerous opportunities for transition zone (TZ) imaging. And we are already receiving inquiries about FireFly surveys in the Niger Delta area. Even with all this progress in only a short period, it appears the virtuous cycle has only just begun.

WANT TO LEARN MORE? [IONGEO.COM/2007ARV6](http://IONGEO.COM/2007ARV6)



**// Nigeria: Lucky Awobasivwe, Karen Sontag, Mike Stewart**

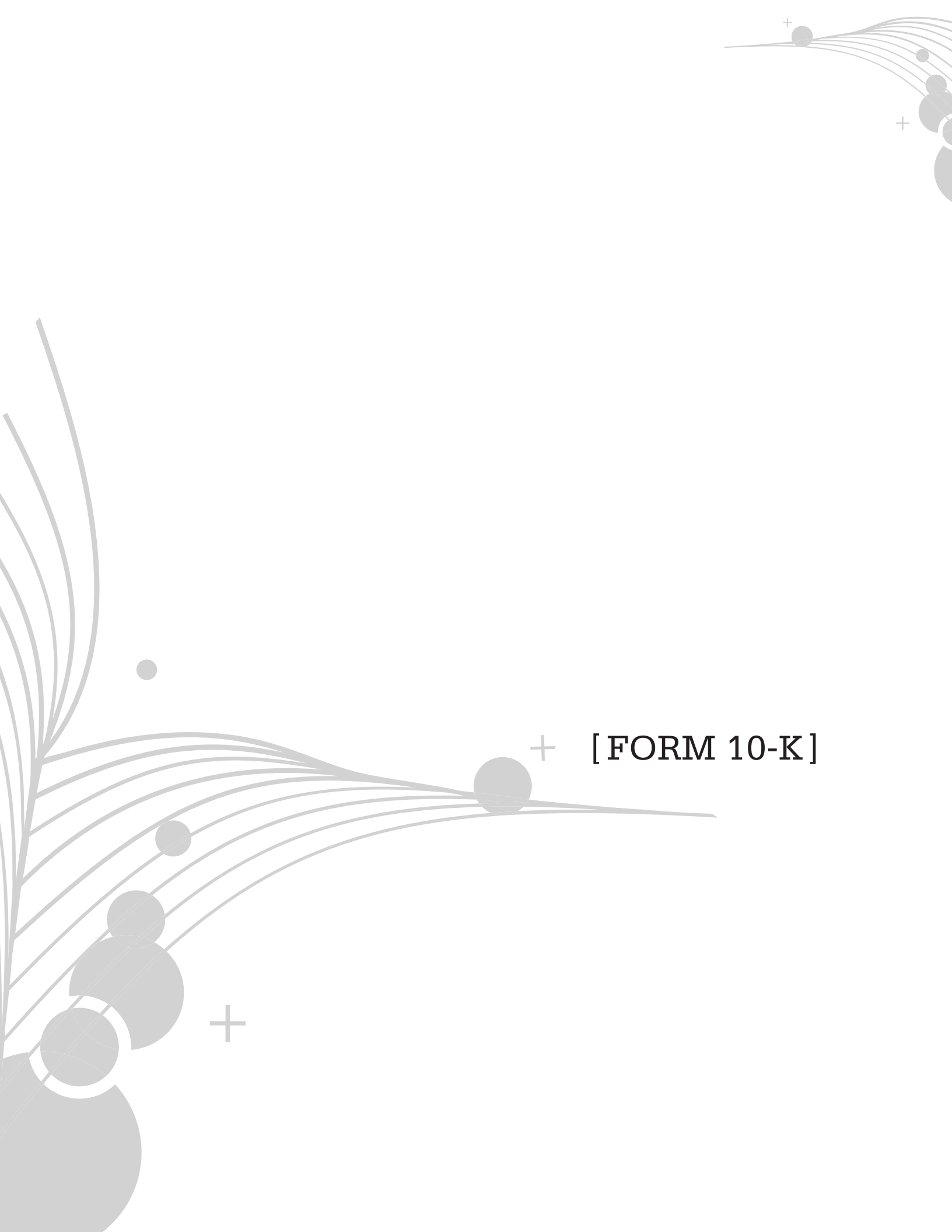
Lucky Awobasivwe is the Managing Director of GXT-Bulwark Services Nigeria, our joint venture for seismic data processing. Karen Sontag is a Client Services Representative in our GXT Imaging Solutions group. Mike Stewart is a Data Processor based in our Egham, UK Geophysical Services Center.



# [ FINANCIAL HIGHLIGHTS ]

	years ended December 31		
	<u>2007</u>	<u>2006</u>	<u>2005</u>
	(in thousands, except per share data)		
<b>STATEMENT OF OPERATIONS DATA</b>			
Product revenues	\$ 537,691	\$ 354,258	\$ 237,359
Service revenues	175,420	149,298	125,323
<b>Net revenues</b>	<b><u>713,111</u></b>	<b><u>503,556</u></b>	<b><u>362,682</u></b>
Cost of products	390,512	257,749	169,688
Cost of services	119,679	91,592	86,619
<b>Gross profit</b>	<b><u>202,920</u></b>	<b><u>154,215</u></b>	<b><u>106,375</u></b>
Operating expenses (income)			
Research and development	46,302	32,751	20,266
Marketing and sales	43,877	40,651	33,167
General and administrative	49,100	40,807	28,227
(Gain) loss on sale of assets	(253)	58	99
<b>Total operating expenses</b>	<b><u>139,026</u></b>	<b><u>114,267</u></b>	<b><u>81,759</u></b>
Income from operations	63,894	39,948	24,616
Interest expense	(6,283)	(5,770)	(6,134)
Interest income	1,848	2,040	843
Loss on debt conversion	(2,902)	—	—
Other income (expense)	(1,090)	(2,161)	820
Income before income taxes and change in accounting principle	55,467	34,057	20,145
Income tax expense	12,823	5,114	1,366
Net income before change in accounting principle	42,644	28,943	18,779
Cumulative effect of change in accounting principle	—	398	—
<b>Net income</b>	<b><u>42,644</u></b>	<b><u>29,341</u></b>	<b><u>18,779</u></b>
Preferred stock dividends and accretion	2,388	2,429	1,635
Net income applicable to common shares	<u>\$ 40,256</u>	<u>\$ 26,912</u>	<u>\$ 17,144</u>
Net income per basic share before change in accounting principle	\$ 0.49	\$ 0.33	\$ 0.22
Cumulative effect of change in accounting principle	—	0.01	—
Net income per basic share	<u>\$ 0.49</u>	<u>\$ 0.34</u>	<u>\$ 0.22</u>
Net income per diluted share before change in accounting principle	\$ 0.45	\$ 0.32	\$ 0.21
Cumulative effect of change in accounting principle	—	0.01	—
Net income per diluted share	<u>\$ 0.45</u>	<u>\$ 0.33</u>	<u>\$ 0.21</u>
Weighted average number of common shares outstanding	<u>81,941</u>	<u>79,497</u>	<u>78,600</u>
Weighted average number of diluted shares outstanding	<u>97,321</u>	<u>95,182</u>	<u>79,842</u>
<b>Balance Sheet Data (end of year)</b>			
Working capital	\$ 220,522	\$ 170,342	\$ 153,761
Total assets	709,149	655,136	537,861
Notes payable and long-term debt	24,713	77,540	75,946
Cumulative convertible preferred stock	35,000	29,987	29,838
Stockholders' equity	476,240	369,668	327,545
<b>Other Data</b>			
Capital expenditures	\$ 11,375	\$ 13,704	\$ 5,304
Investment in multi-client library	64,279	39,087	19,678
Depreciation and amortization (other than multi-client library)	26,767	22,036	23,497
Amortization of multi-client library	37,662	25,011	10,707

The selected consolidated financial data set forth above with respect to our consolidated statements of operations for the years ended December 31, 2007, 2006, and 2005 and with respect to our consolidated balance sheets at December 31, 2007, 2006, and 2005 have been derived from our audited consolidated financial statements. Our results from operations and financial condition have been affected by acquisitions of companies and dispositions of assets during the periods presented, which may affect the comparability of the financial information. 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 in our Annual Report on Form 10-K for the year ended December 31, 2007.



+ [FORM 10-K]



UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549

Form 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934  
For the Fiscal Year Ended December 31, 2007  
OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934  
Commission File Number 1-12691

**ION Geophysical Corporation**

(Exact Name of Registrant as Specified in Its Charter)

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

**22-2286646**  
(I.R.S. Employer  
Identification No.)

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

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, \$0.01 Par Value	New York Stock Exchange

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

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

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

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

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

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

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company

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

As of June 29, 2007 (the last business day of the registrant's second quarter of fiscal 2007), the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was \$1.1 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, 93,996,680 shares outstanding as of February 14, 2008.

**DOCUMENTS INCORPORATED BY REFERENCE**

**Document**  
Portions of the Proxy Statement for the  
Annual Meeting of Stockholders to be held May 27, 2008

**Parts Into Which Incorporated**  
Part III

# ION GEOPHYSICAL CORPORATION

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## PART I

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

In this 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

#### Introduction

We are a technology-focused seismic solutions company that provides advanced acquisition equipment, software, and planning and seismic 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 are designed to create better analyses for the subsurface, which enables oil companies to make improved drilling and production decisions. Our products and services include the following:

- land and marine seismic data acquisition equipment,
- navigation and data management software products,
- survey design planning services,
- 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 & gas reservoirs become harder to find and more expensive to develop and produce, the demand for advanced seismic imaging solutions has grown in recent years. In addition, seismic technologies are now being applied more broadly over the entire life cycle of a hydrocarbon reservoir to optimize production (referred to as “4D” or time-lapse seismic).

We have been involved in the seismic technology industry for approximately 40 years, starting in the 1960s as a manufacturer of seismic equipment. 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.

In September 2007, we changed our corporate name from Input/Output, Inc. to ION Geophysical Corporation. This change was made to reflect the evolution of our company from being primarily known as an equipment manufacturer to our current expanded portfolio of land and marine acquisition hardware, survey design and command and control software, advanced imaging services, and seismic data libraries.

Our executive headquarters are located at 2105 CityWest Boulevard, Suite 400, Houston, Texas 77042-2839. Our telephone number is (281) 933-3339. Our home page on the internet is [www.iongeo.com](http://www.iongeo.com). We make our website content available for information purposes only. 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 page of our website. The SEC also maintains a website at [www.sec.gov](http://www.sec.gov) that contains reports, proxy statements, and other information regarding SEC registrants, including our company.

## **Seismic Industry Overview**

Since the 1930s, oil and gas companies have sought to reduce exploration risk by using seismic data to create an image of the earth's subsurface. Seismic data is recorded when listening devices on the earth's surface, seabed floor or on a towed streamer acquisition 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 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 contractor will often rely on 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 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. 3-D seismic records the reflected energy across a series of closely-spaced seismic lines that collectively provide a more holistic, spatially-sampled measure of subsurface reflections and geological horizons.

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, the business model 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 sold 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.

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

Beginning in 2004, 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 have increased the pressure on E&P companies to discover additional fields and optimize the recovery of those already on production. These increased exploration demands, increasing demand for oil and natural gas worldwide, and prevailing commodity price levels have increased the demand for seismic technology and services. Additionally, E&P companies are focusing on hydrocarbon reservoirs that are in deeper waters or deeper in the geologic column, and that are more complex or subtle than the reservoirs that were discovered in prior decades. 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, more efficient imaging technologies. Moreover, as E&P companies increasingly use seismic data to enhance production from known fields by repeating seismic surveys over a defined area (with these time-lapse seismic images referred to as "4-D" (four-dimensional) surveys, in which the fourth dimension is time), 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. We expect that these companies will, in the future, rely less on undifferentiated, mass seismic studies created using analog sensors and traditional processing technologies that do not adequately identify geologic complexities.

Key steps in recent years in our evolution from being primarily a seismic equipment provider to becoming a broad-based seismic solutions provider were two acquisitions in 2004:

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

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

Our current growth strategy is predicated on successfully executing six key imperatives:

- Expanding our ION Solutions (GXT) business in new regions with new customers and with new service offerings, including proprietary services for owners and operators of oil and gas properties (see “ — *Markets and Customers*” below);
- Globalizing our ION Solutions (GXT) data processing business by opening advanced imaging centers in new locations, and expanding our presence in the land seismic processing segment;
- Successfully developing and introducing our next generation of marine towed streamer products;
- Expanding our seabed imaging solutions business using our VectorSeis® Ocean (VSO) acquisition system platform and derivative products;
- Increasing our market share in cable-based land acquisition systems through the latest version of our Scorpion® acquisition system; and
- Ongoing development and further commercialization of FireFly®, our cableless full-wave land acquisition system.

During 2007, we continued to see increasing interest in our new technologies. In recent periods, we have been differentiating our approaches to our different products and services. For our mature businesses, such as our analog sensors and certain of our land acquisition systems, we are seeking opportunities to profit from the increased demand for seismic products and services. For our legacy products and services in transition, we are introducing new products and services as well as re-positioning current products and services in a manner that we believe will best meet market demand and expectations. Finally, for our newest technologies, we remain focused on our research and development efforts to develop the next generation of seismic equipment and services, while reducing product development-cycle times. We also intend to continue to exploit the emerging market for reservoir monitoring and characterization. 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 3-D and for 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 wave fields traveling within the earth. By measuring both P-waves and S-waves, the VectorSeis “full-wave” sensor records a more complete and accurate seismic dataset having higher frequency content than conventional sensors. When data recorded by VectorSeis is processed using the advanced imaging techniques offered by our GXT Imaging Solutions group, we are able to deliver higher-definition images of the subsurface to our oil and

gas customers, which enables geophysicists to better identify subtle structural, rock, and fluid-oriented features in the earth. In addition, we believe that full-wave technologies should deliver improved operating efficiencies in field acquisition and reduce cycle times across the seismic workflow, from planning through acquisition and final image rendering.

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

- Scorpion — our cable-based land acquisition system 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.

During late 2006 and 2007, we delivered version 1.0 of our FireFly system, which was used by British Petroleum and then Apache Corporation, in its first field application projects located in Wyoming and north-east Texas, respectively. We are in the process of completing Version 2.0 of our FireFly system, which, after internal field testing, we plan to bring to commercialization in 2008.

## 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 (formerly referred to as Seismic Imaging Solutions).

- *Land Imaging Systems.* Our Land Imaging Systems segment includes our cable-based, cableless, and radio-controlled seismic data acquisition systems, digital and analog geophone sensors, vibroseis vehicles (vibrator trucks), and source controllers for detonator and vibrator energy sources.
- *Marine Imaging Systems.* Our Marine Imaging Systems segment consists of 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.* Our Data Management Solutions segment includes our Concept Systems' software and related services for navigation and data management involving towed marine streamer and seabed operations.
- *ION Solutions (Seismic Imaging Solutions).* Our ION Solutions division combines our advanced seismic data processing services for marine and land environments, our marine seismic data libraries, and our Integrated Seismic Solutions (ISS) offering delivered by GXT.

We measure segment operating results based on income from operations. See further discussion of our segment operating results at Note 13 of *Notes to Consolidated Financial Statements*.

## Products and Services

### *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 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 the Scorpion 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.

Scorpion is capable of recording full-wave seismic data. Digital sensors, when compared with 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 significant equipment weight reduction and improved operating efficiencies. These advantages can enable the user to obtain improved location and characterization of reservoir structure and fluids, and more accurate identification of rock properties at reduced total costs.

In October 2006, in connection with our introduction of the Scorpion land acquisition system, we began to phase out production of our System Four platform system. 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 land acquisition 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 giving seismic companies the flexibility to use both traditional analog geophone sensors and digital full-wave VectorSeis sensors on the very 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, the advanced data management capabilities of FireFly should dramatically reduce the amount of time spent pre-processing the data. In the fourth quarter of 2006, we delivered our new FireFly cableless full-wave land acquisition system to Seismic Equipment Solutions LP for use by BP America Production Company, a subsidiary of London-based BP p.l.c., for a first field application project in the Wamsutter gas fields in Wyoming. In March 2007, Apache Corporation began deployment of the FireFly system for a northeast Texas project. Apache's survey was completed in June 2007. FireFly version 2.0 is in the final development stage with target release in 2008.

*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 down-hole. We believe our Sensor subsidiary is the leading designer and manufacturer of precision geophones used in seismic data acquisition, but our analog geophones are used in other industries as well. Our principal geophone product, the SM-24™, features low distortion and wide bandwidth for analog seismic recording systems.

*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. Pelton's Vib Net™ fleet product assists in the proper positioning of vibrator fleets during marine seismic acquisition, which we believe will result in improved productivity and enhanced imaging as well as streamlined field operations.

### *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. Early in the third quarter of 2007, DigiSTREAMER, our next-generation towed streamer system, was used in a sea trial in the Gulf of Mexico. Based on the success of the sea trial, we expect DigiSTREAMER to be commercialized for delivery in the first half of 2008. DigiSTREAMER uses solid streamer and continuous acquisition technology for towed streamer operations.

During 2004, we introduced VectorSeis Ocean (VSO), an advanced system for seismic acquisition using redeployable ocean bottom cable, and shipped the first system to Reservoir Exploration Technology, ASA (RXT), a Norwegian seismic contractor. Beginning in 2006, we have delivered to RXT the second, third and fourth VSO systems. In addition, in May 2007, we 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 over the next four years. This agreement also entitles us to receive a royalty of 2.1% of revenues generated by RXT through the use of all VSO equipment from January 2008 through the term of the agreement. In turn, the agreement allows RXT to have exclusive rights to this product line through 2011.

*Marine Positioning Systems.* Our DigiCOURSE® marine positioning system includes streamer cable depth control devices, compasses, acoustic positioning systems (DigiRANGE II™), and other auxiliary sensors. Marine positioning equipment controls the depth 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.

In the third quarter of 2007, we completed open water testing of our DigiFIN™ advanced streamer command and control system with our launch partner Petroleum Geo-Services, ASA (PGS), resulting in PGS placing an order to outfit a vessel with DigiFIN. The system was delivered during the third quarter as well. DigiFIN is designed to maintain tighter, more uniform marine streamer separation along the entire length of the streamer cable, which allows for finer sampling of seismic data and improved subsurface images. We believe that DigiFIN also enables faster line changes and minimizes the requirements for in-fill seismic work, which together improve the productivity of towed streamer operations.

*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 our purchase of Concept Systems in February 2004, we acquired software systems and services for towed marine streamer and seabed operations. Concept Systems' software 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.* 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. Orca® is the next-generation successor software product to SPECTRA for towed streamer navigation and integrated data management applications. During 2007, Orca made significant inroads into the towed streamer market with several major seismic contractors now adopting the technology for their new, high-end seismic vessels. Orca includes modules designed to manage the acquisition of complex surveys including WATS (Wide Azimuth Towed Streamer) and time-lapse 4-D surveys by integrating navigation, source control, and streamer control systems. Orca's technology is designed to be compatible with our new DigiFIN product, which enables streamer lateral control, and DigiSTREAMER, our new marine streamer acquisition system.

*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 marsh lands) operations. The GATOR system provides real-time, multi-vessel positioning and data management solutions for ocean-bottom, shallow-water, and transition zone crews.

*Survey Design and Planning.* Concept Systems also offers consulting services for planning and designing of 4-D survey operations. As a result of the higher level of competition in the survey design and planning market, Concept's market share is less than in its core software business; however, these projects provide us with valuable feedback into the product development cycle.

*Post-Survey Analysis Tools.* Concept Systems' integrated navigation systems such as Orca, SPECTRA and GATOR also 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, REFLEX® software for navigation and seismic survey control, and SWAT™ software for remote web-based analysis of survey progress and quality assurance of data acquisition operations.

### ***ION Solutions Division (Seismic Imaging Solutions) Services***

Services for our ION Solutions (Seismic Imaging 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 oil and gas E&P companies for both marine and land environments. Services include survey planning and design, project oversight of data acquisition operations, advanced data 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 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 corrects for these anisotropic effects, which correction results in more accurate, 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 provided 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 out-sources 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, ISS assumes some of the processing costs but retains ownership of the data and images and receives on-going license revenue from subsequent 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 oil and gas companies use to better evaluate the evolution of petroleum systems at the basin level, including insights into the character of source rocks and sediments, migration pathways, and reservoir trapping mechanisms. In many cases, the availability of geoscience data extends beyond seismic information to include magnetic, gravity, well log, and electromagnetic information, which help to provide a more comprehensive picture of the subsurface. Known as “Spans,” these geophysical data libraries currently exist for major basins worldwide, including the northern Gulf of Mexico, offshore areas 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 2007, we announced the completion of acquisition of three new basin-scale multi-client seismic surveys for offshore West Africa, East Africa and the Arctic Sea. The West Africa survey adds 13,700 kilometers of 2-D marine data to our existing West Africa surveys. The East Africa survey consists of approximately 9,300 kilometers of 2-D marine data along the coasts of Kenya, Madagascar and Tanzania, while the Arctic survey adds approximately 5,300 kilometers of 2-D marine data to our existing surveys off the northern coasts of Alaska and Canada. 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 2007, we principally focused our research and development efforts on FireFly version 2.0, our next-generation platform for cableless land recording. Activities included prototyping and field testing key system components (including both hardware and software) that were developed by our Concept Systems group. In the fourth quarter of 2006 and into 2007, BP America Production Company deployed the first (version 1.0) FireFly system for use on the Wamsutter natural gas field in Wyoming and then with Apache Corporation at their project located in northeast Texas. Seismic data acquisition activities on the Wamsutter field and in northeast Texas were completed in January 2007 and June 2007, respectively, and seismic data processing and interpretation are presently underway by us. FireFly version 2.0 is anticipated to be commercially available in 2008. See “*Products and Services — Land Imaging Systems Products.*”

In 2007, we continued our research initiatives to develop advanced processing techniques for data gathered through our full-wave and 4-D time-lapse data collection methods. GXT also developed a processing system (under the trade name Autobahn<sup>TM</sup>) designed to handle very large, dense land seismic surveys, such as the surveys we expect to be acquired using our new FireFly system. We are also working closely with our partner Transform Software and Services, Inc. and have invested in this company to develop the next generation interpretation system to better interpret full wave data.

In the third quarter of 2007, we completed open water testing of our DigiFIN<sup>TM</sup> advanced streamer command and control system with PGS.

On June 12, 2007, we entered into a series of agreements with Hydro Technology Ventures and Reservoir Innovation AS for the formation of a joint venture company named OCTIO Geophysical AS for the purpose of developing, pilot testing and commercializing a full-wave seismic system for permanent monitoring of offshore reservoirs. Hydro Technology is a subsidiary of StatoilHydro ASA. Reservoir Innovation is a privately-held company based in Bergen, Norway, that develops and commercializes technologies for the

exploration, development, and production of offshore hydrocarbon reservoirs. Under the terms of the agreement, we licensed certain of our technology to the joint venture as part of our capital contribution and agreed to sell certain products and to provide temporary employee support to the joint venture.

During 2008, we expect that our product development efforts will continue across all business lines, and that we will continue to incur significant future research and development expenditures aimed at the development of our products and technologies. 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 market place.

## **Markets and Customers**

Based on historical revenues, we believe that we are a market leader in numerous product lines, including geophones, MEMS-based full-wave sensors, navigation and data management software, marine positioning and streamer control systems, and redeployable seabed recording systems.

Our principal customers are seismic contractors and oil and gas companies. Seismic contractors purchase our data acquisition systems and related equipment and software to collect data in accordance with their oil and gas company customers’ specifications or for their own seismic data libraries. We also market and sell products and offer services directly to oil and gas companies, primarily imaging-related processing services and multi-client seismic data libraries from our GXT group, as well as consulting services from Concept Systems and GXT. During the years ended December 31, 2007, 2006 and 2005, no single customer accounted for 10% or more of our consolidated net revenues.

Over the past several years, worldwide exploration activities have 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 have increased significantly, leading to increases of 30% – 80% in the prices that contractors charge oil and gas companies for their services. The increased utilization and cash flow have led the contractors to begin expanding their acquisition asset base and to retrofit existing assets with newer, more efficient technologies. As a result of these forces, expenditures for exploration and production activities, including those related to seismic acquisition and processing, have increased 10% – 15% per year since 2003.

One of the recent trends affecting our markets, our customers and the demand for our products and services is the increasing difficulty of access to oil and gas exploration prospects in the worldwide search for reserves for international oil companies. This is partially the result of the growth of national oil companies, which have an increasing advantage over the international oil companies due to geopolitical considerations and political instability causing disruption concerns. This situation is also affected by increasing environmental issues, particularly in North America, where companies may be temporarily or permanently denied access to some of the most promising exploration opportunities.

It is estimated that approximately 85% – 90% of the world’s reserves are controlled by national oil companies. Contractors from China and the former Soviet Union 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, as well as risks 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, 2007, 2006, and 2005, sales to destinations outside of North America accounted for approximately 62%, 68% and 69% 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 are currently in the process of consolidating 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, and over time, Dubai operations will be expanded and established as our international headquarters for that part 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.

For information concerning the geographic breakdown of our net revenues, see Note 13 of *Notes to Consolidated Financial Statements*.

Our ION Solutions division offers its services to customers on both an exclusive and a multi-client basis. Through our processing and imaging services, we apply processing technology to data owned or licensed by our customers. Under these arrangements, our customers separately arrange and pay for survey design, data collection, processing, and imaging and retain ownership of the data after image development. ION Solutions' services are offered to customers on both a proprietary and multi-client basis; in both cases, customers generally pre-fund the data acquisition costs. With the proprietary service, the customer also pays for the imaging and processing and has ownership of the data after imaging. With our multi-client services, we typically assume some of the initial processing risk but retain ownership of or rights to the data and images and receive on-going revenue from subsequent license sales.

Traditionally, our business has been seasonal, with strongest demand in the fourth quarter of the year.

### **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 Applied MEMS, Inc. subsidiary and its assets to Colibrys Ltd. (Colibrys), a Swiss MEMS-based technology firm, in exchange for a 10% interest in Colibrys. We also entered into a five-year supply agreement with Colibrys for Colibrys to supply us with products on an exclusive basis in our markets. Colibrys manufactures micro-electro-mechanical system 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 likely occur, which 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.

### **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. 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.

In recent years, there has been a trend among certain seismic contractors to design, engineer, and manufacture 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, a large integrated oil field services company) relies heavily on its in-house technology development for designing, engineering, and manufacturing its “Q-Technology” platform, which includes 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. There is a risk that other seismic contractors may decide to in-source more 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 that could impact our business results in the future. The number of 2-D and 3-D marine streamer vessels, including those in operation, under construction, or announced additions to capacity, is expected to increase to approximately 135 between 2008 and 2010. 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 during 2007. 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 ION.

ION’s Solutions division competes with more than a dozen processing companies that are capable of providing pre-stack depth migration services to oil and gas companies. While the barriers to entry into this market are relatively low, the barriers to competing at the high end of 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 ours 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 is a leader in providing 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 System’s core command and control business, with planned introduction of products from both Sercel and smaller companies in 2008. There is also a risk that other seismic contractors on their own or in partnership with other contractors may attempt to develop software that competes directly with Concept Systems, or that third-party software companies may attempt to enter the market. This situation is likely to change as we move into 2008 and 2009, when more products will compete in this growing market space.

The most important competitive factors for companies in the same business as ION Solutions division and Concept Systems are processing speed, accuracy, consistency in results, technological innovation and pricing.

### **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.

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,” “DigiSHOT,” “XVib,” “DigiCOURSE,” “GATOR,” “SPECTRA,” “Orca,” “Scorpion,” “SPRINT,” and “REFLEX” refer to our VECTORSEIS®, VECTORSEIS SYSTEM FOUR®, SYSTEM FOUR®, FIREFLY®, DIGISHOT®, XVIB®, DIGICOURSE®, GATOR®, SPECTRA®, ORCA®, SCORPION®, SPRINT®, and REFLEX® are registered marks, and the terms “AZIM,” “True Digital,” “DigiRANGE II,” “SM-24,” “AHV-IV,” “Vib Pro,” “Shot Pro,” “DigiFIN,” “Vib Net,” “Autobahn,” and “SWAT” refer to our AZIM™, True Digital™, DigiRANGE II™, SM-24™, AHV-IV™, Vib Pro™, Shot Pro™, DigiFIN™, Vib Net™, Autobahn™, and SWAT™ are 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, 2007, we had 1,201 regular, full-time employees, 853 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.

## **Financial Information by Segment and Geographic Area**

For a discussion of financial information by business segment and geographic area, see Note 13 of *Notes to Consolidated Financial Statements*.

## Item 1A. Risk Factors

This report (as well as certain oral statements made from time to time by authorized representatives on behalf of our company) contain 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 (the Securities Act), and Section 21E of the Securities Exchange Act of 1934, as amended (the 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,” “should,” “intend,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “potential,” or “continue” or the negative of such terms or other comparable terminology. Examples of other forward-looking statements contained in this report (or in such oral statements) include statements regarding:

- 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;
- expectations of oil and natural gas E&P companies and contractor end-users purchasing our more expensive, more technologically advanced products and services;
- the degree and rate of future market acceptance of our new products and services;
- expectations regarding future mix of business and future asset recoveries;
- 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;
- the outcome of pending or threatened disputes and other contingencies;
- future demand for seismic equipment and services;
- future seismic industry fundamentals;
- the adequacy of our future liquidity and capital resources;
- future oil and gas commodity prices;
- future opportunities for new products and projected research and development expenses;
- future worldwide economic conditions;
- 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:

***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, and despite the fact that industry-wide demand for seismic services and equipment has increased in recent years, 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.

***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. Customers do occasionally experience issues and, therefore, there is a possibility that our new products may also suffer from similar issues. 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 have agreed to purchase a minimum of \$160 million in VectorSeis Ocean (VSO) systems and related equipment over the next four years. In addition, this agreement entitles ION 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 end of the agreement. In turn, this agreement allows RXT to have exclusive rights to this product line through 2011.

For the year ended December 31, 2007 and 2006, \$60.9 million, or 9%, and \$39.6 million, or 8%, respectively, of 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 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.

***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 price of our common stock and convertible notes.

***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 ION Solutions division's data processing operations and our other segments' businesses has intensified as worldwide seismic activity and oil and natural gas exploration and development have increased. Rapid growth presents a challenge to us and our industry to recruit, train, and retain our employees while managing the impact of potential wage inflation and the potential lack of available qualified labor in some markets where we operate. In recent periods, the demand from E&P companies for ION Solutions' services has increased dramatically, putting pressures on its workforce to meet this demand. A well-trained, motivated, 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.

***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 62% of our consolidated net revenues for the year ended December 31, 2007, and we believe that export sales will remain a significant percentage of our revenue. United States export restrictions affect the types and specifications of products we can export. Additionally, to complete certain sales, United States 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, the Asia Pacific region, and the Commonwealth of Independent States, that are subject to risks of war, political disruption, civil disturbance, possible economic and future legal sanctions (such as possible restrictions against countries that the U.S. government may deem to sponsor terrorism), and changes in global trade policies. Our sales or operations may become restricted or prohibited in any country in which the foregoing risks occur. In particular, the occurrence of any of these risks could result in the following events, which in turn, could materially and adversely impact our results of operations:

- disruption of oil and natural gas E&P activities;
- restriction of the movement and exchange of funds;
- inhibition of our ability to collect receivables;
- enactment of additional or stricter U.S. government or international sanctions;
- limitation of our access to markets for periods of time;
- expropriation and nationalization of our assets;
- political and economic instability, which may include armed conflict and civil disturbance;
- currency fluctuations, devaluations, and conversion restrictions;
- confiscatory taxation or other adverse tax policies; and
- governmental actions that may result in the deprivation of our contractual rights.

Our international operations and sales increase our exposure to other countries' restrictive tariff regulations, other import/export restrictions, and customer credit risk.

In addition, we are subject to taxation in many jurisdictions and the final determination of our tax liabilities involves the interpretation of the statutes and requirements of taxing authorities worldwide. Our tax returns are subject to routine examination by taxing authorities, and these examinations may result in assessments of additional taxes, penalties, and/or interest.

***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 Netherlands, United Kingdom, China, Venezuela, Canada, India, Russia, the United Arab Emirates, and other countries. A majority of our foreign net working capital is within the Netherlands and United Kingdom. The subsidiaries in those countries receive their income and pay their expenses primarily in euros and British pounds (GBP), respectively. To the extent that transactions of these subsidiaries are settled in euros or GBP, a devaluation of these currencies versus the U.S. dollar could reduce the contribution from these subsidiaries to our consolidated results of operations as reported in U.S. dollars. For financial reporting purposes, such depreciation will negatively affect our reported results of operations since Euro-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 Euro 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 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.

***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. For 2007, we invested \$64.3 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. We may not be able to recover all of the costs of or earn any return on these investments. In periods in which sales do not meet original expectations, we may be required to record additional amortization and/or impairment charges to reduce the carrying value of our data library, which charges may be material to our results of operations in any period.

***The loss of any significant customer could materially and adversely affect our results of operations and financial condition.***

We have traditionally relied on a relatively small number of significant customers. Consequently, our business is exposed to the risks related to customer concentration. No single customer represented 10% or more of our consolidated net revenues for the years ended December 31, 2007, 2006 and 2005; however, our top five customers in total represented approximately 31%, 29% and 26%, 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. In January 2007, the French seismic contractor, Compagnie General de Geophysique (CGG) acquired Veritas DGC, Inc., a large U.S. seismic contractor and a traditional customer for our products. CGG is the owner of our principal competitor for land and marine seismic equipment, Sercel. While the Veritas acquisition by CGG has not had a material impact on us, the loss of any of our significant customers to further consolidation could materially and adversely affect our results of operations and financial condition.

***ION Solutions and Data Management Solutions 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 and research and development. 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 GXT's and Concept Systems' 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 GXT's and Concept Systems' products and services;
- misappropriation of GXT's or Concept Systems' 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 GXT or Concept Systems, 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 ION 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 and production levels, as well as changes in government regulations. In addition, if geophysical service companies increase their capacity in the future (or do not reduce their capacity if demand decreases), the excess supply in the seismic services market could apply downward pressure on prices for our products and services. The negative effects of the competitive environment in which we operate could have a material adverse effect on our results of operations.

***Certain of our facilities could be damaged by hurricanes and other natural disasters, which could have an adverse effect on our results of operations and financial condition.***

Certain of our facilities are located in regions of the United States that are susceptible to damage from hurricanes and other weather events, and, during 2005, were impacted by hurricanes or weather events. Our Marine Imaging Systems segment leases 99,000-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.

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.

***Disruption in vendor supplies may adversely affect our results of operations.***

Our manufacturing processes require a high volume of quality components. Certain components used by us are currently provided by only one supplier. We may, from time to time, experience supply or quality control problems with suppliers, and these problems could significantly affect our ability to meet production and sales commitments. Reliance on certain suppliers, as well as industry supply conditions, generally involve several risks, including the possibility of a shortage or a lack of availability of key components and increases in component costs and reduced control over delivery schedules; any of these could adversely affect our future results of operations.

***We have outsourcing arrangements with third parties to manufacture some of our products. If these third parties 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.***

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. 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.

If any of these risks are realized, our revenues, profitability, and cash flow 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.

***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.

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 \$7.0 million to \$8.0 million per year through 2009. If demand for our VectorSeis products, of which MEMS accelerometers are a component, prove 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.

***We depend on capital expenditures by the oil and natural gas industry, and reductions in such expenditures may have a material adverse effect on our business.***

Demand for our products and services has historically been dependent upon the level of capital expenditures by oil and natural gas companies for exploration, production and development activities. Our customers' expenditures have a significant direct relationship with current oil and gas prices and with expectations regarding future oil and gas prices. Lower or volatile oil and gas prices or the perception that the same are imminent may tend to limit the demand for seismic services and products. Oil and gas prices may fluctuate based on factors beyond our control, including:

- worldwide demand for oil, natural gas and natural gas liquids;
- worldwide levels of oil and gas production;
- worldwide political, military and economic conditions;
- the ability of the Organization of Petroleum Exporting Countries (OPEC) to set and maintain production levels of member countries and to create expectations that directly correspond with prices for oil;
- refining capacity and its ability to meet consumer demand;
- speculation by investors with respect to oil and gas commodity prices;
- oil and gas production by non-OPEC countries;
- the price, availability and demand for alternative fuels;
- policies of governments regarding the exploration for and production and development of oil and gas reserves in their territories;
- difficulty in accessing certain promising prospects due to geopolitical or environmental concerns; and
- global weather conditions that may affect the demand for oil and gas and/or inhibit the ability of oil and gas companies to produce oil and gas products.

Although oil and natural gas prices are currently high compared with historical values, a significant downturn in the oil and gas industry could result in a reduction in demand for oilfield services and could adversely impact our operating results.

***Our outstanding Series D-1 Preferred Stock, Series D-2 Preferred Stock, Series D-3 Preferred Stock and 5.5% convertible senior notes are convertible into shares of our common stock. Under certain circumstances, the conversion of these securities could 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.***

The conversion of our outstanding shares of Series D-1 Preferred Stock, Series D-2 Preferred Stock and Series D-3 Preferred Stock into shares of our common stock will dilute the ownership interests of existing stockholders. In addition, in November 2007, a holder of approximately \$52.8 million in aggregate principal amount of our outstanding 5.5% convertible senior notes converted its notes into 12,212,964 shares of common stock, reducing the outstanding principal amount of the notes to approximately \$7.2 million. The conversion of these convertible notes have diluted and will dilute the ownership interests of existing stockholders. Sales in the public market of shares of common stock issued upon conversion would apply downward pressure on prevailing market prices of our common stock. In addition, the very existence of the outstanding convertible notes and of the outstanding shares of the three series of Series D Preferred Stock represents potential issuances of common stock, and perhaps potential sales into the market of our common stock to be acquired on conversion, which could also depress trading prices for our common stock.

***Future technologies and businesses that we may acquire may be difficult to integrate, disrupt our business, dilute stockholder value or divert management attention.***

An important aspect of our current business strategy is to seek new technologies, products, and businesses to broaden the scope of our existing and planned product lines and technologies. While we believe that these acquisitions complement our technologies and our general business strategy, there can be no assurance that we will achieve the expected benefit of these acquisitions. In addition, these acquisitions may result in unexpected costs, expenses, and liabilities.

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, operations, sites, and personnel;
- the possible loss of key employees and costs associated with their loss;
- 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. Integrating operations may 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.

***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.

***A downturn in the U.S. economy would adversely affect the demand for our products and services and our operations, and, as a result, may have a negative impact on our future revenues and cash flow.***

A downturn in the U.S. economy and in the local economies of the countries or regions in which we sell our products and services could negatively affect demand for our products and services, which would negatively affect our business and results of operations. 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 oil companies and geophysical contractors; the demand for our products and services will likely 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.

Important factors that could cause demand for our products and services to fluctuate include:

- changes in business and economic conditions, including a downturn in the overall economy;
- changes in consumer confidence caused by changes in market conditions, including changes in the credit market;
- increases in unemployment;
- the risk of a recession;
- higher interest rates; and
- inflation.

***Note: The foregoing factors pursuant to the Private Securities Litigation Reform Act of 1995 should not be construed as exhaustive. In addition to the foregoing, we wish to refer readers to other factors discussed elsewhere in this report as well as other filings and reports with the SEC for a further discussion of risks and uncertainties that could cause actual results to differ materially from those contained in forward-looking statements. We undertake no obligation to publicly release the result of any revisions to any such forward-looking statements, which may be made to reflect the events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.***

**Item 1B. Unresolved Staff Comments**

None.

**Item 2. Properties**

Our primary operating facilities at December 31, 2007 were as follows:

<u>Operating Facilities</u>	<u>Square Footage</u>	<u>Segment</u>
Stafford, Texas . . . . .	184,000	Land and Marine Imaging Systems
Houston, Texas. . . . .	100,000	ION Solutions Division
Harahan, Louisiana . . . . .	99,000	Marine Imaging Systems
Jebel Ali, Dubai, United Arab Emirates . .	65,000	Land Imaging Systems
Denver, Colorado . . . . .	29,000	ION Solutions Division
Voorschoten, The Netherlands. . . . .	27,000	Land Imaging Systems
Edinburgh, Scotland . . . . .	15,000	Data Management Solutions
	<u>519,000</u>	

Each of these operating facilities is leased by us under a long-term lease agreement. These lease agreements have terms that expire ranging from 2008 to 2017. See Note 15 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 seismic data processing centers in Egham, England; Port Harcourt, Nigeria; Luanda, Angola; 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 expands and we grow 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.

## 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.

Period	Price Range	
	High	Low
Year ended December 31, 2008:		
First Quarter (through February 14, 2008) . . . . .	\$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
Year ended December 31, 2006:		
Fourth Quarter . . . . .	\$14.05	\$ 9.50
Third Quarter . . . . .	10.20	8.38
Second Quarter . . . . .	11.10	8.19
First Quarter . . . . .	10.04	6.95

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 revolving line of credit facility agreement prohibit us from paying dividends on or repurchasing shares of our common stock without the prior consent of the lenders.

In February 2005, we issued 30,000 shares of Series D-1 Cumulative Convertible Preferred Stock (Series D-1 Preferred Stock), which accrues cumulative dividends at a minimum rate of 5% per annum, payable quarterly. In December 2007, the holders of the Series D-1 Preferred Stock exercised their rights to purchase 5,000 shares of Series D-2 Cumulative Convertible Preferred Stock (Series D-2 Preferred Stock). The terms of the Series D-2 Preferred Stock are substantially identical to the terms of the Series D-1 Preferred Stock except that the conversion price of the Series D-2 Preferred Stock is \$16.0429 per share. Dividends may be paid, at our election, in cash or shares of registered common stock. During the year ended December 31, 2007, we declared and paid \$2.4 million in cash dividends on these outstanding shares of Series D-1 and Series D-2 Preferred Stock. So long as any shares of Series D-1 and Series D-2 Preferred Stock are outstanding, we may not pay any dividends in cash or property to holders of our common stock, and may not purchase or redeem for cash or property any common stock, unless there are no arrearages in dividends paid on the Series D-1 and on the Series D-2 Preferred Stock and sufficient cash is available to pay dividends on the Series D-1 and Series D-2 Preferred Stock for the next four quarterly dividend periods. In February 2008, we issued 35,000 shares of Series D-3 Cumulative Convertible Preferred Stock in connection with the final exercise of the Series D-1 and Series D-2 Preferred Stockholders’ rights to acquire additional shares. See Item 7. “*Management’s Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources.*”

On November 27, 2007, approximately \$52.8 million in aggregate principal amount of indebtedness under our outstanding 5.5% Convertible Senior Notes due December 2008 was converted into 12,212,964 shares of our common stock based on the \$4.32 per share conversion price under the convertible senior notes. As a result of these conversions, we reduced the outstanding principal amount of indebtedness evidenced by

the convertible senior notes from \$60.0 million to approximately \$7.2 million. See Item 7. — “*Management’s Discussion and Analysis of Financial Condition and Results of Operations — “Liquidity and Capital Resources.”*”

On December 31, 2007, there were 818 holders of record of our common stock.

During the three months ended December 31, 2007, the Company withheld and subsequently cancelled shares of our common stock to satisfy the minimum statutory income tax withholding obligation on the vesting of restricted stock for related employees. The date of cancellation, number of shares and average effective acquisition price per share, were as follows:

Period	(a) Total Number of Shares Acquired	(b) Average Price Paid Per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Program	(d) Maximum Number (or Approximate Dollar Value) of Shares That May Yet Be Purchased Under the Plans or Program
October 1, 2007 to October 31, 2007 . . . . .	—	\$ —	Not applicable	Not applicable
November 1, 2007 to November 30, 2007 . . . . .	—	\$ —	Not applicable	Not applicable
December 1, 2007 to December 31, 2007 . . . . .	<u>5,295</u>	<u>\$15.43</u>	Not applicable	Not applicable
Total . . . . .	<u>5,295</u>	<u>\$15.43</u>		

In January 2007, our board of directors determined not to renew our stockholders rights plan that had been adopted in 1997, and the plan and the rights issued under the plan expired in accordance with the terms of the plan.

**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, 2007, 2006, 2005, 2004, and 2003, and with respect to our consolidated balance sheets at December 31, 2007, 2006, 2005, 2004, and 2003 have been derived from our audited consolidated financial statements. Our results of operations and financial condition have been affected by acquisitions of companies and dispositions 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 Concept Systems and GXT in February and June 2004, respectively; the occurrence of these acquisitions during 2004 affects the comparability of financial information for fiscal years after 2004. 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,				
	2007	2006	2005	2004	2003
	(In Thousands, Except for Per Share Data)				
<b>Statement of Operations Data:</b>					
Product revenues . . . . .	\$537,691	\$354,258	\$237,359	\$194,978	\$150,033
Service revenues . . . . .	<u>175,420</u>	<u>149,298</u>	<u>125,323</u>	<u>45,663</u>	<u>—</u>
Net revenues . . . . .	<u>713,111</u>	<u>503,556</u>	<u>362,682</u>	<u>240,641</u>	<u>150,033</u>
Cost of products . . . . .	390,512	257,749	169,688	134,874	122,192
Cost of services . . . . .	<u>119,679</u>	<u>91,592</u>	<u>86,619</u>	<u>40,075</u>	<u>—</u>
Gross profit . . . . .	<u>202,920</u>	<u>154,215</u>	<u>106,375</u>	<u>65,692</u>	<u>27,841</u>
Operating expenses (income):					
Research and development . . . . .	46,302	32,751	20,266	19,611	18,696
Marketing and sales . . . . .	43,877	40,651	33,167	23,491	12,566
General and administrative . . . . .	49,100	40,807	28,227	29,748	16,753

**Years Ended December 31,**

	<u>2007</u>	<u>2006</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>
	(In Thousands, Except for Per Share Data)				
(Gain) loss on sale of assets . . . .	(253)	58	99	(3,980)	(291)
Impairment of long-lived assets . .	—	—	—	—	1,120
Total operating expenses. . . . .	<u>139,026</u>	<u>114,267</u>	<u>81,759</u>	<u>68,870</u>	<u>48,844</u>
Income (loss) from operations. . . . .	63,894	39,948	24,616	(3,178)	(21,003)
Interest expense . . . . .	(6,283)	(5,770)	(6,134)	(6,231)	(4,087)
Interest income. . . . .	1,848	2,040	843	1,276	1,903
Loss on debt conversion . . . . .	(2,902)	—	—	—	—
Other income (expense). . . . .	(1,090)	(2,161)	820	220	685
Fair value adjustment and exchange of warrant obligation . . . . .	—	—	—	—	1,757
Impairment of investment . . . . .	—	—	—	—	(2,059)
Income (loss) before income taxes and change in accounting principle . . . . .	55,467	34,057	20,145	(7,913)	(22,804)
Income tax expense. . . . .	<u>12,823</u>	<u>5,114</u>	<u>1,366</u>	<u>701</u>	<u>348</u>
Net income (loss) before change in accounting principle . . . . .	42,644	28,943	18,779	(8,614)	(23,152)
Cumulative effect of change in accounting principle. . . . .	—	398	—	—	—
Net income (loss) . . . . .	<u>42,644</u>	<u>29,341</u>	<u>18,779</u>	<u>(8,614)</u>	<u>(23,152)</u>
Preferred stock dividends and accretion . . . . .	<u>2,388</u>	<u>2,429</u>	<u>1,635</u>	—	—
Net income (loss) applicable to common shares . . . . .	<u>\$ 40,256</u>	<u>\$ 26,912</u>	<u>\$ 17,144</u>	<u>\$ (8,614)</u>	<u>\$ (23,152)</u>
Net income (loss) per basic share before change in accounting principle . . . . .	\$ 0.49	\$ 0.33	\$ 0.22	\$ (0.13)	\$ (0.45)
Cumulative effect of change in accounting principle. . . . .	—	0.01	—	—	—
Net income (loss) per basic share . .	<u>\$ 0.49</u>	<u>\$ 0.34</u>	<u>\$ 0.22</u>	<u>\$ (0.13)</u>	<u>\$ (0.45)</u>
Net income (loss) per diluted share before change in accounting principle . . . . .	\$ 0.45	\$ 0.32	\$ 0.21	\$ (0.13)	\$ (0.45)
Cumulative effect of change in accounting principle. . . . .	—	0.01	—	—	—
Net income (loss) per diluted share	<u>\$ 0.45</u>	<u>\$ 0.33</u>	<u>\$ 0.21</u>	<u>\$ (0.13)</u>	<u>\$ (0.45)</u>
Weighted average number of common shares outstanding. . . . .	<u>81,941</u>	<u>79,497</u>	<u>78,600</u>	<u>65,759</u>	<u>51,080</u>
Weighted average number of diluted shares outstanding . . . . .	<u>97,321</u>	<u>95,182</u>	<u>79,842</u>	<u>65,759</u>	<u>51,080</u>

**Years Ended December 31,**

	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>
	(In Thousands, Except for Per Share Data)				
<b>Balance Sheet Data (end of year):</b>					
Working capital . . . . .	\$220,522	\$170,342	\$153,761	\$101,121	\$133,467
Total assets . . . . .	709,149	655,136	537,861	486,094	249,204
Notes payable and long-term debt . .	24,713	77,540	75,946	85,951	81,203
Cumulative convertible preferred stock . . . . .	35,000	29,987	29,838	—	—
Stockholders' equity . . . . .	476,240	369,668	327,545	308,760	133,764
<b>Other Data:</b>					
Capital expenditures . . . . .	\$ 11,375	\$ 13,704	\$ 5,304	\$ 5,022	\$ 4,587
Investment in multi-client library . .	64,279	39,087	19,678	4,168	—
Depreciation and amortization (other than multi-client library) . .	26,767	22,036	23,497	18,345	11,444
Amortization of multi-client library .	37,662	25,011	10,707	5,870	—

**Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

*Note: The following should be read in conjunction with our Consolidated Financial Statements and related notes that appear elsewhere in this Annual Report on Form 10-K.*

**Executive Summary**

We are a leading seismic solutions company, providing the global oil and natural gas industry with a variety of seismic products and services, including land and marine seismic data acquisition equipment, survey design planning services, software products, seismic data libraries, and seismic data processing services. In recent years, we have transformed our business from being solely a seismic equipment manufacturer to being a provider of a full range of seismic imaging products and services – including designing and planning a seismic survey, overseeing the acquisition of seismic data by seismic contractors, and processing the acquired seismic data using advanced algorithms and mode workflows.

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, and the fourth segment is our ION Solutions Division (formerly referred to as Seismic Imaging Solutions).

Our current growth strategy is focused on the following key areas:

- Expanding our ION Solutions business in new regions with new customers and with new service offerings, including proprietary services for owners and operators of oil and gas properties;
- Globalizing our ION Solutions data processing business by opening advanced imaging centers in new locations, and expanding our presence in the land seismic processing segment;
- Successfully developing and introducing our next generation of marine towed streamer products;
- Expanding our seabed imaging solutions business using our VectorSeis Ocean (VSO) acquisition platform and derivative products;
- Increasing our market share in cable-based land acquisition systems through our new Scorpion acquisition system; and
- Ongoing development and further commercialization of FireFly, our cableless full-wave land acquisition system.

In September 2007, we changed our corporate name from Input/Output, Inc. to ION Geophysical Corporation. This change was made to reflect the evolution of our company from being primarily known as an

equipment manufacturer to our broader, current product and service portfolio of land and marine acquisition hardware, survey design and command and control software, advanced imaging service and seismic data libraries.

We are currently in the process of consolidating 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. Over time, our Dubai operations will be expanded and established as our international headquarters for that part 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.

During the year ended December 31, 2007, we continued to see interest in our new technologies. For example:

- In the fourth quarter of 2006, we delivered our new FireFly cableless full-wave land acquisition system to Seismic Equipment Solutions LP for use by BP America Production Company, a subsidiary of London-based BP p.l.c., for a first field application project in Wyoming. In March 2007, Apache Corporation began their deployment of this system at a project located in northeast Texas; the survey was completed in June 2007 and results are currently being assessed. In the first quarter of 2007, we recognized revenues of \$20.8 million associated with this system sale, which was used on both the surveys in Wyoming and northeast Texas. FireFly version 2.0 is in the final development stage with target release in 2008.
- During February 2007, we announced the receipt of an order for approximately \$29 million from RXT, a marine seismic contractor headquartered in Oslo, Norway, for a fourth VSO redeployable ocean-bottom cable system. This system was delivered in the fourth quarter of 2007. In addition, in May 2007, we 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 over the next four years. This agreement entitles us to receive a royalty of 2.1% of revenues generated by RXT through the use of all VSO equipment from January 2008 through the term of the agreement. In turn, this agreement allows RXT to have exclusive rights to this product line through 2011.
- During 2007, we delivered all of the 14 land acquisition systems to ONGC, the national oil company of India, resulting in approximately \$60 million of revenues during the year.
- In the third quarter of 2007, we completed open water testing of our DigiFIN advanced streamer command and control system with our launch partner, PGS, resulting in PGS' placing an order to outfit a vessel with DigiFIN, which we delivered during that quarter.
- On June 12, 2007, we entered into a series of agreements with Hydro Technology Ventures and Reservoir Innovation AS for the formation of a joint venture company named OCTIO Geophysical AS for the purpose of developing, pilot testing and commercializing a full-wave seismic system for permanent monitoring of offshore reservoirs. Hydro Technology is a subsidiary of StatoilHydro ASA. Reservoir Innovation is a privately held company based in Bergen, Norway, that develops and commercializes technologies for the exploration, development, and production of offshore hydrocarbon reservoirs. Each party to the joint venture has equal operational control over the joint venture company. Under the terms of the agreement, we contributed (licensed) certain of our technology to the joint venture and agreed to sell certain products and to provide temporary employee support to the joint venture.
- In the fourth quarter of 2007, we delivered a full wave digital Scorpion system to a customer in China. This sale involved a very large VectorSeis based Scorpion land acquisition system with over 10,000 digital sensor stations. We believe the large scale of this system deployment further validates the merits of our full wave imaging technology and how it can be utilized to bring high fidelity imaging to difficult subsurface reservoirs.

Each of our four operating business segments experienced strong percentage increases in their revenues compared to their revenues for the comparable periods in 2006 and 2005. Our total net revenues of \$713.1

million for the year ended December 31, 2007 increased \$209.5 million, or 42%, compared to fiscal 2006, principally due to increased activity and demand for seismic services. Overall, income from operations for the year ended December 31, 2007 was approximately 60% higher compared to income from operations for fiscal 2006, although our ION Solutions Division experienced lower operating income in 2007 compared to 2006 due to the more lower-margin sales mix of its 2007 net revenues, particularly the margins on a one-time seismic data library sale. Our gross margin percentage was 28% in 2007, 31% in 2006 and 29% in 2005.

In March 2007, we obtained a \$75.0 million revolving line of credit replacing our previously available \$25.0 million revolving line of credit. The only indebtedness outstanding under this facility at December 31, 2007 was \$1.0 million with respect to outstanding letters of credit. On February 26, 2008, we amended this facility. In addition, in December 2007 and February 2008, we completed the sale of 5,000 shares of Series D-2 Cumulative Convertible Preferred Stock and 35,000 shares of Series D-3 Cumulative Convertible Preferred Stock, respectively, for an aggregate consideration of \$40.0 million. The sales were made in connection with the preferred stockholder's exercise of rights to acquire additional shares of our preferred stock under a February 2005 agreement between our company and the stockholder. See discussion below of the terms of this credit facility and these sales of preferred stock at “— *Liquidity and Capital Resources.*”

In November 2007, a holder of \$52.8 million of our convertible senior notes approached us and made an offer to convert its notes into common stock. The conversion occurred on November 27, 2007, and we paid a one-time charge of \$2.9 million, which represented the net present value of the remaining interest payments until the note's maturity in December 2008. The remaining \$7.2 million balance remains outstanding on our convertible senior notes.

The following table provides an overview of the key financial metrics for our company as a whole and our four business segments during the years ended December 31, 2007, 2006 and 2005:

	<b>Years Ended December 31,</b>		
	<b>2007</b>	<b>2006</b>	<b>2005</b>
	(In Thousands, Except Per Share Amounts)		
Net revenues:			
ION Systems Division:			
Land Imaging Systems . . . . .	\$325,037	\$205,779	\$155,172
Marine Imaging Systems . . . . .	177,685	127,927	69,604
Data Management Solutions . . . . .	37,660	23,198	15,966
Total ION Systems Division . . . . .	<u>540,382</u>	<u>356,904</u>	<u>240,742</u>
ION Solutions Division (Seismic Imaging Solutions) . . . . .	<u>172,729</u>	<u>146,652</u>	<u>121,940</u>
Total . . . . .	<u><u>\$713,111</u></u>	<u><u>\$503,556</u></u>	<u><u>\$362,682</u></u>
Income (loss) from operations:			
ION Systems Division:			
Land Imaging Systems . . . . .	\$ 28,681	\$ 13,463	\$ 18,413
Marine Imaging Systems . . . . .	44,727	30,258	15,895
Data Management Solutions . . . . .	17,290	7,461	3,430
Total ION Systems Division . . . . .	<u>90,698</u>	<u>51,182</u>	<u>37,738</u>
ION Solutions Division (Seismic Imaging Solutions) . . . . .	21,646	28,648	15,265
Corporate . . . . .	(48,450)	(39,882)	(28,387)
Total . . . . .	<u><u>\$ 63,894</u></u>	<u><u>\$ 39,948</u></u>	<u><u>\$ 24,616</u></u>
Net income applicable to common shares . . . . .	<u><u>\$ 40,256</u></u>	<u><u>\$ 26,912</u></u>	<u><u>\$ 17,144</u></u>
Basic net income per common share . . . . .	<u><u>\$ 0.49</u></u>	<u><u>\$ 0.34</u></u>	<u><u>\$ 0.22</u></u>
Diluted net income per common share . . . . .	<u><u>\$ 0.45</u></u>	<u><u>\$ 0.33</u></u>	<u><u>\$ 0.21</u></u>

In 2007 and 2006, the impact of Statement of Financial Accounting Standards No. 123 (Revised 2004), “Share-Based Payment” (SFAS 123R), resulted in the recognition of \$6.9 million and \$6.1 million, respectively, of stock-based compensation expense related to our employees’ outstanding stock-based awards. The total expense in 2007 was comprised of \$1.2 million reflected in cost of sales, \$0.7 million in research and development expense, \$1.6 million in marketing and sales expense, and \$3.4 million in general and administrative expense.

We intend that the discussion of our financial condition and results of operations that follows will provide information that will assist in understanding our consolidated financial statements, the changes in certain key items in those financial statements from year to year, and the primary factors that accounted for those changes.

For a discussion of factors that could impact our future operating results and financial condition, see Item 1A. “Risk Factors” above.

## **Results of Operations**

### ***Year Ended December 31, 2007 Compared to Year Ended December 31, 2006***

*Net Revenues.* Net revenues of \$713.1 million for the year ended December 31, 2007 increased \$209.5 million, compared to the corresponding period last year, principally due to increased activity and demand for seismic services. Land Imaging Systems’ net revenues increased by \$119.2 million, to \$325.0 million compared to \$205.8 million during the twelve months ended December 31, 2006. This increase was due to an increase in sales of our land acquisition systems, including the 2007 sale of 14 land acquisition systems to ONGC, the recognition of our FireFly sale in the first quarter of 2007 and significantly increased vibrator truck sales compared to 2006. Marine Imaging Systems’ net revenues increased \$49.8 million to \$177.7 million, compared to \$127.9 million during the year ended December 31, 2006 principally due to stronger sales of our marine positioning products, including the first sale of our DigiFIN advanced streamer command and control system, greater demand for our DigiCOURSE positioning and source products and an increase in VectorSeis Ocean (VSO) and source product sales. We delivered to RXT the fourth VSO system in December 2007 and expect to begin delivering the next VSO system in 2008. Our Data Management Solutions’ net revenues increased \$14.5 million, to \$37.7 million compared to \$23.2 million in 2006. This increase primarily reflects increased energy industry demand for marine seismic work and sales from our newly launched Orca towed streamer navigation and data management applications product line.

ION Solutions’ (Seismic Imaging Solutions) net revenues increased \$26.0 million, to \$172.7 million compared to \$146.7 million in 2006. This increase was due to larger demand related to higher proprietary processing revenues, pre-funded multi-client seismic surveys primarily off the coasts of Alaska, Africa and Indonesia and sales of off-the-shelf seismic data sales. Sales showed significant improvement compared to 2006, which included a one-time, \$11.2 million multi-client seismic library sale that was not duplicated in 2007.

*Gross Profit and Gross Profit Percentage.* Gross profit of \$202.9 million for the year ended December 31, 2007 increased \$48.7 million compared to the prior year. Gross profit percentage for the twelve months ended December 31, 2007 was 28% compared to 31% in the prior year. The 3% reduction in our gross margin percentage was primarily due to the recognition of the sale in 2007 of our first FireFly system (which, as a newly-developed system, had relatively high built-in costs of sale) and the mix of business, including an increase in sales of lower margin Vibroseis trucks by Land Imaging Systems, the impact of lower than average margins related to the ONGC sale and the sale of a low-margin pre-funded multi-client survey by ION Solutions. This decrease was partially offset by stronger margins from our Marine Imaging Systems due to increased sales of our source and seabed product lines. We also had an increase in higher margin sales from our Data Management Solutions segment due to product mix, including significantly increased sales of our Orca software.

*Research and Development.* Research and development expense was \$46.3 million, or 6.5% of net revenues, for the year ended December 31, 2007, an increase of \$13.5 million compared to \$32.8 million, or 6.5% of net revenues, for the corresponding period last year. We expect to continue to incur significant research and development expenses in 2008 at or above these levels on an absolute dollar basis, as we continue to invest heavily in our next generation of seismic acquisition products and services, including products

such as FireFly and DigiSTREAMER. For a discussion of our product research and development programs in 2008, see Item 1. “*Business — Product Research and Development.*”

*Marketing and Sales.* Marketing and sales expense of \$43.9 million, or 6.2% of net revenues, for the year ended December 31, 2007 increased \$3.2 million compared to \$40.7 million, or 8.1% of net revenues, for the corresponding period last year. The reduction in marketing and sales expense as a percentage of net revenues reflects our focus on leveraging our marketing and sales costs with our sales growth. The increase in our sales and marketing expenditures reflects the hiring of additional sales personnel as well as increased travel associated with our global marketing efforts. This increase was partially offset by a decrease in our sales commissions, which reflects more effective utilization of our internal sales force. We intend to continue investing significant sums in our marketing efforts as we seek to penetrate markets with our new products.

*General and Administrative.* General and administrative expense of \$49.1 million for the year ended December 31, 2007 increased \$8.3 million compared to \$40.8 million in the prior year. General and administrative expenses as a percentage of net revenues for the years ended December 31, 2007 and 2006 were 6.9% and 8.1%, respectively. The increase in expenditures was primarily due to higher payroll costs associated with an increase in management and corporate personnel and an increase in travel associated with our global solutions corporate strategy. This increase was partially offset by a decrease in professional accounting and consulting fees compared to 2006.

*Loss on Debt Conversion.* In November 2007, \$52.8 million of our \$60.0 million 5.5% convertible senior notes indebtedness was converted into approximately 12.2 million shares of our common stock, in accordance with the terms of the notes. The conversion arrangement included a one-time charge of \$2.9 million that represented the present value of future interest payments through the converted notes’ original date of maturity of December 15, 2008.

*Income Tax Expense.* Income tax expense for the year ended December 31, 2007 was \$12.8 million compared to income tax expense of \$5.1 million for the twelve months ended December 31, 2006. The increase in tax expense during 2007 primarily relates to improved results of our foreign operations, U.S. alternative minimum taxes and deferred taxes on the utilization of acquired net operating losses. We continue to maintain a valuation allowance for substantially all of our net deferred tax assets. The Company’s effective tax rate for the year ended December 31, 2007 was 23.1% as compared to 15.0% for the similar period during 2006. The increased effective tax rate for 2007 relates to improved results of operations of our foreign divisions and deferred tax expense related to the utilization of acquired net operating losses of \$3.6 million. The 2006 and 2007 effective tax rates were lower than the statutory rate due to the utilization of previously reserved U.S. deferred tax assets.

*Preferred Stock Dividends and Accretion.* Preferred stock dividends and accretion of \$2.4 million for the year ended December 31, 2007 relate to our Series D-1 Preferred Stock that we issued in 2005 and the Series D-2 Preferred Stock that we issued in December 2007. Dividends are paid at a rate equal to the greater of (i) five percent per annum or (ii) the three month LIBOR rate on the last day of the immediately preceding calendar quarter plus two and one-half percent per annum. All dividends paid on the Series D-1 and Series D-2 Preferred Stock have been paid in cash. The preferred stock dividend rate was 7.73% at December 31, 2007.

#### ***Year Ended December 31, 2006 Compared to Year Ended December 31, 2005***

*Net Revenues.* Net revenues of \$503.6 million for the year ended December 31, 2006 increased \$140.9 million, compared to 2005’s revenues, principally due to increased activity and demand for seismic services. Land Imaging Systems’ net revenues increased by \$50.6 million, to \$205.8 million compared to \$155.2 million during the twelve months ended December 31, 2006. This increase was due to an increase in sales of our land acquisition systems, vibrator trucks, and our Sensor geophones. Marine Imaging Systems’ net revenues increased \$58.3 million to \$127.9 million, compared to \$69.6 million during the year ended December 31, 2005 due to the significant upturn in demand for towed marine seismic equipment as well as deliveries of our VectorSeis Ocean systems to RXT.

ION Solutions’ (Seismic Imaging Solutions) net revenues increased \$24.8 million, to \$146.7 million compared to \$121.9 million in 2005. This increase was related to higher proprietary processing revenues and

pre-funded multi-client seismic surveys primarily off the coasts of India, northern Canada and Alaska, partially offset by a decrease in off-the-shelf seismic data sales. Data Management Solutions' net revenues increased \$7.2 million, to \$23.2 million compared to \$16.0 million in 2005, reflecting the increased demand for marine seismic work.

*Gross Profit and Gross Profit Percentage.* Gross profit of \$154.2 million for the year ended December 31, 2006 increased \$47.8 million compared to 2005's gross profit. Gross profit percentage for the twelve months ended December 31, 2006 was 31% compared to 29% in the prior year. The improvement in our gross margin percentages is primarily due to an increase in revenues from pre-funded multi-client seismic surveys with higher margins, offset by continued pricing pressures on our land acquisition system sales and Sensor geophone sales as well as a higher mix of lower margin vibrator truck sales during 2006 compared to 2005.

*Research and Development.* Research and development expense of \$32.8 million for the year ended December 31, 2006 increased \$12.5 million compared to 2005, due to our continuing investment in our next generation of seismic acquisition products and services, including products such as FireFly and DigiFIN.

*Marketing and Sales.* Marketing and sales expense of \$40.7 million for the year ended December 31, 2006 increased \$7.5 million compared to the prior year. The increase was primarily a result of an increase in commissions to employees and our non-employee sales force associated with our overall increase in sales during 2006, in addition to the impact of our adopting SFAS 123R.

*General and Administrative.* General and administrative expense of \$40.8 million for the year ended December 31, 2006 increased \$12.6 million compared to the prior year. The increase in general and administrative expense was primarily related to additional management and corporate personnel, increased audit and consulting fees, and an increase in bonuses for 2006 related to our improved results of operations, in addition to the impact of our adopting SFAS 123R.

*Income Tax Expense.* Income tax expense for the year ended December 31, 2006 was \$5.1 million compared to income tax expense of \$1.4 million for the twelve months ended December 31, 2005. Included in the 2005 income tax expense was a \$1.4 million tax benefit resulting from a reduction in our tax reserves due to closure of a foreign tax matter. Excluding the reduction for tax reserves, the increase in tax expense during 2006 primarily related to improved results of our foreign operations and state income taxes. The Company's effective tax rate for the year ended December 31, 2006 was 15.0% as compared to 6.8% for the similar period during 2005. The increased effective tax rate for 2006 relates to improved results of operations of our foreign divisions and the reduction in our tax reserves during the prior year. The 2006 effective tax rate was lower than the statutory rate due to the utilization of previously reserved domestic deferred tax assets.

*Preferred Stock Dividends and Accretion.* Preferred stock dividends and accretion of \$2.4 million for the year ended December 31, 2006 related to our outstanding Series D-1 Preferred Stock that we issued in 2005. The preferred stock dividend rate was 7.87% at December 31, 2006.

## **Liquidity and Capital Resources**

Our cash requirements include working capital requirements, debt service payments, dividend payments on our preferred stock, acquisitions and capital expenditures. We expect our future liquidity needs to be provided by a combination of cash generated from future operations, existing cash balances, our revolving credit facility and other sources. We also utilize a sale-leaseback arrangement for our Stafford, Texas facility, capital leases for many of our capital equipment expenditures and non-cancelable operating leases for certain offices, processing centers and fabrication space. In order to fund future acquisitions and undertake large capital projects, we may obtain funds from our existing facilities, issue additional debt to the extent permitted under our existing financing arrangements or we may issue additional equity securities.

### **Sources of Capital**

*Revolving Line of Credit.* In March 2007, we obtained a \$75.0 million revolving line of credit (the "Facility") with a maturity date of March 2011. The Facility replaced our \$25.0 million revolving line of credit facility that was scheduled to mature in May 2008. There was no outstanding balance under the Facility at December 31, 2007. The Facility is available for revolving credit borrowings to be used for our working

capital needs and general corporate purposes, subject to a borrowing base. In addition, the Facility includes a \$25.0 million sub-limit for the issuance of documentary and standby letters of credit, of which \$1.0 million was outstanding at December 31, 2007. The Facility includes an accordion feature under which the total commitments under the Facility may be increased to \$100.0 million, subject to the satisfaction of certain conditions.

The Facility borrowing base is calculated based on the sum of (i) 85% of our total eligible accounts receivable, eligible foreign accounts receivable and insured foreign accounts receivable, plus (ii) the lesser of (x) thirty percent (30%) of eligible inventory or (y) \$20.0 million. For purposes of this calculation, eligible foreign accounts receivable cannot exceed \$23.5 million. As of December 31, 2007, the borrowing base calculation permitted total borrowings of \$75.0 million, of which \$74.0 million remained available.

The interest rate on borrowings under the Facility will be, at our option, (i) an “alternate base rate” (as defined in the credit agreement) or (ii) for Eurodollar borrowings, a LIBOR rate plus an applicable margin. The amount of the margin will be based on our then-current leverage ratio as defined in the Facility credit agreement. The applicable margin will be increased by 0.50% with respect to any borrowings that are applied to repay the convertible senior notes debt.

We are obligated to pay a commitment fee of 0.25% per annum on the unused portion of the Facility. A significant portion of our assets are pledged as collateral for outstanding borrowings under the Facility. The Facility credit agreement restricts our ability to pay common stock dividends, incur additional debt, sell significant assets, acquire other businesses, merge with other entities and take certain other actions without the consent of the lenders.

The credit agreement requires compliance with certain financial and non-financial covenants. These covenants include requirements to (i) maintain a minimum fixed charge coverage ratio of 1.25 to 1.0, and (ii) not exceed a maximum leverage ratio of 2.75 to 1.0 (upon retirement of our convertible senior notes debt, the maximum leverage ratio will be reduced to 2.50 to 1.0 for 12 months, and then to 2.0 to 1.0 thereafter).

The February 26, 2008 amendment to the Facility modified the indebtedness covenant to permit certain intercompany indebtedness of up to \$150.0 million during 2008, and \$135.0 million thereafter owing to ourselves and our domestic subsidiaries by certain of our foreign subsidiaries and provided for certain additional financial covenants with respect to our domestic operations and subsidiaries. Specifically, these additional financial covenants obligate us to (x) not exceed a minimum domestic fixed charge coverage ratio of 1.5 to 1.0; (y) not exceed a maximum domestic leverage ratio of 1.5 to 1.0; and (z) not permit the ratio of the book value of total receivables, cash, permitted investments, inventory and equipment of ourselves and our domestic subsidiaries, to the total commitments of the lenders under the Facility, to be less than 1.75 to 1.0. In addition, the Facility contains certain curative provisions with respect to any technical defaults that may have resulted under the Facility related to the intercompany indebtedness permitted above or our 2007 internal international restructuring. As of February 26, 2008, we are in compliance with all of the covenants under the Facility.

*Convertible Preferred Stock.* In February 2005, we issued 30,000 shares of Series D-1 Cumulative Convertible Preferred Stock (Series D-1 Preferred Stock) in a privately-negotiated transaction, and received \$29.8 million in net proceeds. The conversion price per share for common stock under the Series D-1 Preferred Stock is \$7.869 per share (subject to adjustment under certain circumstances). Under our agreement with the Series D-1 Preferred Stock purchaser, we also granted to the purchaser an option to purchase up to an additional 40,000 shares of Series D Preferred Stock, having a conversion price equal to 122% of an average daily volume-weighted market price of our common stock over a trailing period of days, as of the time of issuance.

In December 2007, the holder exercised this option and purchased 5,000 shares of Series D-2 Cumulative Convertible Preferred Stock (Series D-2 Preferred Stock) for \$5.0 million. In addition, on February 21, 2008, the holder exercised the option and purchased the remaining 35,000 shares of Series D-3 Cumulative Convertible Preferred Stock (Series D-3 Preferred Stock) for \$35.0 million. The shares of Series D-2 and Series D-3 Preferred Stock have substantially identical terms to the Series D-1 Preferred Stock, except that the Series D-2

Preferred Stock has a conversion price per share of \$16.0429, and the Series D-3 Preferred Stock has a conversion price per share of \$14.7981. The conversion prices in each instance were based on the 122% times average daily volume-weighted market price formula contained in our agreement with the holder. On February 20, 2008, the day before the closing of the sale of the Series D-3 Preferred Stock, the closing market price per share of the Company's common stock on the New York Stock Exchange was \$13.26.

The net proceeds from the sale of these shares of Series D-2 and Series D-3 Preferred Stock will be used for general corporate purposes, including working capital. All rights held by the holder to purchase shares of our preferred stock have been exercised.

The holder of the preferred stock has the right to redeem, at any time, all or part of its Series D Preferred Stock. We may satisfy our redemption obligations either in cash or by the issuance of our common stock, adjusted based upon changes in our 40-day average prevailing market price of our common stock at the time of redemption, but the conversion price cannot be less than a minimum price of \$4.45 per share, subject to adjustment. If the 20-day average price of our common stock is less than this minimum price during that time, we may satisfy our redemption obligation by resetting the conversion price to this minimum price, and thereafter, all dividends must be paid in cash. In the event we cannot deliver registered shares upon redemption for stock, and to the extent we cannot deliver cash, the dividend rate will increase to 15%.

Under the agreement, the Series D Preferred Stock has a minimum annual dividend rate of 5.0% and a maximum annual dividend rate of LIBOR plus 2.5%. So long as any shares of Series D Preferred Stock are outstanding, the Company may not pay any dividends in cash or property to holders of the Company's common stock, and may not purchase or redeem for cash or property any common stock, unless there are no arrearages in dividends paid on the Series D Preferred Stock and sufficient cash has been set aside to pay dividends on the Series D Preferred Stock for the next four quarterly dividend periods. Dividends are payable quarterly in cash or common shares at the Company's option. To date, all dividends on the shares of Series D Preferred Stock have been paid in cash, and we intend for the foreseeable future to continue to pay cash dividends on those shares.

*Convertible Notes.* As of December 31, 2007, \$7.2 million of our original \$60.0 million principal amount of our 5.5% convertible senior notes were outstanding. These notes mature on December 15, 2008. The notes are not redeemable prior to their maturity, and are convertible into the Company's common stock at an initial conversion rate of 231.4815 shares per \$1,000 principal amount of notes (a conversion price of \$4.32 per share).

In November 2007, a holder of \$52.8 million of our convertible senior notes approached us and made an offer to convert its notes into common stock. The conversion occurred on November 27, 2007, and we issued to the holder 12,212,964 shares upon conversion, in accordance with the terms of the notes. We also paid a one-time charge of \$2.9 million, which represented the net present value of the remaining interest payments until the note's maturity in December 2008. The accrued interest of \$1.3 million earned through the date of conversion was also paid to the holder under our agreement with the holder. The remaining \$7.2 million balance of our convertible senior notes outstanding can currently be converted into 1,675,926 shares of our common stock.

The conversion prices per share of common stock under the Series D-1 Preferred Stock and the 5.5% convertible senior notes are substantially below the currently prevailing market prices for our common stock. Converting all of the Series D-1 Preferred Stock and the remaining 5.5% convertible senior notes at one time would result in significant dilution to our stockholders that could limit our ability to raise additional capital.

### ***Cash Flow from Operations***

We have historically financed our operations from internally generated cash and funds from equity and debt financings. Cash and cash equivalents were \$36.4 million at December 31, 2007, an increase of \$19.4 million compared to December 31, 2006. Net cash provided by operating activities was \$93.8 million for the year ended December 31, 2007, compared to net cash provided by operating activities of \$58.0 million for the year ended December 31, 2006. The increase in net cash provided in our operating activities was primarily

due to an increase in our profitability, particularly in the third and fourth quarters of 2007. This increase was partially offset by increases in our accounts receivables due to our higher sales volumes and increased investment in our inventories.

### ***Cash Flow from Investing Activities***

Net cash flow used in investing activities was \$76.0 million for the year ended December 31, 2007, compared to \$49.8 million for the year ended December 31, 2006. The principal uses of our cash for investing activities during the year ended December 31, 2007 were \$11.4 million of equipment purchases and a \$64.3 million investment in our multi-client data library. We expect to spend approximately \$65 million on investments in our multi-client data library during 2008, and anticipate that a majority of this investment will be underwritten by our customers. The level of our investment in our multi-client data could fluctuate significantly based upon the level of customer underwriting obtained. In addition, capital expenditures for 2008 are anticipated to be approximately \$25 million with approximately \$10 million related to ION Solutions' computer equipment purchases, which are generally financed through capital leases. The remaining sums are anticipated to be funded from internally generated cash.

### ***Cash Flow from Financing Activities***

Net cash flow provided by financing activities was \$0.8 million for the year ended December 31, 2007, compared to \$8.4 million of cash used in financing activities for the year ended December 31, 2006. We paid an aggregate of \$2.4 million of cash dividends on our Series D-1 Preferred Stock and on our Series D-2 Preferred Stock during 2007. We made scheduled payments of \$8.4 million on our notes payable, long-term debt and lease obligations. Our employees exercised stock options and purchased common stock, resulting in proceeds to us of \$8.0 million during the period, and we received \$5.0 million in December 2007 related to the sale of 5,000 shares of our Series D-2 Preferred Stock.

### **Inflation and Seasonality**

Inflation in recent years has not had a material effect on our costs of goods or labor, or the prices for our products or services. Traditionally, our business has been seasonal, with strongest demand in the fourth quarter of our fiscal year.

### **Future Contractual Obligations**

The following table sets forth estimates of future payments of our consolidated contractual obligations, as of December 31, 2007:

Contractual Obligations	Total	Less Than 1 Year	1 – 3 Years	3 – 5 Years	More Than 5 Years
			(In Thousands)		
Notes payable and long-term debt . . . . .	\$ 12,254	\$ 7,622	\$ 976	\$ 1,324	\$ 2,332
Interest on notes payable and long-term debt obligations . . . . .	3,023	962	976	713	372
Equipment capital lease obligations . . . . .	12,459	7,249	5,210	—	—
Operating leases . . . . .	55,195	9,964	18,552	15,587	11,092
Product warranty . . . . .	13,439	13,439	—	—	—
Purchase obligations . . . . .	107,026	100,018	7,008	—	—
Total . . . . .	<u>\$203,396</u>	<u>\$139,254</u>	<u>\$32,722</u>	<u>\$17,624</u>	<u>\$13,796</u>

The long-term debt and lease obligations at December 31, 2007 included \$7.2 million indebtedness under our outstanding convertible senior notes that mature in December 2008. The remaining amount of these obligations consists of \$5.0 million related to our sale-leaseback arrangement. The \$12.5 million of capital lease obligations relates to GXT's financing of computer equipment purchases. For further discussion of our notes payable, long-term debt and capital lease obligations, see Note 10 of *Notes to Consolidated Financial Statements*.

The operating lease commitments at December 31, 2007 relate to our leases for certain equipment, offices, processing centers, and warehouse space under non-cancelable operating leases.

The liability for product warranties at December 31, 2007 relate to the estimated future warranty expenditures associated with our products. Our warranty periods generally range from 30 days to three years from the date of original purchase, depending on the product. We record an accrual for product warranties and other contingencies at the time of sale, which is when the estimated future expenditures associated with those contingencies become probable and the amounts can be reasonably estimated. We generally receive warranty support from our suppliers regarding equipment they manufactured.

Our purchase obligations primarily relate to our committed inventory purchase orders for which deliveries are scheduled to be made in 2008. In 2004, we entered into a five-year exclusive supply agreement with Colibrys Ltd. for the purchase of MEMS accelerometers, which include annual minimum commitments ranging between \$7 million to \$8 million per year through 2009.

In February 2005, we issued 30,000 shares of Series D-1 Preferred Stock receiving \$29.8 million in net proceeds. In December 2007, the holders of the Series D-1 Preferred Stock purchased an additional 5,000 shares of Series D-2 Cumulative Convertible Preferred Stock resulting in \$5.0 million in net proceeds. These shares of preferred stock are currently redeemable at the option of the holder. However, because we may satisfy our redemption obligations either in cash or by issuance of our common stock, we have excluded the Series D-1 and Series D-2 Preferred Stock from the above table. Dividends, which are paid quarterly, may be paid, at our option, either in cash or by the issuance of our common stock. The dividend rate was 7.73% at December 31, 2007. To date, we have paid only cash dividends and expect that we will continue to pay only cash dividends for the foreseeable future. See “— *Liquidity and Capital Resources*” above.

### **Critical Accounting Policies and Estimates**

The preparation of consolidated financial statements in conformity with generally accepted accounting principles in the United States requires management to make choices between acceptable methods of accounting and to use judgment in making estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities, and the reported amounts of revenue and expenses. The following accounting policies are based on, among other things, judgments and assumptions made by management that include inherent risk and uncertainties. Management’s estimates are based on the relevant information available at the end of each period. We believe that all of the judgments and estimates used to prepare our financial statements were reasonable at the time we made them, but circumstances may change requiring us to revise our estimates in ways that could be materially adverse to our results of operations and financial condition. Management has discussed these critical accounting estimates with the Audit Committee of our Board of Directors and the Audit Committee has reviewed our disclosures relating to the estimates in this Management’s Discussion and Analysis.

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

For the sales of acquisition systems and other seismic equipment, we follow the requirements of Staff Accounting Bulletin No. 104 “*Revenue Recognition*” and recognize revenue when (a) evidence of an arrangement exists; (b) the price to the customer is fixed and determinable; (c) collectibility is reasonably assured; and (d) the acquisition system or other seismic equipment is delivered to the customer and risk of ownership has passed to the customer, or, in the limited case where a substantive customer-specified acceptance clause exists in the contract, the later of delivery or when the customer-specified acceptance is obtained.

Revenues from all imaging and other services are recognized when persuasive evidence of an arrangement exists, the price is fixed or determinable, and collectibility is reasonably assured. Revenues from contract services performed on a day-rate basis are recognized as the service is performed.

Revenues from multi-client surveys are recognized as the seismic data is acquired and/or processed on a proportionate basis as work is performed. Under this method, we recognize revenues based

upon quantifiable measures of progress, such as kilometers acquired or days processed. Upon completion of a multi-client seismic survey, the survey data is considered “off-the-shelf” and licenses to the survey data are sold to customers on a non-exclusive basis. The license of a completed multi-client survey is represented by the license of one standard set of data. Revenues on licenses of completed multi-client data surveys are recognized when a signed final master geophysical data license agreement and accompanying supplemental license agreement are returned by the customer, the purchase price for the license is fixed or determinable, delivery or performance has occurred, and no significant uncertainty exists as to the customer’s obligation, willingness or ability to pay. In limited situations, we have provided the customer with a right to exchange seismic data for another specific seismic data set. In these limited situations, we recognize revenue at the earlier of the customer exercising its exchange right or the expiration of the customer’s exchange right.

When separate elements (such as an acquisition system, other seismic equipment and/or imaging services) are contained in a single sales arrangement, or in related arrangements with the same customer, we follow the requirements of Emerging Issues Task Force (EITF) 00-21 “*Accounting for Multiple-Element Revenue Arrangement*,” and allocate revenue to each element based upon its vendor-specific objective evidence of fair value, so long as each such element meets the criteria for treatment as a separate unit of accounting. We limit the amount of revenue recognized for delivered elements to the amount that is not contingent on the future delivery of products or services. We generally do not grant return or refund privileges to our customers. When undelivered elements, such as training courses and engineering services, are inconsequential or perfunctory and not essential to the functionality of the delivered elements, we recognize revenue on the total contract and make a provision for the costs of the incomplete elements.

For the sales of navigation, survey and quality control software systems, we follow the requirements of SOP 97-2 “*Software Revenue Recognition*,” because in those systems the software is more than incidental to the arrangement as a whole. Following the requirements of EITF 03-05 “*Applicability of AICPA Statement of Position 97-2 to Non-Software Deliverables in an Arrangement Containing More-Than-Incidental Software*,” we consider the hardware within these systems to be a software-related item because the software is essential to the hardware’s functionality. As a result, we recognize revenue from sales of navigation, survey and quality control software systems when (a) evidence of an arrangement exists; (b) the price to the customer is fixed and determinable; (c) collectibility is reasonably assured; and (d) the software and software-related hardware is delivered to the customer and risk of ownership has passed to the customer, or, in the limited case where a substantive customer-specified acceptance clause exists in the contract, the later of delivery or when the customer-specified acceptance is obtained. These arrangements generally include us providing related services, such as training courses, engineering services and annual software maintenance. We allocate revenue to each element of the arrangement based upon vendor-specific objective evidence of fair value of the element or, if vendor-specific objective evidence is not available for the delivered element, we apply the residual method.

Even though a majority of our software arrangements are licensed on a perpetual basis, we do offer certain time-based software licenses. For these time-based licenses, we recognize revenue ratably over the contract term, which is generally two to three years.

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

- *Multi-Client Data Library* — Our multi-client data library consists of seismic surveys that are offered for licensing to customers on a non-exclusive basis. The capitalized costs include the costs paid to third parties for the acquisition of data and related activities associated with the data creation activity and direct internal processing costs, such as salaries, benefits, computer-related expenses,

and other costs incurred for seismic data project design and management. For the years ended December 31, 2007, 2006 and 2005, we capitalized, as part of our multi-client data library, \$4.3 million, \$3.1 million, and \$1.7 million, respectively, of direct internal processing costs.

Our method of amortizing the costs of a multi-client data library available for commercial sale is the greater of (i) the percentage of actual revenue to the total estimated revenue multiplied by the total cost of the project (the sales forecast method) or (ii) the straight-line basis over a four-year period. The sales forecast method is our primary method of calculating amortization. The total amortization period of four years represents the minimum period over which benefits from these surveys are expected to be derived. We have determined the amortization period of four years based upon our historical experience that indicates that the majority of our revenues from multi-client surveys are derived during the acquisition and processing phases and during four years subsequent to survey completion.

Estimated sales are determined based upon discussions with our customers, our experience, and our knowledge of industry trends. Changes in sales estimates may have the effect of changing the percentage relationship of cost of services to revenue. In applying the sales forecast method, an increase in the projected sales of a survey will result in lower cost of services as a percentage of revenue, and higher earnings when revenue associated with that particular survey is recognized, while a decrease in projected sales will have the opposite effect. Assuming that the overall volume of sales mix of surveys generating revenue in the period was held constant in 2007, an increase in 10% in the sales forecasts of all surveys would have decreased our amortization expense by approximately \$4.0 million.

We estimate the ultimate revenue expected to be derived from a particular seismic data survey over its estimated useful economic life to determine the costs to amortize, if greater than straight-line amortization. That estimate is made by us at the project's initiation. For a completed multi-client survey, we review the estimate quarterly. If during any such review, we determine that the ultimate revenue for a survey is expected to be more or less than the original estimate of total revenue for such survey, we decrease or increase (as the case may be) the amortization rate attributable to the future revenue from such survey. In addition, in connection with such reviews, we evaluate the recoverability of the multi-client data library, and if required under Statement of Financial Accounting Standards (SFAS) 144 "*Accounting for the Impairment and Disposal of Long-Lived Assets*," record an impairment charge with respect to such data. There were no significant impairment charges during 2007, 2006 and 2005.

- *Reserve for Excess and Obsolete Inventories* — Our reserve for excess and obsolete inventories is based on historical sales trends and various other assumptions and judgments, including future demand for our inventory and the timing of market acceptance of our new products. Should these assumptions and judgments not be realized for reasons such as delayed market acceptance of our new products, our valuation allowance would be adjusted to reflect actual results. Our industry is subject to technological change and new product development that could result in obsolete inventory. Our valuation reserve for inventory at December 31, 2007 was \$11.5 million compared to \$9.9 million at December 31, 2006.
- *Goodwill and Other Intangible Assets* — We completed our annual goodwill impairment testing as of December 31, 2007 and determined that there were no impairment losses related to goodwill. In making this assessment we rely on a number of factors including operating results, business plans, internal and external economic projections, anticipated future cash flows and external market data. If these estimates or related projections change in the future, we may be required to record impairment charges.

For purposes of performing the impairment test for goodwill as required by SFAS 142, we established the following reporting units: Land Imaging Systems, Sensor Geophone, Marine Imaging Systems, Data Management Solutions, and ION Solutions (formerly referred to as Seismic Imaging Solutions). To determine the fair value of our reporting units, we use a discounted future returns

valuation method. If we had established different reporting units or utilized different valuation methodologies, the impairment test results could differ.

SFAS 142 requires us to compare the fair value of our reporting units to their carrying amount on an annual basis to determine if there is potential goodwill impairment. If the fair value of the reporting unit is less than its carrying value, an impairment loss is recorded to the extent that the fair value of the goodwill within the reporting units is less than its carrying value.

Our intangible assets other than goodwill relate to computer software, proprietary technology, patents, customer relationships and trade names that are amortized over the estimated periods of benefit (ranging from 4 to 20 years). We review the carrying values of these intangible assets for impairment if events or changes in the facts and circumstances indicate that their carrying value may not be recoverable. Any impairment determined is recorded in the current period and is measured by comparing the fair value of the related asset to its carrying value.

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

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

- *Stock-Based Compensation* — Prior to January 1, 2006, our equity compensation plans were accounted for under the recognition and measurement provisions of APB Opinion No. 25, "Accounting for Stock Issued to Employees" and related Interpretations, as permitted by SFAS 123, "Accounting for Stock-Based Compensation." We did not recognize stock-based compensation expense associated with our stock options in our statement of operations for periods prior to January 1, 2006 because all of our stock options granted had an exercise price equal to or in excess of the market value of the underlying common stock on the date of grant.

On January 1, 2006, we adopted the fair value recognition provisions of SFAS 123R, using the modified prospective method. Under this transition method, stock-based compensation cost recognized in the years ended December 31, 2007 and 2006 includes: (a) compensation cost for all unvested stock-based awards as of January 1, 2006 that had been granted prior to January 1, 2006, based on the grant date fair value estimated in accordance with the original provisions of SFAS 123, and (b) compensation cost for all stock-based awards granted after January 1, 2006, based on the grant-date fair value estimated in accordance with the provisions of SFAS 123R.

With our adoption of SFAS 123R, we began estimating the value of stock option awards on the date of grant using the Black-Scholes option pricing model. Prior to the adoption of SFAS 123R, the values of our stock-based awards were estimated as of the date of grant using the Black-Scholes model for the pro forma information required to be disclosed under SFAS 123. The determination of the fair value of stock-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of subjective variables. These variables include, but are not limited to, our expected stock price volatility over the term of the awards, actual and projected employee stock option exercise behaviors, risk-free interest rate, and expected dividends.

Our estimates of expected volatility for our stock price used in calculating fair value of our stock-based compensation under SFAS 123R for the twelve months ended December 31, 2007 and 2006

were based on assumptions involving a combination of historical volatility and market-based implied volatility derived from traded options on our common stock. Prior to 2006, our calculation of expected volatility was based solely on historical volatility. See Note 12 “*Stockholders’ Equity and Stock-Based Compensation*” of *Notes to Consolidated Financial Statements*.

We currently recognize stock-based compensation expense on the straight-line basis over the service period of each award (generally the vesting period of the award). We had recognized compensation expense in our pro forma disclosures under SFAS 123 on the straight-line basis for our stock options. Prior to the adoption of SFAS 123R, we recognized compensation expense related to our restricted stock and restricted stock unit awards using the accelerated method of amortization and will continue to apply the accelerated method to all outstanding restricted stock and restricted stock units awards granted prior to January 1, 2006. Also, prior to our adoption to SFAS 123R, we accounted for forfeitures of our restricted stock and restricted stock unit grants as the forfeitures actually occurred. We estimated forfeitures on our unvested restricted stock outstanding as of January 1, 2006, and recorded a \$0.4 million cumulative effect of change in accounting principle to reflect the compensation cost that would not have been recognized in prior periods had forfeitures been estimated during these periods.

### **Recent Accounting Pronouncements**

In September 2006, the Financial Accounting Standards Board (FASB) issued SFAS No. 157, “*Fair Value Measurements*” (SFAS 157), which defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. SFAS No. 157 will be effective for us beginning January 1, 2008. We do not currently expect the adoption of SFAS No. 157 to have a material impact on our consolidated financial statements. However, we are continuing to assess the potential effects of SFAS No. 157 as additional guidance becomes available.

In February 2007, the FASB issued SFAS No. 159, “*The Fair Value Option for Financial Assets and Financial Liabilities*” (SFAS 159). SFAS 159 allows companies the option to report certain financial assets and liabilities at fair value, establishes presentation and disclosure requirements and requires additional disclosure surrounding the valuation of the financial assets and liabilities presented at fair value on the balance sheet. The provisions of SFAS 159 are effective for fiscal years beginning after November 15, 2007. We do not currently expect the adoption of SFAS No. 159, which occurred on January 1, 2008, to have a material impact on our consolidated financial statements. However, we are continuing to assess the potential effects of SFAS No. 159 as additional guidance becomes available.

Effective July, 1, 2007, we adopted the EITF Topic D-109, “*Determining the Nature of a Host Contract Related to a Hybrid Financial Instrument Issued in the Form of a Share under FASB Statement No.133*” (Topic D-109). Topic D-109 conveys the SEC staff’s views on determining whether the characteristics of a host contract in a hybrid financial instrument issued in the form of a share is more like debt or equity. The SEC staff believes that in evaluating an embedded derivative feature for separation under SFAS 133, the consideration of the economic characteristics and risks of the host contract should not ignore the stated or implied substantive terms and features of the hybrid financial instrument. The adoption of Topic D-109 did not have a material impact on our financial position, results of operations, or cash flows.

### **Credit and Sales Risks**

No single customer represented 10% or more of our consolidated net revenues for the years ended December 31, 2007, 2006 and 2005; however, our top five customers in total represented approximately 31%, 29% and 26%, respectively of our consolidated net revenues. The loss of any significant customers or a deterioration in our relationship with either customer could have a material adverse effect on our results of operations and financial condition.

For the twelve months ended December 31, 2007, we recognized \$179.1 million of sales to customers in Europe, \$131.7 million of sales to customers in Asia Pacific, \$37.1 million of sales to customers in Africa, \$29.3 million of sales to customers in the Middle East, \$16.0 million of sales to customers in Latin American countries, and \$52.2 million of sales to customers in the Commonwealth of Independent States, or former Soviet Union (CIS). The majority of our foreign sales are denominated in U.S. dollars. For the years ended

December 31, 2007 and 2006, international sales comprised 62% and 68%, respectively, of total net revenues. In recent years, the CIS and certain Latin American countries have experienced economic problems and uncertainties. To the extent that world events or economic conditions negatively affect our future sales to customers in these and other regions of the world or the collectibility of our existing receivables, our future results of operations, liquidity, and financial condition may be adversely affected. We currently require customers in these higher risk countries to provide their own financing and in some cases assist the customer in organizing international financing and Export-Import credit guarantees provided by the United States government. We do not currently extend long-term credit through notes to companies in countries we consider to be inappropriate for credit risk purposes.

### **Certain Relationships and Related Party Transactions**

James M. Lapeyre, Jr. is chairman of our board of directors. He is also the chairman and a significant equity owner of Laitram, L.L.C. (Laitram) and has served as president of Laitram and its predecessors since 1989. Laitram is a privately-owned, New Orleans-based manufacturer of food processing equipment and modular conveyor belts. Mr. Lapeyre and Laitram together own approximately 9.6% of our outstanding common stock.

We acquired DigiCourse, Inc., our marine positioning products business, from Laitram in 1998 and have renamed it I/O Marine Systems, Inc. In connection with that acquisition, we entered into a Continued Services Agreement with Laitram under which Laitram agreed to provide us certain accounting, software, manufacturing, and maintenance services. Manufacturing services consist primarily of machining of parts for our marine positioning systems. The term of this agreement expired in September 2001 but we continue to operate under its terms. In addition, when we have requested, the legal staff of Laitram has advised us on certain intellectual property matters with regard to our marine positioning systems. Under a lease of Commercial Property dated February 1, 2006, between Lapeyre Properties L.L.C. (an affiliate of Laitram) and ION, we agreed to lease certain office and warehouse space from Lapeyre Properties until January 2011. During 2007, we paid Laitram a total of approximately \$4.9 million, which consisted of approximately \$4.0 million for manufacturing services, \$0.8 million for rent and other pass-through third party facilities charges, and \$0.1 million for other services. For the 2006 and 2005 fiscal years, we paid Laitram a total of approximately \$3.6 million and \$2.7 million for these services. In the opinion of our management, the terms of these services are fair and reasonable and as favorable to us as those that could have been obtained from unrelated third parties at the time of their performance.

### **Off-Balance Sheet Arrangements**

As part of our ongoing business, we do not participate in transactions that generate material relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities (SPEs) that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. As a result, we have no material off-balance sheet arrangements.

### **Indemnification**

In the ordinary course of our business, we enter into contractual arrangements with our customers, suppliers, and other parties under which we may agree to indemnify the other party to such arrangement from certain losses it incurs relating to our products or services or for losses arising from certain events as defined within the particular contract. Some of these indemnification obligations may not be subject to maximum loss limitations. Historically, payments we have made related to these indemnification obligations have been immaterial.

### **Item 7A. Quantitative and Qualitative Disclosures about Market Risk**

Market risk is the risk of loss from adverse changes in market prices and rates. Our primary market risks include risks related to interest rates and to foreign currency exchange rates.

#### **Interest Rate Risk**

In February 2005, we issued 30,000 shares of Series D-1 Cumulative Convertible Preferred Stock (Series D-1 Preferred Stock). In addition, in December 2007, the holder exercised its right to purchase an additional

5,000 shares (Series D-2 Preferred Stock). Dividends, which are contractually obligated to be paid quarterly, may be paid, at our option, either in cash or by the issuance of our common stock. Dividends are paid at a variable rate, equal to the greater of (i) five percent per annum or (ii) the three month LIBOR rate on the last day of the immediately preceding calendar quarter plus two and one-half percent per annum. The dividend rate for the Series D-1 Preferred Stock and for the Series D-2 Preferred Stock was 7.73% at December 31, 2007. Each 100 basis point increase in the LIBOR rate would have the effect of increasing the annual amount of dividends to be paid by approximately \$0.4 million.

With respect to our fixed-rate long-term debt outstanding, the fair market value of our outstanding notes payable and long-term debt was \$26.4 million and \$193.8 million at December 31, 2007 and 2006, respectively. The large decrease in this amount is due to approximately 88% of our convertible debt being converted to common shares during 2007.

### **Foreign Currency Exchange Rate Risk**

Through our subsidiaries, we operate in a wide variety of jurisdictions, including the Netherlands, United Kingdom, China, Venezuela, Canada, India, Russia, the United Arab Emirates, and other countries. Our financial results may be affected by changes in foreign currency exchange rates. Our consolidated balance sheet at December 31, 2007 reflected approximately \$24.5 million of net working capital related to our foreign subsidiaries. A majority of our foreign net working capital is within the Netherlands and United Kingdom. The subsidiaries in those countries receive their income and pay their expenses primarily in euros and British pounds (GBP), respectively. To the extent that transactions of these subsidiaries are settled in euros or GBP, a devaluation of these currencies versus the U.S. dollar could reduce the contribution from these subsidiaries to our consolidated results of operations as reported in U.S. dollars.

### **Item 8. Financial Statements and Supplementary Data**

The financial statements required by this item begin at page F-1 hereof.

### **Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

Not applicable.

### **Item 9A. Controls and Procedures**

(a) *Evaluation of Disclosure Controls and Procedures.* Disclosure controls and procedures are designed to ensure that information required to be disclosed by us in reports filed or submitted under the Exchange Act, is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed under the Exchange Act is accumulated and communicated to management, including the principal executive officer and the principal financial officer, as appropriate to allow timely decisions regarding required disclosure. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives.

Our management carried out an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of December 31, 2007. Based upon that evaluation, our principal executive officer and our principal financial officer believe that our disclosure controls and procedures were effective as of December 31, 2007.

(b) *Management's Report on Internal Control Over Financial Reporting.* Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) under the Exchange Act. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Our internal control over financial reporting includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;

- (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of our management and directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Under Rule 12b-2 under the Exchange Act, a material weakness is defined as a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we assessed the effectiveness of our internal control over financial reporting as of December 31, 2007 based upon criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Management's assessment concluded that our internal control over financial reporting was effective as of December 31, 2007.

(c) *Changes in Internal Control.* There was not any change in our internal control over financial reporting that occurred during the fourth quarter of fiscal 2007 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

## **Report of Independent Registered Public Accounting Firm**

The Board of Directors and Stockholders of ION Geophysical Corporation

We have audited ION Geophysical Corporation's (formerly Input/Output, Inc.) internal control over financial reporting as of December 31, 2007, based on criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). ION Geophysical Corporation's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, ION Geophysical Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2007, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of ION Geophysical Corporation and subsidiaries as of December 31, 2007 and 2006, and the related consolidated statements of operations, stockholders' equity and comprehensive income, and cash flows for each of the three years in the period ended December 31, 2007 and our report dated February 27, 2008 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Houston, Texas  
February 27, 2008

## **Item 9B. Other Information**

Not applicable.

## **PART III**

### **Item 10. Directors, Executive Officers and Corporate Governance**

Reference is made to the information appearing in the definitive proxy statement for our annual meeting of stockholders to be held on May 27, 2008 (the “2008 Proxy Statement”) to be filed with the SEC with respect to Directors, Executive Officers and Corporate Governance, which is incorporated herein by reference and made a part hereof in response to the information required by Item 10.

### **Item 11. Executive Compensation**

Reference is made to the information appearing in the 2008 Proxy Statement to be filed with the SEC with respect to Executive Compensation, which is incorporated herein by reference and made a part hereof in response to the information required by Item 11.

### **Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

Reference is made to the information appearing in the 2008 Proxy Statement to be filed with the SEC with respect to Security Ownership of Certain Beneficial Owners, and Management and Related Stockholder Matters, which is incorporated herein by reference and made a part hereof in response to the information required by Item 12.

### **Item 13. Certain Relationships and Related Transactions and Director Independence**

Reference is made to the information appearing in the 2008 Proxy Statement to be filed with the SEC with respect to Certain Relationships and Related Transactions and Director Independence, which is incorporated herein by reference and made a part hereof in response to the information required by Item 13.

### **Item 14. Principal Accountant Fees and Services**

Reference is made to the information appearing in the 2008 Proxy Statement to be filed with the SEC with respect to Principal Accountant Fees and Services, which is incorporated herein by reference and made a part hereof in response to the information required by Item 14.

## **PART IV**

### **Item 15. Exhibits and Financial Statement Schedules**

#### *(a) List of Documents Filed*

##### *(1) Financial Statements*

The financial statements filed as part of this report are listed in the “Index to Consolidated Financial Statements” on page F-1 hereof.

##### *(2) Financial Statement Schedules*

The following financial statement schedule is listed in the “Index to Consolidated Financial Statements” on page F-1 hereof, and is included as part of this Annual Report on Form 10-K:

#### Schedule II — Valuation and Qualifying Accounts

All other schedules are omitted because they are not applicable or the requested information is shown in the financial statements or noted therein.

(3) Exhibits

Exhibit No.	Description
3.1	Restated Certificate of Incorporation dated September 24, 2007 filed on September 24, 2007 as Exhibit 3.4 to the Company's Current Report on Form 8-K and incorporated herein by reference.
3.2	Amended and Restated Bylaws of ION Geophysical Corporation filed on September 24, 2007 as Exhibit 3.5 to the Company's Current Report on Form 8-K and incorporated herein by reference.
3.3	Certificate of Ownership and Merger merging ION Geophysical Corporation with and into Input/Output, Inc. dated September 21, 2007, filed on September 24, 2007 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.1	Indenture dated as of December 10, 2003, filed on January 27, 2004 as Exhibit 4.1 to the Company's Registration Statement on Form S-3 (Registration No. 333-112263), and incorporated herein by reference.
4.2	Certificate of Rights and Designations of Series D-1 Cumulative Convertible Preferred Stock, dated February 16, 2005 and filed on February 17, 2005 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.3	Certificate of Elimination of Series B Preferred Stock dated September 24, 2007, filed on September 24, 2007 as Exhibit 3.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.4	Certificate of Elimination of Series C Preferred Stock dated September 24, 2007, filed on September 24, 2007 as Exhibit 3.3 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.5	Certificate of Designation of Series D-2 Cumulative Convertible Preferred Stock dated December 6, 2007, filed on December 6, 2007 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
4.6	Certificate of Designation of Series D-3 Cumulative Convertible Preferred Stock dated February 20, 2008, filed on February 22, 2008 as Exhibit 3.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
**10.1	Amended and Restated 1990 Stock Option Plan, filed on June 9, 1999 as Exhibit 4.2 to the Company's Registration Statement on Form S-8 (Registration No. 333-80299), and incorporated herein by reference.
10.2	Office and Industrial/Commercial Lease dated June 2005 by and between Stafford Office Park II, LP as Landlord and Input/Output, Inc. as Tenant, filed on March 31, 2006 as Exhibit 10.2 to the Company's Annual Report on Form 10-K for the year ended December 31, 2005, and incorporated herein by reference.
10.3	Office and Industrial/Commercial Lease dated June 2005 by and between Stafford Office Park District as Landlord and Input/Output, Inc. as Tenant, filed on March 31, 2006 as Exhibit 10.3 to the Company's Annual Report on Form 10-K for the year ended December 31, 2005, and incorporated herein by reference.
**10.4	Input/Output, Inc. Amended and Restated 1996 Non-Employee Director Stock Option Plan, filed on June 9, 1999 as Exhibit 4.3 to the Company's Registration Statement on Form S-8 (Registration No. 333-80299), and incorporated herein by reference.
**10.5	Employment Agreement dated effective as of May 22, 2006, between Input/Output, Inc. and R. Brian Hanson filed on May 1, 2006 as Exhibit 10.1 to the Company's Form 8-K, and incorporated herein by reference.

Exhibit No.	Description
10.6	First Amendment to Employment Agreement dated as of August 20, 2007 between Input/Output, Inc. and R. Brian Hanson, filed on August 21, 2007 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
**10.7	Input/Output, Inc. Employee Stock Purchase Plan, filed on March 28, 1997 as Exhibit 4.4 to the Company's Registration Statement on Form S-8 (Registration No. 333-24125), and incorporated herein by reference.
**10.8	Third Amended and Restated Input/Output, Inc. 2004 Long-Term Incentive Plan filed as Appendix A to the definitive proxy statement for the 2007 Annual Meeting of Stockholders of Input/Output, Inc. as filed with the SEC on April 10, 2007 and incorporated herein by reference.
10.9	Registration Rights Agreement dated as of November 16, 1998, by and among the Company and The Laitram Corporation, filed on March 12, 2004 as Exhibit 10.7 to the Company's Annual Report on Form 10-K for the year ended December 31, 2003, and incorporated herein by reference.
**10.10	Input/Output, Inc. 1998 Restricted Stock Plan dated as of June 1, 1998, filed on June 9, 1999 as Exhibit 4.7 to the Company's Registration Statement on S-8 (Registration No. 333-80297), and incorporated herein by reference.
**10.11	Input/Output Inc. Non-qualified Deferred Compensation Plan, filed on April 1, 2002 as Exhibit 10.14 to the Company's Annual Report on Form 10-K for the year ended December 31, 2001, and incorporated herein by reference.
**10.12	Amendment No. 1 to the Input/Output, Inc. Amended and Restated 1996 Non-Employee Director Stock Option Plan dated September 13, 1999 filed on November 14, 1999 as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the fiscal quarter ended August 31, 1999 and incorporated herein by reference.
**10.13	Input/Output, Inc. 2000 Restricted Stock Plan, effective as of March 13, 2000, filed on August 17, 2000 as Exhibit 10.27 to the Company's Annual Report on Form 10-K for the fiscal year ended May 31, 2000, and incorporated herein by reference.
**10.14	Input/Output, Inc. 2000 Long-Term Incentive Plan, filed on November 6, 2000 as Exhibit 4.7 to the Company's Registration Statement on Form S-8 (Registration No. 333-49382), and incorporated by reference herein.
**10.15	Employment Agreement dated effective as of March 31, 2003, by and between the Company and Robert P. Peebler, filed on March 31, 2003, as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
**10.16	First Amendment to Employment Agreement dated September 6, 2006, between Input/Output, Inc. and Robert P. Peebler, filed on September 7, 2006, as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
10.17	Second Amendment to Employment Agreement dated February 16, 2007, between Input/Output, Inc. and Robert P. Peebler, filed on February 16, 2007 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
10.18	Third Amendment to Employment Agreement dated as of August 20, 2007 between Input/Output, Inc. and Robert P. Peebler, filed on August 21, 2007 as Exhibit 10.2 to the Company's Current Report on Form 8-K and incorporated herein by reference.
**10.19	Employment Agreement dated effective as of June 15, 2004, by and between the Company and David L. Roland, filed on August 9, 2004 as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2004, and incorporated herein by reference.

Exhibit No.	Description
**10.20	GX Technology Corporation Employee Stock Option Plan, filed on August 9, 2004 as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2004, and incorporated herein by reference.
10.21	Concept Systems Holdings Limited Share Acquisition Agreement dated February 23, 2004, filed on March 5, 2004 as Exhibit 2.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
10.22	Concept Systems Holdings Limited Registration Rights Agreement dated February 23, 2004, filed on March 5, 2004 as Exhibit 4.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
**10.23	Form of Employment Inducement Stock Option Agreement for the Input/Output, Inc. — Concept Systems Employment Inducement Stock Option Program, filed on July 27, 2004 as Exhibit 4.1 to the Company's Registration Statement on Form S-8 (Reg. No. 333-117716), and incorporated herein by reference.
10.24	Agreement dated as of February 15, 2005, between Input/Output, Inc. and Fletcher International, Ltd., filed on February 17, 2005 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
10.25	First Amendment to Agreement, dated as of May 6, 2005, between the Company and Fletcher International, Ltd., filed on May 10, 2005 as Exhibit 10.2 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
**10.26	Input/Output, Inc. 2003 Stock Option Plan, dated March 27, 2003, filed as Appendix B of the Company's definitive proxy statement filed with the SEC on April 30, 2003, and incorporated herein by reference.
**10.27	Input/Output, Inc. 2004 Long-Term Incentive Plan, dated May 3, 2004, filed as Appendix B of the Company's definitive proxy statement filed with the SEC on May 13, 2004, and incorporated herein by reference.
10.28	Credit Agreement dated as of March 22, 2007, filed on March 28, 2007 as Exhibit 10.1 to the Company's Current Report on Form 8-K and incorporated herein by reference.
**10.29	Form of Employment Inducement Stock Option Agreement for the Input/Output, Inc. — GX Technology Corporation Employment Inducement Stock Option Program, filed on April 4, 2005 as Exhibit 4.1 to the Company's Registration Statement on Form S-8 (Reg. No. 333-123831), and incorporated herein by reference.
**10.30	Consulting Services Agreement dated as of October 19, 2006, by and between GX Technology Corporation and Michael K. Lambert, filed on October 24, 2006 as Exhibit 10.2 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
**10.31	First Amendment to Consulting Services Agreement dated as of January 5, 2007, by and between GX Technology Corporation and Michael K. Lambert, filed on January 8, 2007 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
**10.32	Letter agreement dated October 19, 2006, by and between the Company and Michael K. Lambert, filed on October 24, 2006 as Exhibit 10.1 to the Company's Current Report on Form 8-K, and incorporated herein by reference.
*10.33	First Amendment to Credit Agreement dated as of February 26, 2008, among the Company, Citibank, N.A., as Administrative Agent, and the other Guarantors, Banks and Financial Institutions Party thereto.

Exhibit No.	Description
*21.1	Subsidiaries of the Company.
*23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
*24.1	The Power of Attorney is set forth on the signature page hereof.
*31.1	Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a).
*31.2	Certification of Chief Financial Officer Pursuant to Rule 13a-14(a) or Rule 15d-14(a).
*32.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. §1350.
*32.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. §1350.

\* Filed herewith.

\*\* Management contract or compensatory plan or arrangement.

(b) *Exhibits required by Item 601 of Regulation S-K.*

Reference is made to subparagraph (a) (3) of this Item 15, which is incorporated herein by reference.

(c) *Not applicable.*

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Houston, State of Texas, on February 27, 2008.

### ION GEOPHYSICAL CORPORATION

By: /s/ R. Brian Hanson

R. Brian Hanson  
Executive Vice President and Chief Financial Officer

### POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Robert P. Peebler and David L. Roland and each of them, as his or her true and lawful attorneys-in-fact and agents with full power of substitution and re-substitution for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all documents relating to the Annual Report on Form 10-K for the year ended December 31, 2007, including any and all amendments and supplements thereto, and to file the same with all exhibits thereto and other documents in connection therewith with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully as to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or their or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

<u>Name</u>	<u>Capacities</u>	<u>Date</u>
<u>/s/ Robert P. Peebler</u> Robert P. Peebler	President, Chief Executive Officer and Director (Principal Executive Officer)	February 27, 2008
<u>/s/ R. Brian Hanson</u> R. Brian Hanson	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 27, 2008
<u>/s/ Michael L. Morrison</u> Michael L. Morrison	Vice President and Corporate Controller (Principal Accounting Officer)	February 27, 2008
<u>/s/ James M. Lapeyre, Jr.</u> James M. Lapeyre, Jr.	Chairman of the Board of Directors and Director	February 27, 2008
<u>/s/ Bruce S. Appelbaum</u> Bruce S. Appelbaum	Director	February 27, 2008
<u>/s/ Theodore H. Elliott, Jr.</u> Theodore H. Elliott, Jr.	Director	February 27, 2008
<u>/s/ Franklin Myers</u> Franklin Myers	Director	February 27, 2008
<u>/s/ S. James Nelson, Jr.</u> S. James Nelson, Jr.	Director	February 27, 2008
<u>/s/ John N. Seitz</u> John N. Seitz	Director	February 27, 2008
<u>/s/ Sam K. Smith</u> Sam K. Smith	Director	February 27, 2008

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**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

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All other schedules are omitted because they are not applicable or the required information is shown in the financial statements or notes thereto.

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of ION Geophysical Corporation

We have audited the accompanying consolidated balance sheets of ION Geophysical Corporation (formerly Input/Output, Inc.) and subsidiaries as of December 31, 2007 and 2006, and the related consolidated statements of operations, stockholders' equity and comprehensive income, and cash flows for each of the three years in the period ended December 31, 2007. Our audits also included the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of ION Geophysical Corporation and subsidiaries at December 31, 2007 and 2006, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2007, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

As discussed in Note 14 to the consolidated financial statements, in 2007 the Company adopted FASB Interpretation No. 48, *Accounting for Uncertainty in Income Taxes, an Interpretation of FASB Statement No. 109*, and as discussed in Note 1 to the consolidated financial statements, in 2006 the Company adopted Statement of Financial Accounting Standards No. 123 (revised 2004), *"Share-Based Payment."*

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), ION Geophysical Corporation's internal control over financial reporting as of December 31, 2007, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 27, 2008, expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Houston, Texas  
February 27, 2008

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**CONSOLIDATED BALANCE SHEETS**

	<b>December 31,</b>	
	<b>2007</b>	<b>2006</b>
	(In Thousands, Except Share Data)	
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents . . . . .	\$ 36,409	\$ 17,056
Restricted cash . . . . .	7,052	1,044
Accounts receivable, net . . . . .	188,029	167,747
Current portion notes receivable, net . . . . .	5,454	6,299
Unbilled receivables . . . . .	22,388	28,599
Inventories . . . . .	128,961	115,520
Prepaid expenses and other current assets . . . . .	12,717	9,854
Total current assets . . . . .	401,010	346,119
Notes receivable . . . . .	—	4,968
Deferred income tax asset . . . . .	2,872	6,197
Property, plant and equipment, net . . . . .	36,951	38,129
Multi-client data library, net . . . . .	59,689	33,072
Investments at cost . . . . .	4,954	4,254
Goodwill . . . . .	153,145	156,091
Intangible and other assets, net . . . . .	50,528	66,306
Total assets . . . . .	\$709,149	\$ 655,136
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Notes payable and current maturities of long-term debt . . . . .	\$ 14,871	\$ 6,566
Accounts payable . . . . .	44,674	47,844
Accrued expenses . . . . .	66,911	50,819
Accrued multi-client data library royalties . . . . .	29,962	27,197
Deferred revenue . . . . .	21,278	37,442
Deferred income tax liability . . . . .	2,792	5,909
Total current liabilities . . . . .	180,488	175,777
Long-term debt, net of current maturities . . . . .	9,842	70,974
Non-current deferred income tax liability . . . . .	3,384	4,142
Other long-term liabilities . . . . .	4,195	4,588
Total liabilities . . . . .	197,909	255,481
Cumulative convertible preferred stock . . . . .	35,000	29,987
Commitments and contingencies		
Stockholders' equity:		
Common stock, \$.01 par value; authorized 200,000,000 shares; out- standing 93,847,608 and 80,123,486 shares at December 31, 2007 and 2006, respectively, net of treasury stock . . . . .	948	810
Additional paid-in capital . . . . .	559,255	493,605
Accumulated deficit . . . . .	(82,839)	(123,095)
Accumulated other comprehensive income . . . . .	5,460	4,859
Treasury stock, at cost, 853,402 and 850,428 shares at December 31, 2007 and 2006, respectively . . . . .	(6,584)	(6,511)
Total stockholders' equity . . . . .	476,240	369,668
Total liabilities and stockholders' equity . . . . .	\$709,149	\$ 655,136

*See accompanying Notes to Consolidated Financial Statements.*

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**CONSOLIDATED STATEMENTS OF OPERATIONS**

	Years Ended December 31,		
	2007	2006	2005
	(In Thousands, Except Per Share Data)		
Product revenues . . . . .	\$537,691	\$354,258	\$237,359
Service revenues . . . . .	<u>175,420</u>	<u>149,298</u>	<u>125,323</u>
Total net revenues . . . . .	<u>713,111</u>	<u>503,556</u>	<u>362,682</u>
Cost of products . . . . .	390,512	257,749	169,688
Cost of services . . . . .	<u>119,679</u>	<u>91,592</u>	<u>86,619</u>
Gross profit . . . . .	<u>202,920</u>	<u>154,215</u>	<u>106,375</u>
Operating expenses (income):			
Research and development . . . . .	46,302	32,751	20,266
Marketing and sales . . . . .	43,877	40,651	33,167
General and administrative . . . . .	49,100	40,807	28,227
(Gain) loss on sale of assets . . . . .	<u>(253)</u>	<u>58</u>	<u>99</u>
Total operating expenses . . . . .	<u>139,026</u>	<u>114,267</u>	<u>81,759</u>
Income from operations . . . . .	<u>63,894</u>	<u>39,948</u>	<u>24,616</u>
Interest expense . . . . .	(6,283)	(5,770)	(6,134)
Interest income . . . . .	1,848	2,040	843
Loss on debt conversion . . . . .	(2,902)	—	—
Other income (expense) . . . . .	<u>(1,090)</u>	<u>(2,161)</u>	<u>820</u>
Income before income taxes and change in accounting principle . . . . .	55,467	34,057	20,145
Income tax expense . . . . .	<u>12,823</u>	<u>5,114</u>	<u>1,366</u>
Net income before change in accounting principle . . . . .	42,644	28,943	18,779
Cumulative effect of change in accounting principle . . . . .	—	398	—
Net income . . . . .	<u>42,644</u>	<u>29,341</u>	<u>18,779</u>
Preferred stock dividends and accretion . . . . .	<u>2,388</u>	<u>2,429</u>	<u>1,635</u>
Net income applicable to common shares . . . . .	<u>\$ 40,256</u>	<u>\$ 26,912</u>	<u>\$ 17,144</u>
Basic earnings per share:			
Net income per basic share before change in accounting principle . . . . .	\$ 0.49	\$ 0.33	\$ 0.22
Cumulative effect of change in accounting principle . . . . .	—	0.01	—
Net income per basic share . . . . .	<u>\$ 0.49</u>	<u>\$ 0.34</u>	<u>\$ 0.22</u>
Diluted earnings per share:			
Net income per diluted share before change in accounting principle . . . . .	\$ 0.45	\$ 0.32	\$ 0.21
Cumulative effect of change in accounting principle . . . . .	—	0.01	—
Net income per diluted share . . . . .	<u>\$ 0.45</u>	<u>\$ 0.33</u>	<u>\$ 0.21</u>
Weighted average number of common shares outstanding:			
Basic . . . . .	81,941	79,497	78,600
Diluted . . . . .	97,321	95,182	79,842

*See accompanying Notes to Consolidated Financial Statements.*

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	<b>Years Ended December 31</b>		
	<b>2007</b>	<b>2006</b>	<b>2005</b>
	(In Thousands)		
Cash flows from operating activities:			
Net income . . . . .	\$ 42,644	\$ 29,341	\$ 18,779
Adjustments to reconcile net income to net cash provided by operating activities:			
Cumulative effect of change in accounting principle . . . . .	—	(398)	—
Depreciation and amortization (other than multi-client library). . . . .	26,767	22,036	23,497
Amortization of multi-client data library . . . . .	37,662	25,011	10,707
Stock-based compensation expense related to stock options, nonvested stock, and employee stock purchases . . . . .	6,875	6,121	2,500
Deferred income tax . . . . .	2,960	(1,014)	(718)
Reduction of tax reserves . . . . .	—	—	(1,441)
(Gain) loss on disposal of fixed assets . . . . .	(253)	58	99
Change in operating assets and liabilities:			
Accounts and notes receivable. . . . .	(13,911)	(44,666)	(58,889)
Unbilled receivables . . . . .	6,211	(13,529)	(7,762)
Inventories . . . . .	(11,270)	(32,697)	7,999
Accounts payable, accrued expenses and accrued royalties. . .	8,674	43,235	10,684
Deferred revenue. . . . .	(16,203)	25,386	(3,382)
Other assets and liabilities . . . . .	3,604	(910)	(198)
Net cash provided by operating activities. . . . .	<u>93,760</u>	<u>57,974</u>	<u>1,875</u>
Cash flows from investing activities:			
Purchase of property, plant and equipment . . . . .	(11,375)	(13,704)	(5,304)
Investment in multi-client data library . . . . .	(64,279)	(39,087)	(19,678)
Proceeds from the sale of fixed assets. . . . .	386	311	234
Increase in cost method investments. . . . .	(700)	(254)	(500)
Proceeds from collection of long-term note receivable associated with the sale of a facility . . . . .	—	2,000	—
Non-interest bearing customer (advance) repayment . . . . .	—	909	(909)
Acquisition of intellectual property rights . . . . .	—	—	(1,850)
Net cash used in investing activities . . . . .	<u>(75,968)</u>	<u>(49,825)</u>	<u>(28,007)</u>
Cash flows from financing activities:			
Payments on notes payable and long-term debt . . . . .	(8,424)	(6,940)	(7,144)
Borrowings under revolving line of credit . . . . .	175,000	36,265	31,615
Repayments under revolving line of credit . . . . .	(175,000)	(39,265)	(28,615)
Net proceeds from preferred stock offering . . . . .	5,000	—	29,762
Payment of preferred dividends . . . . .	(2,375)	(2,280)	(1,635)
Purchases of treasury stock. . . . .	(117)	(615)	(272)
Restricted stock cancelled for employee minimum income taxes . . . . .	(1,314)	—	—
Proceeds from employee stock purchases and exercise of stock options. . . . .	8,038	4,435	2,640
Return of deposit to secure a letter of credit . . . . .	—	—	1,500
Net cash provided by (used in) financing activities . . . . .	<u>808</u>	<u>(8,400)</u>	<u>27,851</u>
Effect of change in foreign currency exchange rates on cash and cash equivalents . . . . .	753	1,454	(801)
Net increase in cash and cash equivalents . . . . .	19,353	1,203	918
Cash and cash equivalents at beginning of period . . . . .	17,056	15,853	14,935
Cash and cash equivalents at end of period . . . . .	<u>\$ 36,409</u>	<u>\$ 17,056</u>	<u>\$ 15,853</u>

*See accompanying Notes to Consolidated Financial Statements.*

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND**  
**COMPREHENSIVE INCOME**

	<u>Common Stock</u>		<u>Additional Paid-In Capital</u>	<u>Accumulated Deficit</u>	<u>Accumulated Other Comprehensive Income (Loss)</u>	<u>Trea- sury Stock</u>	<u>Unamortized Restricted Stock Compensation</u>	<u>Total Stockholders' Equity</u>
	<u>Shares</u>	<u>Amount</u>						
	(In Thousands, Except Per Share Data)							
Balance at January 1, 2005 . . . . .	78,561,675	\$795	\$480,845	\$(167,151)	\$ 2,332	\$(5,844)	\$(2,217)	\$308,760
Comprehensive income:								
Net income applicable to common shares . . . . .	—	—	—	17,144	—	—	—	17,144
Other comprehensive loss:								
Translation adjustment . . . . .	—	—	—	—	(3,060)	—	—	(3,060)
Total comprehensive income . . . . .								14,084
Amortization of restricted stock compensation . . . . .	—	—	—	—	—	—	2,410	2,410
Issuance of restricted stock awards . . .	619,000	6	4,531	—	—	—	(4,537)	—
Cancellation of restricted stock awards .	(108,416)	(1)	(835)	—	—	—	553	(283)
Purchase treasury stock . . . . .	(36,071)	—	—	—	—	(272)	—	(272)
Exercise of stock options . . . . .	571,426	6	1,651	—	—	—	—	1,657
Amortization of restricted stock units . .	—	—	119	—	—	—	—	119
Vesting of restricted stock units . . . . .	8,007	—	—	—	—	—	—	—
Amortization of stock options awards . .	—	—	142	—	—	—	—	142
Issuance of stock for the ESPP . . . . .	130,200	1	818	—	—	—	—	819
Issuance of treasury stock . . . . .	18,517	—	(39)	—	—	148	—	109
Balance at December 31, 2005 . . . . .	<u>79,764,338</u>	<u>807</u>	<u>487,232</u>	<u>(150,007)</u>	<u>(728)</u>	<u>(5,968)</u>	<u>(3,791)</u>	<u>327,545</u>
Comprehensive income:								
Net income applicable to common shares . . . . .	—	—	—	26,912	—	—	—	26,912
Other comprehensive income:								
Translation adjustment . . . . .	—	—	—	—	5,587	—	—	5,587
Total comprehensive income . . . . .								32,499
Stock-based compensation expense . . . .	—	—	6,121	—	—	—	—	6,121
Impact of adoption of SFAS 123R on restricted stock . . . . .	(743,238)	(7)	(4,182)	—	—	—	3,791	(398)
Purchase treasury stock . . . . .	(62,883)	(1)	—	—	—	(615)	—	(616)
Exercise of stock options . . . . .	778,921	8	3,788	—	—	—	—	3,796
Vesting of restricted stock units/awards .	263,787	2	(2)	—	—	—	—	—
Issuance of stock for the ESPP . . . . .	113,582	1	640	—	—	—	—	641
Issuance of treasury stock . . . . .	8,979	—	8	—	—	72	—	80
Balance at December 31, 2006 . . . . .	<u>80,123,486</u>	<u>810</u>	<u>493,605</u>	<u>(123,095)</u>	<u>4,859</u>	<u>(6,511)</u>	<u>—</u>	<u>369,668</u>
Comprehensive income:								
Net income applicable to common shares . . . . .	—	—	—	40,256	—	—	—	40,256
Other comprehensive income:								
Translation adjustment . . . . .	—	—	—	—	601	—	—	601
Total comprehensive income . . . . .								40,857
Stock-based compensation expense . . . .	—	—	6,875	—	—	—	—	6,875
Purchase treasury stock . . . . .	(8,548)	—	—	—	—	(117)	—	(117)
Exercise of stock options . . . . .	1,036,794	10	6,960	—	—	—	—	6,970
Vesting of restricted stock units/awards .	455,307	4	(4)	—	—	—	—	—
Restricted stock cancelled for employee minimum income taxes . . . . .	(91,732)	—	(1,314)	—	—	—	—	(1,314)
Issuance of stock for the ESPP . . . . .	113,763	2	1,068	—	—	—	—	1,070
Conversion of 5.5% convertible senior notes . . . . .	12,212,964	122	52,030	—	—	—	—	52,152
Issuance of treasury stock . . . . .	5,574	—	35	—	—	44	—	79
Balance at December 31, 2007 . . . . .	<u>93,847,608</u>	<u>\$948</u>	<u>\$559,255</u>	<u>\$ (82,839)</u>	<u>\$ 5,460</u>	<u>\$(6,584)</u>	<u>\$ —</u>	<u>\$476,240</u>

*See accompanying Notes to Consolidated Financial Statements.*

## ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### (1) Summary of Significant Accounting Policies

*General Description and Principles of Consolidation.* ION Geophysical Corporation (formerly Input/Output, Inc.) and its wholly-owned subsidiaries offer a full suite of related products and services for seismic data acquisition and processing, including products incorporating traditional analog technologies and products incorporating the proprietary VectorSeis, True Digital™ technology. The consolidated financial statements include the accounts of ION Geophysical Corporation and its wholly-owned subsidiaries (collectively referred to as the “Company” or “ION”). Inter-company balances and transactions have been eliminated.

In September 2007, the Company changed its corporate name from Input/Output, Inc. to ION Geophysical Corporation. This change was made to reflect the evolution of the company from being primarily known as an equipment manufacturer to the broad, current product/service portfolio of land and marine acquisition hardware, survey design and command & control software, advanced imaging services, and seismic data libraries. No subsidiary names have been changed.

*Use of Estimates.* The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates are made at discrete points in time based on relevant market information. These estimates may be subjective in nature and involve uncertainties and matters of judgment and, therefore, cannot be determined with exact precision. Areas involving significant estimates include, but are not limited to, accounts and notes receivable, inventory valuation, sales forecast related to multi-client data libraries, goodwill valuation, deferred taxes, and accrued warranty costs. Actual results could differ from those estimates.

*Cash and Cash Equivalents.* The Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents. At December 31, 2007 and 2006, there were \$7.1 million and \$1.0 million, respectively, of short-term restricted cash and \$1.8 million and \$6.2 million, respectively, of long-term restricted cash (included in Intangible and other assets, net), that are used to secure standby and commercial letters of credit.

*Accounts and Notes Receivable.* Accounts and notes receivable are recorded at cost, less the related allowance for doubtful accounts and notes. The Company considers current information and events regarding the customers’ ability to repay their obligations, such as the length of time the receivable balance is outstanding, the customers’ credit worthiness and historical experience. The Company considers an account or note to be impaired when it is probable that the Company will be unable to collect all amounts due according to the contractual terms. When an account or note is considered impaired, the amount of the impairment is measured based on the present value of expected future cash flows or the fair value of collateral. Impairment losses (recoveries) are included in the allowance for doubtful accounts and notes through an increase (decrease) in bad debt expense.

Notes receivable are generally collateralized by the products sold and bear interest at contractual rates ranging from 7% to 12% per year. For non-interest bearing notes with a maturity greater than one year, or those notes which the stated rate of interest is considered a below market rate of interest, the Company imputes interest using prevailing market rates at the note’s origination. Cash receipts on impaired notes are applied to reduce the principal amount of such notes until the principal has been recovered and are recognized as interest income thereafter. The Company records interest income on investments in notes receivable on the accrual basis of accounting. The Company does not accrue interest on impaired loans where collection of interest according to the contractual terms is considered doubtful. Among the factors the Company considers in making an evaluation of the collectibility of interest are: (i) the status of the loan; (ii) the fair value of the underlying collateral; (iii) the financial condition of the borrower; and (iv) anticipated future events.

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(1) Summary of Significant Accounting Policies – (continued)**

*Inventories.* Inventories are stated at the lower of cost (primarily standard cost, which approximates first-in, first-out method) or market. The Company provides reserves for estimated obsolescence or excess inventory equal to the difference between cost of inventory and its estimated market value based upon assumptions about future demand for the Company's products and market conditions.

*Property, Plant and Equipment.* Property, plant and equipment are stated at cost. Depreciation expense is provided straight-line over the following estimated useful lives:

	Years
Machinery and equipment . . . . .	3 – 8
Buildings . . . . .	10 – 20
Leased equipment and other . . . . .	1 – 10

Expenditures for renewals and betterments are capitalized; repairs and maintenance are charged to expense as incurred. The cost and accumulated depreciation of assets sold or otherwise disposed of are removed from the accounts and any gain or loss is reflected in operating expenses.

The Company periodically evaluates the net realizable value of long-lived assets, including property, plant and equipment, relying on a number of factors including operating results, business plans, economic projections, and anticipated future cash flows. Impairment in the carrying value of an asset held for use is recognized whenever anticipated future cash flows (undiscounted) from an asset are estimated to be less than its carrying value. The amount of the impairment recognized is the difference between the carrying value of the asset and its fair value. There were no significant impairment charges during 2007, 2006 and 2005.

*Multi-Client Data Library.* The multi-client data library consists of seismic surveys that are offered for licensing to customers on a non-exclusive basis. The capitalized costs include costs paid to third parties for the acquisition of data and related activities associated with the data creation activity and direct internal processing costs, such as salaries, benefits, computer-related expenses, and other costs incurred for seismic data project design and management. For the years ended December 31, 2007, 2006, and 2005, the Company capitalized, as part of its multi-client data library, \$4.3 million, \$3.1 million, and \$1.7 million, respectively, of direct internal processing costs. At December 31, 2007 and 2006, multi-client data library creation and accumulated amortization consisted of the following:

	December 31, 2007	December 31, 2006
Gross costs of multi-client data creation . . . . .	\$137,519	\$ 73,240
Less accumulated amortization . . . . .	(77,830)	(40,168)
Total . . . . .	\$ 59,689	\$ 33,072

The Company's method of amortizing the costs of a multi-client data library available for commercial sale is the greater of (i) the percentage of actual revenue to the total estimated revenue multiplied by the total cost of the project (the sales forecast method) or (ii) the straight-line basis over a four-year period. The greater of the sales forecast method or the straight-line amortization policy is applied on a cumulative basis at the individual survey level. Under this policy, the Company first records amortization using the sales forecast method. The cumulative amortization recorded for each survey is then compared with the cumulative straight-line amortization. If the cumulative straight-line amortization is higher for any specific survey, additional amortization expense is recorded, resulting in accumulated amortization being equal to the cumulative straight-line amortization for such survey.

The Company estimates the ultimate revenue expected to be derived from a particular seismic data survey over its estimated useful economic life to determine the costs to amortize, if greater than straight-line amortization. That estimate is made by the Company at the project's initiation. For a completed multi-client

## ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### (1) Summary of Significant Accounting Policies – (continued)

survey, the Company reviews the estimate quarterly. If during any such review, the Company determines that the ultimate revenue for a survey is expected to be more or less than the original estimate of total revenue for such survey, the Company decreases or increases (as the case may be) the amortization rate attributable to the future revenue from such survey. In addition, in connection with such reviews, the Company evaluates the recoverability of the multi-client data library, and, if required under Statement of Financial Accounting Standards (SFAS) 144 “*Accounting for the Impairment and Disposal of Long-Lived Assets*,” records an impairment charge with respect to such data. There were no significant impairment charges during 2007, 2006 and 2005.

*Computer Software.* In February 2004, the Company acquired Concept Systems Holding Limited (Concept Systems). A portion of the purchase price was allocated to software available-for-sale and included within Intangible and other assets, net. The capitalized costs of computer software are charged to costs of products in the period sold, using the greater of (i) the percentage of actual sales to the total estimated sales multiplied by the total costs of the software or (ii) a straight-line amortization rate equal to the software costs divided by its remaining estimated economic life. At December 31, 2007, the total costs of software were \$14.6 million, less accumulated amortization of \$8.0 million. Amortization expense was \$2.1 million for the year ended December 31, 2007, and \$1.9 million for both the years ended December 31, 2006 and 2005.

*Cost Method Investments.* Certain of the Company’s investments are accounted for under the cost method. The Company has determined that it is not practicable to estimate the fair value of these investments, as quoted market prices are not available. Therefore, the cost method investments are recorded at cost and reviewed periodically if there are events or changes in circumstances that may have a significant adverse effect on the fair value of the investments. During 2007, 2006 and 2005, there were no events or changes in circumstances that would indicate a significant adverse effect on the fair value of the Company’s investments. The aggregate carrying amount of cost method investments was \$5.0 million and \$4.3 million at December 31, 2007 and 2006, respectively.

*Equity Method Investment.* The Company uses the equity method of accounting for investments in entities in which the Company has an ownership interest between 20% and 50% and exercises significant influence. Under this method, an investment is carried at the acquisition cost, plus the Company’s equity in undistributed earnings or losses since acquisition, and less distributions received.

*Financial Instruments.* Fair value estimates are made at discrete times based on relevant market information. These estimates may be subjective in nature and involve uncertainties and matters of significant judgment and, therefore, cannot be determined with precision. The Company believes that the carrying amount of its cash and cash equivalents, accounts and notes receivable, and accounts payable approximate the fair values at those dates. The fair market value of the Company’s notes payable and long-term debt was \$26.4 million and \$193.8 million at December 31, 2007 and 2006, respectively. The large decrease is due to a majority of the Company’s convertible debt being converted to common shares during 2007.

*Goodwill and Other Intangible Assets.* The Company performs an annual impairment test at its fiscal year end for goodwill. For purposes of performing the impairment test for goodwill as required by SFAS 142, “*Goodwill and Other Intangible Assets*,” the Company established the following reporting units: Land Imaging Systems, Sensor Geophone, Marine Imaging Systems, Data Management Solutions, and ION Solutions (formerly referred to as Seismic Imaging Solutions).

SFAS 142 requires the Company to compare the fair value of the reporting unit to its carrying amount on an annual basis to determine if there is a 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 unit is less than its carrying value. To determine the fair value of their reporting units, the Company uses a discounted future returns valuation method. The annual impairment assessment performed at December 31, 2007, 2006 and 2005 resulted in no impairment of the Company’s goodwill.

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(1) Summary of Significant Accounting Policies – (continued)**

Intangible assets other than goodwill relate to proprietary technology, patents, trade names, customer relationships, and intellectual property rights and are included in Intangible and other assets, net. The Company reviews the carrying values of these intangible assets for impairment if events or changes in the facts and circumstances indicate that their carrying value may not be recoverable. The carrying value of an intangible asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from use of the intangible asset. Any impairment determined is recorded in the current period and is measured by comparing the fair value of the related asset to its carrying value. There were no impairments to the Company's intangible assets during the years ended December 31, 2007, 2006 and 2005.

Intangible assets amortized on a straight-line basis are:

	<b>Estimated Useful Life (Years)</b>
Proprietary technology . . . . .	4 – 7
Patents. . . . .	5 – 20
Trade names. . . . .	5

Intangible assets amortized on an accelerated basis are:

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

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

For the sales of acquisition systems and other seismic equipment, the Company follows the requirements of Staff Accounting Bulletin No. 104 “*Revenue Recognition*” and recognizes revenue when (a) evidence of an arrangement exists; (b) the price to the customer is fixed and determinable; (c) collectibility is reasonably assured; and (d) the acquisition system or other seismic equipment is delivered to the customer and risk of ownership has passed to the customer, or, in the limited case where a substantive customer-specified acceptance clause exists in the contract, the later of delivery or when the customer-specified acceptance is obtained.

Revenues from all imaging and other services are recognized when persuasive evidence of an arrangement exists, the price is fixed or determinable, and collectibility is reasonably assured. Revenues from contract services performed on a day-rate basis are recognized as the service is performed.

Revenues from multi-client surveys are recognized as the seismic data is acquired and/or processed on a proportionate basis as work is performed. Under this method, the Company recognizes revenues based upon quantifiable measures of progress, such as kilometers acquired or days processed. Upon completion of a multi-client seismic survey, the survey data is considered “off-the-shelf” and licenses to the survey data are sold to customers on a non-exclusive basis. The license of a completed multi-client survey is represented by the license of one standard set of data. Revenues on licenses of completed multi-client data surveys are recognized when a signed final master geophysical data license agreement and accompanying supplemental license agreement are returned by the customer, the purchase price for the license is fixed or determinable, delivery or performance has occurred, and no significant uncertainty exists as to the customer's obligation, willingness or ability to pay. In limited situations, the Company has provided the customer with a right to exchange seismic

## ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### (1) Summary of Significant Accounting Policies – (continued)

data for another specific seismic data set. In these limited situations, the Company recognizes revenue at the earlier of the customer exercising its exchange right or the expiration of the customer's exchange right.

When separate elements (such as an acquisition system, other seismic equipment and/or imaging services) are contained in a single sales arrangement, or in related arrangements with the same customer, the Company follows the requirements of Emerging Issues Task Force (EITF) 00-21 "*Accounting for Multiple-Element Revenue Arrangement*," and allocates revenue to each element based upon its vendor-specific objective evidence of fair value, so long as each such element meets the criteria for treatment as a separate unit of accounting. The Company limits the amount of revenue recognized for delivered elements to the amount that is not contingent on the future delivery of products or services. The Company generally does not grant return or refund privileges to its customers. When undelivered elements, such as training courses and engineering services, are inconsequential or perfunctory and not essential to the functionality of the delivered elements, the Company recognizes revenue on the total contract and makes a provision for the costs of the incomplete elements.

For the sales of navigation, survey and quality control software systems, the Company follows the requirements of Statement of Position (SOP) 97-2 "*Software Revenue Recognition*," because in those systems the software is more than incidental to the arrangement as a whole. Following the requirements of EITF 03-05 "*Applicability of AICPA Statement of Position 97-2 to Non-Software Deliverables in an Arrangement Containing More-Than-Incidental Software*," the Company considers the hardware within these systems to be a software-related item because the software is essential to the hardware's functionality. As a result, the Company recognizes revenue from sales of navigation, survey and quality control software systems when (a) evidence of an arrangement exists; (b) the price to the customer is fixed and determinable; (c) collectibility is reasonably assured; and (d) the software and software-related hardware is delivered to the customer and risk of ownership has passed to the customer, or, in the limited case where a substantive customer-specified acceptance clause exists in the contract, the later of delivery or when the customer-specified acceptance is obtained. These arrangements generally include the Company providing related services, such as training courses, engineering services and annual software maintenance. The Company allocates revenue to each element of the arrangement based upon vendor-specific objective evidence of fair value of the element or, if vendor-specific objective evidence is not available for the delivered element, the Company applies the residual method.

Even though a majority of the Company's software arrangements are licensed on a perpetual basis, the Company does offer certain time-based software licenses. For these time-based licenses, the Company recognizes revenue ratably over the contract term, which is generally two to three years.

The Company generally warrants that its manufactured equipment will be free from defects in workmanship, materials and parts. Warranty periods generally range from 30 days to three years from the date of original purchase, depending on the product. The Company provides for estimated warranty as a charge to costs of sales at the time of sale.

*Research and Development.* Research and development costs primarily relate to activities that are designed to improve the quality of the subsurface image and overall acquisition economics of the Company's customers. The costs associated with these activities are expensed as incurred. These costs include prototype material and field testing expenses, along with the related salaries and stock-based compensation, facility costs, consulting fees, tools and equipment usage, and other miscellaneous expenses associated with these activities.

*Income Taxes.* Income taxes are accounted for under the liability method. Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, and operating loss and tax credit carry-forwards. Deferred income tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be

## ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### (1) Summary of Significant Accounting Policies – (continued)

recovered or settled. The Company reserves for substantially all net deferred tax assets and will continue to reserve for substantially all net deferred tax assets until there is sufficient evidence to warrant reversal (see Note 14 of *Notes to Consolidated Financial Statements*). The Company's net non-current deferred tax liability relates primarily to the difference in the carrying amount and the tax bases of the acquired intangible assets of Concept Systems. The effect on deferred income tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

*Comprehensive Net Income.* Comprehensive net income, consisting of net income and foreign currency translation adjustments, is presented in the Consolidated Statements of Stockholders' Equity and Comprehensive Income. The balance in Accumulated Other Comprehensive Income consists of foreign currency translation adjustments. In 2007, the Company recorded in Accumulated Other Comprehensive Income the tax impact of currency translation adjustments of \$1.5 million.

*Net Income per Common Share.* Basic net income per common share is computed by dividing net income applicable to common shares by the weighted average number of common shares outstanding during the period. Diluted net income per common share is determined based on the assumption that dilutive restricted stock and restricted stock unit awards have vested and outstanding dilutive stock options have been exercised and the aggregate proceeds were used to reacquire common stock using the average price of such common stock for the period. The total number of shares issuable under anti-dilutive options at December 31, 2007, 2006 and 2005 were 1,550,800, 3,734,050 and 3,242,050, respectively.

For the years ended December 31, 2006 and 2005, the Company had outstanding \$60.0 million of convertible senior notes, for which 13,888,890 common shares could have been acquired upon their full conversion. During November 2007, \$52.8 million of the senior notes were converted into 12,212,964 common shares. As a result of this conversion, \$7.2 million of the senior notes remain outstanding at December 31, 2007, for which 1,675,926 common shares may be acquired upon their conversion. The convertible notes were dilutive for the year ended December 31, 2007 and 2006. For the year ended December 31, 2005, the convertible notes were anti-dilutive and were excluded from the diluted net income per common share for that period.

In February 2005, the Company issued the Series D-1 Preferred Stock, which may be converted, at the holder's election, into 3,812,428 total common shares. In December 2007, the holders of the Series D-1 Preferred Stock exercised their rights to purchase additional shares (Series D-2 Preferred Stock), which may be converted into 311,664 total common shares. The Series D-1 Preferred Stock and Series D-2 Preferred Stock were anti-dilutive for all periods outstanding and have been excluded from the diluted net income per common share for the years ended December 31, 2007, 2006 and 2005.

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(1) Summary of Significant Accounting Policies – (continued)**

The following table summarizes the calculation of the weighted average number of common shares and weighted average number of diluted common shares outstanding for purposes of the computation of basic net income per common share and diluted net income per common share:

	Years Ended December 31,		
	2007	2006	2005
	(In Thousands, Except Per Share Amounts)		
Net income applicable to common shares . . . . .	\$40,256	\$26,912	\$17,144
Income impact of assumed convertible debt conversion . . . . .	<u>3,694</u>	<u>4,027</u>	<u>—</u>
Net income after impact of assumed convertible debt conversion . . . . .	<u>\$43,950</u>	<u>\$30,939</u>	<u>\$17,144</u>
Weighted average number of common shares outstanding . . . . .	81,941	79,497	78,600
Effect of dilutive stock awards . . . . .	2,629	1,796	1,242
Effect of assumed convertible debt conversion . . . . .	<u>12,751</u>	<u>13,889</u>	<u>—</u>
Weighted average number of diluted common shares outstanding . . . . .	<u>97,321</u>	<u>95,182</u>	<u>79,842</u>
Net income per basic share before change in accounting principle . . . . .	\$ 0.49	\$ 0.33	\$ 0.22
Cumulative effect of change in accounting principle . . . . .	<u>—</u>	<u>0.01</u>	<u>—</u>
Net income per basic share . . . . .	<u>\$ 0.49</u>	<u>\$ 0.34</u>	<u>\$ 0.22</u>
Net income per diluted share before change in accounting principle . . . . .	\$ 0.45	\$ 0.32	\$ 0.21
Cumulative effect of change in accounting principle . . . . .	<u>—</u>	<u>0.01</u>	<u>—</u>
Net income per diluted share . . . . .	<u>\$ 0.45</u>	<u>\$ 0.33</u>	<u>\$ 0.21</u>

*Foreign Currency Gains and Losses.* Assets and liabilities of the Company's subsidiaries operating outside the United States which account in a functional currency other than U.S. dollars have been translated to U.S. dollars using the exchange rate in effect at the balance sheet date. Results of foreign operations have been translated using the average exchange rate during the periods of operation. Resulting translation adjustments have been recorded as a component of Accumulated Other Comprehensive Income (Loss) in the Consolidated Statements of Stockholders' Equity and Comprehensive Income. Foreign currency transaction gains and losses are included in the Consolidated Statements of Operations as they occur. Total foreign currency transaction losses were \$(1.8) million, \$(2.3) million and \$(0.2) million for the years ended December 31, 2007, 2006 and 2005, respectively.

*Concentration of Credit and Foreign Sales Risks.* No single customer represented 10% or more of the Company's consolidated net revenues for the years ended December 31 2007, 2006 and 2005; however, the Company's top five customers in total represented approximately 31%, 29% and 26%, respectively, of the Company's consolidated net revenues. The loss of any significant customers or a deterioration in the Company's relationship with these customers could have a material adverse effect on the Company's results of operations and financial condition.

For the twelve months ended December 31, 2007, the Company recognized \$179.1 million of sales to customers in Europe, \$131.7 million of sales to customers in Asia Pacific, \$37.1 million of sales to customers

## ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### (1) Summary of Significant Accounting Policies – (continued)

in Africa, \$29.3 million of sales to customers in the Middle East, \$16.0 million of sales to customers in Latin American countries, and \$52.2 million of sales to customers in the Commonwealth of Independent States, or former Soviet Union (CIS). The majority of the Company's foreign sales are denominated in U.S. dollars. For the years ended December 31, 2007, 2006 and 2005, international sales comprised 62%, 68% and 69%, respectively, of total net revenues. In recent years, the CIS and certain Latin American countries have experienced economic problems and uncertainties. To the extent that world events or economic conditions negatively affect the Company's future sales to customers in these and other regions of the world or the collectibility of the Company's existing receivables, the Company's future results of operations, liquidity, and financial condition may be adversely affected.

*Stock-Based Compensation.* On January 1, 2006, the Company adopted SFAS 123 (revised 2004), "Share-Based Payment" (SFAS 123R), that addresses the accounting for share-based payment transactions in which an enterprise receives employee services in exchange for either equity instruments of the enterprise or liabilities that are based on the fair value of the enterprise's equity instruments or that may be settled by the issuance of such equity instruments. This statement requires that such transactions be accounted for using a fair-value-based method and recognized as expense in the Company's consolidated statement of operations. Prior to the adoptions of SFAS 123R, the Company used the intrinsic value method as prescribed by Accounting Principles Board (APB) Opinion No. 25, "Accounting for Stock Issued to Employees."

The Company adopted SFAS 123R using the modified prospective method which required the application of the accounting standard as of January 1, 2006. In accordance with the modified prospective method, the consolidated financial statements for 2005 were not restated to reflect and do not include, the impact of SFAS 123R. See Note 12 "Stockholders' Equity and Stock-Based Compensation" for further details.

Stock-based compensation expense recognized during the periods of 2007 and 2006 are based on the value of the portion of stock-based payment awards that is ultimately expected to vest. Stock-based compensation expense recognized in the consolidated statement of operations during the year ended December 31, 2007 and 2006 includes the compensation expense for stock-based payment awards granted prior to, but not yet vested, as of December 31, 2005 based upon the grant date fair value estimated in accordance with the pro forma provisions of SFAS 148, "Accounting for Stock-Based Compensation — Transition and Disclosure — an amendment of FASB Statement No. 123 (issued 12/02)" (SFAS 148), and compensation expense for the stock-based payment awards granted subsequent to December 31, 2005, based on the grant date fair value estimated in accordance with SFAS 123R. As stock-based compensation expense recognized in the consolidated statement of operations for the year ended December 31, 2007 and 2006 is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures.

SFAS 123R requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. When estimating forfeitures, the Company considers voluntary termination experience as well as trends of actual forfeitures. In the pro forma information required under SFAS 148 for the period prior to 2006, the Company accounted for forfeitures as they occurred. Also, prior to adoption to SFAS 123R, the Company accounted for forfeitures of its restricted stock and restricted stock units as the forfeitures occurred. The Company estimated forfeitures on its unvested restricted stock and restricted stock units outstanding as of January 1, 2006, and recorded a \$0.4 million cumulative effect of a change in accounting principle that reflected the compensation cost that would not have been recognized in prior periods had forfeitures been estimated during these periods.

Effective January 1, 2006, the Company began recognizing stock-based compensation on the straight-line basis over the service period of each award (generally the award's vesting period). The Company had recognized compensation expense in its pro forma disclosures under SFAS 123 on the straight-line basis related to its stock options. Prior to the adoption of SFAS 123R, the Company recognized compensation expense related

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(1) Summary of Significant Accounting Policies – (continued)**

to its restricted stock and restricted stock unit awards using the accelerated method of amortization and has continued to apply the accelerated method to all outstanding restricted stock and restricted stock unit awards granted prior to January 1, 2006.

*Recent Accounting Pronouncements.* In September 2006, the Financial Accounting Standards Board (FASB) issued SFAS No. 157, “*Fair Value Measurements*” (SFAS 157), which defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. SFAS No. 157 will be effective for the Company beginning January 1, 2008. The Company does not currently expect the adoption of SFAS No. 157 to have a material impact on the consolidated financial statements. However, the Company is continuing to assess the potential effects of SFAS No. 157 as additional guidance becomes available.

In February 2007, the FASB issued SFAS No. 159, “*The Fair Value Option for Financial Assets and Financial Liabilities*” (SFAS 159). SFAS 159 allows companies the option to report certain financial assets and liabilities at fair value, establishes presentation and disclosure requirements and requires additional disclosure surrounding the valuation of the financial assets and liabilities presented at fair value on the balance sheet. The provisions of SFAS 159 are effective for fiscal years beginning after November 15, 2007. The Company does not currently expect the adoption of SFAS No. 159 on January 1, 2008 to have a material impact on the consolidated financial statements. However, the Company is continuing to assess the potential effects of SFAS No. 159 as additional guidance becomes available.

Effective July 1, 2007, the Company adopted the EITF Topic D-109, “*Determining the Nature of a Host Contract Related to a Hybrid Financial Instrument Issued in the Form of a Share under FASB Statement No.133*” (Topic D-109). This Topic D-109 conveys the SEC staff’s views on determining whether the characteristics of a host contract in a hybrid financial instrument issued in the form of a share is more like debt or equity. The SEC staff believes that in evaluating an embedded derivative feature for separation under SFAS 133, the consideration of the economic characteristics and risks of the host contract should not ignore the stated or implied substantive terms and features of the hybrid financial instrument. The adoption of Topic D-109 did not have a material impact on the Company’s financial position, results of operations, or cash flows.

**(2) Accounts and Notes Receivable**

A summary of accounts receivable is as follows:

	<b>December 31, 2007</b>	<b>December 31, 2006</b>
	(In Thousands)	
Accounts receivable, principally trade . . . . .	\$190,704	\$170,548
Less allowance for doubtful accounts . . . . .	<u>(2,675)</u>	<u>(2,801)</u>
Accounts receivable, net . . . . .	<u>\$188,029</u>	<u>\$167,747</u>

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

	<b>December 31, 2007</b>	<b>December 31, 2006</b>
	(In Thousands)	
Notes receivable and accrued interest . . . . .	\$ 8,805	\$15,797
Less allowance for doubtful notes . . . . .	<u>(3,351)</u>	<u>(4,530)</u>
Notes receivable, net . . . . .	5,454	11,267
Less current portion notes receivable, net . . . . .	<u>5,454</u>	<u>6,299</u>
Long-term notes receivable . . . . .	<u>\$ —</u>	<u>\$ 4,968</u>

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(2) Accounts and Notes Receivable – (continued)**

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

	Years Ended December 31,		
	2007	2006	2005
	(In Thousands)		
Balance at beginning of period . . . . .	\$ 4,530	\$4,530	\$ 5,893
Recoveries reducing bad debt expense . . . . .	—	—	(50)
Write-offs charged against the allowance . . . . .	(1,179)	—	(1,313)
Balance at end of period . . . . .	\$ 3,351	\$4,530	\$ 4,530

**(3) Inventories**

A summary of inventories is as follows:

	December 31, 2007	December 31, 2006
		(In Thousands)
Raw materials and subassemblies . . . . .	\$ 70,870	\$ 52,628
Work-in-process . . . . .	13,681	13,324
Finished goods . . . . .	55,945	59,448
Reserve for excess and obsolete inventories . . . . .	(11,535)	(9,880)
Total . . . . .	\$128,961	\$115,520

The Company provides for estimated obsolescence or excess inventory equal to the difference between the cost of inventory and its estimated market value based upon assumptions about future demand for the Company's products and market conditions. For the years ended December 31, 2007, 2006 and 2005, the Company recorded inventory obsolescence and excess inventory charges of approximately \$5.3 million, \$1.5 million, and \$1.0 million, respectively.

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

Supplemental disclosure of cash flow information is as follows:

	Years Ended December 31,		
	2007	2006	2005
	(In Thousands)		
Net cash paid during the period for:			
Interest . . . . .	\$3,370	\$2,047	\$5,510
Income taxes . . . . .	7,470	5,314	1,814

In November 2007, approximately \$52.8 million of the Company's \$60.0 million 5.5% convertible senior notes was converted. This resulted in a non-cash reclassification from long-term debt to stockholders' equity as the Company issued approximately 12.2 million shares. See further discussion of the effects and details of this transaction on the Company at Note 10 of *Notes to Consolidated Financial Statements*.

In 2007 and 2006, the Company purchased \$6.0 million and \$9.8 million, respectively, of computer equipment, which were financed through capital leases. Also, in 2005, the Company transferred \$3.6 million of inventory at cost, to property, plant, and equipment.

In June 2005, the owner of the Company's facilities located in Stafford, Texas, sold the facilities to two unrelated parties. See further discussion of the effects and details of this transaction on the Company at Note 10 of *Notes to Consolidated Financial Statements*.

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(5) Property, Plant and Equipment**

A summary of property, plant and equipment is as follows:

	<b>December 31, 2007</b>	<b>December 31, 2006</b>
(In Thousands)		
Land . . . . .	\$ 25	\$ 34
Buildings . . . . .	13,620	11,134
Machinery and equipment. . . . .	90,223	78,808
Leased equipment . . . . .	2,490	6,912
Other. . . . .	5,876	4,737
Total . . . . .	112,234	101,625
Less accumulated depreciation. . . . .	(75,283)	(63,496)
Property, plant and equipment, net . . . . .	<u>\$ 36,951</u>	<u>\$ 38,129</u>

Total depreciation expense for the years ended December 31, 2007, 2006 and 2005 was \$16.4 million, \$13.4 million and \$15.2 million, respectively. At December 31, 2007, a building of \$6.7 million at cost, less accumulated depreciation of \$4.1 million, pursuant to a ten-year non-cancelable lease agreement (see Note 10 of *Notes to Consolidated Financial Statements*), is continuing to be depreciated over its useful life.

**(6) Investments**

*Equity Method Investment.* In June 2007, the Company entered into a joint participation agreement with Hydro Technology Ventures (“HTV”) and Reservoir Innovation AS (“Reservoir”). HTV is the venture capital arm of Hydro Oil & Energy, a subsidiary of Norsk Hydro ASA, an energy and mining company. Reservoir is a privately held company based in Bergen, Norway, and develops and commercializes breakthrough technologies for the exploration, development, and production of offshore hydrocarbon reservoirs. Each party to the joint venture has equal operational control. Under the terms of the agreement, the Company contributed (licensed) certain of its technology to the joint venture and agreed to sell certain products and to provide temporary employee support, on a reimbursement basis, to the joint venture. The joint venture commenced operations in 2007 and the Company has accounted for its investment in the joint venture under APB No. 18, “*The Equity Method of Accounting for Investments in Common Stock.*”

The Company’s investment in the joint venture is comprised of \$0 book basis at December 31, 2007. Any difference between the amount of the Company’s investment and the amount of the underlying equity in net assets of the joint venture will be amortized over the expected life of the contributed assets. The Company’s investment in the joint venture is not material to its condensed consolidated financial statements, and therefore summarized financial information for the joint venture is not presented.

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

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(6) Investments – (continued)**

To protect the Company's intellectual property rights, the Company retained ownership of its MEMS intellectual property, and has licensed that intellectual property to Colibrys on a royalty-free basis. Additionally, the Company received preferential rights to Colibrys' MEMS technology for seismic applications involving natural resource extraction. The Company also entered into a five-year supply agreement with Colibrys and Applied MEMS, which provides for them to supply the Company with MEMS accelerometers on an exclusive basis in the Company's markets at agreed prices that are consistent with market prices. The five-year minimum commitment ranges between \$7.0 million to \$8.0 million per year through 2009.

**(7) Goodwill**

The following is a summary of the changes in the carrying amount of goodwill for the years ended December 31, 2007 and 2006:

	<u>Land Imaging Systems</u>	<u>Marine Imaging Systems</u>	<u>Data Management Solutions</u>	<u>ION Solutions Division</u>	<u>Total</u>
Balance at January 1, 2006 . . . . .	\$3,478	\$26,984	\$30,679	\$93,653	\$154,794
Impact of foreign currency translation adjustments . . . . .	—	—	1,297	—	1,297
Balance at December 31, 2006 . . . . .	<u>3,478</u>	<u>26,984</u>	<u>31,976</u>	<u>93,653</u>	<u>156,091</u>
Impact of acquisition net operating losses . . .	—	—	(345)	(3,248)	(3,593)
Impact of foreign currency translation adjustments . . . . .	—	—	647	—	647
Balance at December 31, 2007 . . . . .	<u>\$3,478</u>	<u>\$26,984</u>	<u>\$32,278</u>	<u>\$90,405</u>	<u>\$153,145</u>

During fiscal year 2007, the Company made adjustments to goodwill related to the tax affected portion of the net operating losses (NOLs) utilized with respect to the GXT and Concept Systems acquisitions. These adjustments resulted in reductions of approximately \$3.6 million to the Company's goodwill balances.

**(8) Intangible Assets**

A summary of intangible assets, net, is as follows:

	<u>As of December 31, 2007</u>			<u>As of December 31, 2006</u>		
	<u>Gross Amount</u>	<u>Accumulated Amortization</u>	<u>Net</u>	<u>Gross Amount</u>	<u>Accumulated Amortization</u>	<u>Net</u>
	(In Thousands)					
Proprietary technology . . . . .	\$14,242	\$ (7,770)	\$ 6,472	\$14,242	\$ (5,899)	\$ 8,343
Patents . . . . .	3,689	(2,505)	1,184	3,689	(2,276)	1,413
Intellectual property rights . . . . .	3,050	(1,677)	1,373	3,050	(375)	2,675
Customer relationships . . . . .	42,203	(11,516)	30,687	42,053	(7,469)	34,584
Trade names . . . . .	<u>4,171</u>	<u>(2,980)</u>	<u>1,191</u>	<u>4,161</u>	<u>(2,140)</u>	<u>2,021</u>
Total . . . . .	<u>\$67,355</u>	<u>\$(26,448)</u>	<u>\$40,907</u>	<u>\$67,195</u>	<u>\$(18,159)</u>	<u>\$49,036</u>

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(8) Intangible Assets – (continued)**

Total amortization expense for intangible assets for the years ended December 31, 2007, 2006 and 2005 was \$8.3 million, \$6.7 million, and \$6.4 million, respectively. A summary of the estimated amortization expense for the next five years is as follows:

<u>Years Ended December 31,</u>	
	(In Thousands)
2008 . . . . .	\$8,114
2009 . . . . .	\$6,701
2010 . . . . .	\$5,866
2011 . . . . .	\$4,639
2012 . . . . .	\$3,255

**(9) Accrued Expenses**

A summary of accrued expenses is as follows:

	<u>December 31,</u> <u>2007</u>	<u>December 31,</u> <u>2006</u>
	(In Thousands)	
Compensation, including compensation-related taxes and commissions . . . . .	\$27,142	\$24,084
Product warranty . . . . .	13,439	6,255
Accrued taxes (primarily income taxes) . . . . .	9,430	5,798
Accrued multi-client data library acquisition costs . . . . .	8,582	5,378
Other . . . . .	<u>8,318</u>	<u>9,304</u>
Total accrued expenses . . . . .	<u>\$66,911</u>	<u>\$50,819</u>

The Company generally warrants that all manufactured equipment will be free from defects in workmanship, materials, and parts. Warranty periods generally range from 30 days to three years from the date of original purchase, depending on the product. The Company provides for estimated warranty as a charge to cost of sales at time of sale, which is when estimated future expenditures associated with such contingencies become probable and reasonably estimated. However, new information may become available, or circumstances (such as applicable laws and regulations) may change, thereby resulting in an increase or decrease in the amount required to be accrued for such matters (and therefore a decrease or increase in reported net income in the period of such change). A summary of warranty activity is as follows:

	<u>Years Ended December 31,</u>		
	<u>2007</u>	<u>2006</u>	<u>2005</u>
	(In Thousands)		
Balance at beginning of period . . . . .	\$ 6,255	\$ 3,896	\$ 3,832
Accruals for warranties issued during the period . . . . .	13,074	6,784	5,317
Settlements made (in cash or in kind) during the period . . . . .	<u>(5,890)</u>	<u>(4,425)</u>	<u>(5,253)</u>
Balance at end of period . . . . .	<u>\$13,439</u>	<u>\$ 6,255</u>	<u>\$ 3,896</u>

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

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

A summary of the Company's notes payable, long term debt, and lease obligations as of December 31, 2007 and 2006, are as follows:

Obligations	December 31, 2007	December 31, 2006
	(In Thousands)	
Revolving line of credit . . . . .	\$ —	\$ —
Convertible senior notes . . . . .	7,240	60,000
Facility lease obligation . . . . .	4,975	5,276
Equipment capital leases and other notes payable . . . . .	<u>12,498</u>	<u>12,264</u>
Total . . . . .	<u>\$24,713</u>	<u>\$77,540</u>

*Revolving Line of Credit.* In March 2007, the Company obtained a \$75.0 million revolving line of credit (the "Facility") with a scheduled maturity in March 2011. The Facility replaced the Company's \$25.0 million revolving line of credit facility that was scheduled to mature in May 2008. There were no outstanding borrowings under the Facility at December 31, 2007. The Facility is available for revolving credit borrowings to be used for the Company's working capital needs and general corporate purposes, subject to a borrowing base. In addition, the Facility includes a \$25.0 million sub-limit for the issuance of documentary and standby letters of credit of which \$1.0 million was outstanding at December 31, 2007. The Facility includes an accordion feature under which the total commitments under the Facility may be increased to \$100.0 million, subject to the satisfaction of certain conditions.

The Facility borrowing base is calculated based on the sum of (i) 85% of eligible accounts receivable, eligible foreign accounts receivable and insured foreign accounts receivable, plus (ii) the lesser of (x) thirty percent (30%) of eligible inventory or (y) \$20.0 million. For purposes of this calculation, eligible foreign accounts receivable cannot exceed \$23.5 million. As of December 31, 2007, the borrowing base calculation permitted total borrowings of \$75.0 million, of which \$74.0 million remained available.

The interest rate on borrowings under the Facility will be, at the Company's option, (i) an "alternate base rate" (as defined in the Facility credit agreement) or (ii) for Eurodollar borrowings, a LIBOR rate plus an applicable margin. The amount of the applicable margin will be based on the Company's then-current leverage ratio as defined in the credit agreement. The applicable margin will be increased by 0.50% with respect to any borrowings that are applied to repay the convertible senior notes.

The Company is obligated to pay a commitment fee of 0.25% per annum on the unused portion of the Facility. A significant portion of the Company's assets are pledged as collateral for outstanding borrowings under the Facility. The Facility credit agreement restricts the Company's ability to pay common stock dividends, incur additional debt, sell significant assets, acquire other businesses, merge with other entities and take certain other actions without the consent of the lenders.

The credit agreement requires compliance with certain financial and non-financial covenants. These covenants include requirements related to (i) maintaining a minimum fixed charge coverage ratio of 1.25 to 1.0, and (ii) not exceeding a maximum leverage ratio of 2.75 to 1.0 (provided that, upon the Company's repaying the outstanding indebtedness under the convertible senior notes, the maximum leverage ratio shall fall to 2.50 to 1.0 for 12 months and then 2.0 to 1.0 thereafter).

On February 26, 2008, the Facility was amended, modifying the indebtedness covenant to permit certain intercompany indebtedness of up to \$150.0 million during 2008, and \$135.0 million thereafter owing to the Company and its domestic subsidiaries by certain of the Company's foreign subsidiaries and provided for certain additional financial covenants with respect to the Company's domestic operations and subsidiaries. Specifically, these additional financial covenants obligate the Company to (x) not exceed a minimum domestic fixed charge coverage ratio of 1.5 to 1.0; (y) not exceed a maximum domestic leverage ratio of 1.5 to 1.0; and

## ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### (10) Notes Payable, Long-term Debt and Lease Obligations – (continued)

(z) not permit the ratio of the book value of total receivables, cash, permitted investments, inventory and equipment of the Company and its domestic subsidiaries, to the total commitments of the lenders under the Facility, to be less than 1.75 to 1.0. In addition, the Facility contains certain curative provisions with respect to any technical defaults that may have resulted under the Facility related to the intercompany indebtedness permitted above or the Company's 2007 internal international restructuring. See further discussion of the Company's internal international restructuring at Note 14 of *Notes to Consolidated Financial Statements*. As of February 26, 2008, the Company is in compliance with all of the covenants under the credit agreement.

*Convertible Senior Notes.* In December 2003, the Company issued \$60.0 million of convertible senior notes, which mature on December 15, 2008. The notes bear interest at an annual rate of 5.5%, payable semi-annually. The notes, which are not redeemable prior to their maturity, are convertible into the Company's common stock at an initial conversion rate of 231.4815 shares per \$1,000 principal amount of notes (a conversion price of \$4.32 per share). The Company paid \$3.5 million in underwriting and professional fees, which were recorded as deferred financing costs and are being amortized over the term of the notes.

In November 2007, a holder of \$52.8 million of the \$60.0 million convertible senior notes approached the Company and made an offer to convert its portion of the debt into common stock. The conversion occurred on November 27, 2007 during which the Company issued to the holder 12,212,964 shares upon conversion, in accordance with the terms of the notes. In accordance with SFAS 84, "*Induced Conversions of Convertible Debt*," the Company recorded a one-time charge of \$2.9 million, which represented the net present value of the remaining interest payments until the note's maturity in December 2008. The accrued interest of \$1.3 million earned through the date of conversion was also paid to the holder per the agreement and was reflected within interest expense. As part of the transaction, the notes were converted and the applicable portion of the unamortized debt issuance costs of \$0.6 million was reclassified to equity. The remaining \$7.2 million balance of the convertible senior notes remains unconverted as of December 31, 2007.

*Facility Lease Obligation.* In 2001, the Company sold its facilities, located in Stafford, Texas, for \$21.0 million. Simultaneously with the sale, the Company entered into a non-cancelable twelve-year lease with the purchaser of the property. Because the Company retained a continuing involvement in the property that precluded sale-leaseback treatment for financial accounting purposes, the sale-leaseback transaction was accounted for as a financing transaction.

In June 2005, the owner sold the facilities to two parties, which were unrelated to each other as well as unrelated to the seller. In conjunction with the sale of the facilities, the Company entered into two separate lease arrangements for each of the facilities with the new owners. One lease, which was classified as an operating lease, has a twelve-year lease term. The second lease continues to be accounted for as a financing transaction due to the Company's continuing involvement in the property as a lessee, and has a ten-year lease term. The Company recorded the commitment under the second lease as a \$5.5 million lease obligation at an implicit rate of 11.7% per annum, of which \$5.0 million was outstanding at December 31, 2007. Both leases have renewal options allowing the Company to extend the leases for up to an additional twenty-year term, which the Company does not expect to renew.

*Equipment Capital Leases.* The Company has entered into a series of equipment loans that are due in installments for the purpose of financing the purchase of computer equipment, in the form of capital leases expiring in various years through 2010. Interest charged under these loans range from 5.9% to 9.0% and the leases are collateralized by liens on the computer equipment. The assets and liabilities under these capital leases are recorded at the lower of the present value of the minimum lease payments or the fair value of the assets. The assets are amortized over the lesser of their related lease terms or their estimated productive lives and such charges are reflected within depreciation expense.

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(10) Notes Payable, Long-term Debt and Lease Obligations – (continued)**

A summary of future principal obligations under the notes payable, long-term debt and equipment capital lease obligations are as follows:

Years Ended December 31,	Notes Payable and Long-Term Debt	Capital Lease Obligations
	(In Thousands)	
2008 . . . . .	\$ 7,622	\$ 7,897
2009 . . . . .	455	4,535
2010 . . . . .	521	836
2011 . . . . .	610	—
2012 . . . . .	714	—
2013 and thereafter . . . . .	2,332	—
Total . . . . .	<u>\$12,254</u>	<u>13,268</u>
Imputed interest . . . . .		(809)
Net present value of equipment capital lease obligations . . . . .		12,459
Current portion of equipment capital lease obligations. . . . .		<u>7,249</u>
Long-term portion of equipment capital lease obligations. . . . .		<u>\$ 5,210</u>

**(11) Cumulative Convertible Preferred Stock**

In February 2005, the Company issued 30,000 shares of Series D-1 Cumulative Convertible Preferred Stock (Series D-1 Preferred Stock) in a privately-negotiated transaction, at a purchase price of \$1,000 per share, for an aggregate of \$29.8 million in net proceeds. Dividends, which are contractually obligated to be paid quarterly, may be paid, at the option of the Company, either in cash or by the issuance of the Company's common stock. Dividends are paid at a rate equal to the greater of (i) five percent per annum or (ii) the three month LIBOR rate on the last day of the immediately preceding calendar quarter plus two and one-half percent per annum. The dividend rate for the Series D-1 Preferred Stock was 7.73% at December 31, 2007.

The Series D-1 Preferred Stock may be converted, at the holder's election, into 3,812,428 shares of the Company's common stock, subject to adjustment, at an initial conversion price of \$7.869 per share, also subject to adjustment in certain events. The holder has the right to redeem, at any time, all or part of the Series D-1 Preferred Stock. The Company may satisfy its redemption obligations either in cash or by the issuance of the Company's common stock, adjusted based upon changes in the Company's 40-day average prevailing market price, but not less than \$4.45 per share (the Minimum Price), of the Company's common stock at the time of redemption. However, if the 20-day average price of the Company's common stock is less than the Minimum Price during that time, the Company may satisfy its redemption obligation by resetting the conversion price to the Minimum Price, and thereafter, all dividends must be paid in cash. In the event the Company cannot deliver registered shares upon a redemption and to the extent the Company does not deliver cash, the dividend rate will increase to 15%. Also, if the Company falls out of registration, the Company will pay an additional dividend equal to 1/15% multiplied by the number of days (equates to 2% per month) an effective registration is not available.

Under our agreement with the Series D-1 Preferred Stock purchaser, we also granted to the purchaser an option to purchase up to an additional 40,000 shares of Series D Preferred Stock, having a conversion price equal to 122% of an average daily volume-weighted market price of our common stock over a trailing period of days, as of the time of issuance.

In December 2007, the holder exercised this option and purchased 5,000 shares of Series D-2 Cumulative Convertible Preferred Stock (Series D-2 Preferred Stock) for \$5.0 million. The Series D-2 Preferred Stock is

## ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### **(11) Cumulative Convertible Preferred Stock – (continued)**

initially convertible into 311,664 shares of the Company's common stock at an initial conversion price of \$16.0429 per share, also subject to adjustments in certain events. On December 5, 2007, the closing sales price per share of ION common stock on the New York Stock Exchange was \$15.37.

In addition, on February 21, 2008, the holder exercised the option and purchased the remaining 35,000 shares of Series D-3 Cumulative Convertible Preferred Stock (Series D-3 Preferred Stock) for \$35.0 million. The Series D-3 Preferred Stock is initially convertible into 2,365,168 shares of the Company's common stock at an initial conversion price of \$14.7981 per share, also subject to adjustments in certain events. The shares of Series D-2 and Series D-3 Preferred Stock have substantially identical terms to the Series D-1 Preferred Stock, except that the Series D-2 Preferred Stock has a conversion price per share of \$16.0429, and the Series D-3 Preferred Stock has a conversion price per share of \$14.7981. The conversion prices in each instance were based on the 122% times average daily volume-weighted market price formula contained in our agreement with the holder.

The proceeds received from the sale of the Series D-1 Preferred Stock, net of transaction costs, and the Series D-2 Preferred Stock have been classified outside of stockholders' equity on the balance sheet below total liabilities. The transaction costs of the Series D-1 Preferred Stock were deferred and accreted through the statement of operations through February 2007. Prior to conversion, common shares issuable will be assessed for inclusion in the weighted average shares outstanding for the Company's diluted earnings per share using the if-converted method.

#### **(12) Stockholders' Equity and Stock-Based Compensation**

##### ***Stockholders Rights Plan***

In January 1997, the Company's Board of Directors adopted a stockholders' rights plan. The stockholders' rights plan was adopted to give the Company's Board increased power to negotiate in the Company's best interests and to discourage appropriation of control of the Company at a price that was unfair to its stockholders. The stockholders' rights plan involved the distribution of one preferred share purchase "right" as a dividend on each outstanding share of the Company's common stock to all holders of record on January 27, 1997. Each right will entitle the holder to purchase one one-thousandth of a share of the Company's Series A Preferred Stock at a purchase price of \$200 per one one-thousandth of a share of Series A Preferred Stock, subject to adjustment. The rights traded in tandem with the Company's common stock until, and would become exercisable following, the occurrence of certain triggering events. The stockholders rights plan and the rights expired in accordance with the terms of the plan on January 29, 2007, and the Company currently has no stockholders' rights plan.

##### ***Stock Option Plans***

The Company has adopted stock option plans for eligible employees, directors, and consultants, which provide for the granting of options to purchase shares of common stock. As of December 31, 2007, there were 6,839,641 shares issued or committed for issuance under outstanding options under the Company's stock option plans, and 1,611,044 shares available for future grant and issuance, of which, 1,594,294 may also be issued as other stock-based awards such as restricted stock or restricted stock units.

On March 13, 2007, the Company's Board of Directors and on May 21, 2007, the stockholders of the Company approved, the amendment and restatement of such plan as previously in effect, principally to increase by 2,400,000, the total number of shares of common stock of the Company available for issuance under such plan.

The options under these plans generally vest in equal annual installments over a four-year period and have a term of ten years. These options are typically granted with an exercise price per share equal to or greater than the current market price and, upon exercise, are issued from the Company's unissued common shares. On August 16, 2006, the Compensation Committee of the Board of Directors of the Company approved fixed pre-established quarterly grant dates for all future grants of options.

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

The vesting schedule for option grants to directors is determined based upon the years of service. The maximum vesting period is equal annual installments over a three-year period beginning on the anniversary of the date of grant. The options have a term of ten years.

Transactions under the stock option plans are summarized as follows:

	<u>Option Price per Share</u>	<u>Outstanding</u>	<u>Vested</u>	<u>Available for Grant</u>
January 1, 2005 . . . . .	\$1.73 – \$30.00	7,313,600	3,637,611	307,583
Increase in shares authorized . . . . .	—	—	—	1,600,000
Granted . . . . .	5.94 – 8.32	1,155,500	—	(1,155,500)
Vested . . . . .	—	—	1,320,345	—
Exercised . . . . .	1.73 – 8.32	(599,648)	(599,648)	—
Canceled/forfeited . . . . .	3.30 – 21.75	(877,325)	(219,850)	325,499
Restricted stock and units granted out of option plans . . . . .	—	—	—	(603,000)
Issuance of inducement stock options . . . . .	6.49	55,000	—	—
December 31, 2005 . . . . .	1.73 – 30.00	<u>7,047,127</u>	<u>4,138,458</u>	<u>474,582</u>
Increase in shares authorized . . . . .	—	—	—	1,700,000
Granted . . . . .	7.84 – 10.89	1,333,500	—	(1,333,500)
Vested . . . . .	—	—	1,269,726	—
Exercised . . . . .	1.73 – 11.10	(778,921)	(778,921)	—
Cancelled/forfeited . . . . .	1.73 – 29.63	(777,058)	(293,676)	457,704
Restricted stock granted out of option plans . . . . .	—	—	—	(602,500)
December 31, 2006 . . . . .	1.73 – 30.00	<u>6,824,648</u>	<u>4,335,587</u>	<u>696,286</u>
Increase in shares authorized . . . . .	—	—	—	2,400,000
Granted . . . . .	13.52 – 16.03	1,381,200	—	(1,381,200)
Vested . . . . .	—	—	968,250	—
Exercised . . . . .	1.73 – 12.45	(1,036,794)	(1,036,794)	—
Cancelled/forfeited . . . . .	3.35 – 30.00	(329,413)	(66,601)	279,544
Restricted stock granted out of option plans . . . . .	—	—	—	(473,708)
Restricted stock cancelled for employee minimum income taxes and returned to the plans . . . . .	—	—	—	90,122
December 31, 2007 . . . . .	\$1.73 – \$24.63	<u><u>6,839,641</u></u>	<u><u>4,200,442</u></u>	<u><u>1,611,044</u></u>

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

Stock options outstanding at December 31, 2007 are summarized as follows:

<b>Option Price per Share</b>	<b>Outstanding</b>	<b>Weighted Average Exercise Price of Outstanding Options</b>	<b>Weighted Average Remaining Contract Life</b>	<b>Vested</b>	<b>Weighted Average Exercise Price of Vested Options</b>
\$1.73 – \$3.93 . . . . .	389,696	\$ 2.78	4.2	389,696	\$ 2.78
3.94 – 7.85 . . . . .	2,999,995	\$ 6.30	5.5	2,548,245	\$ 6.17
7.86 – 11.78 . . . . .	1,921,150	\$ 9.92	7.0	1,027,401	\$ 9.92
11.79 – 15.70 . . . . .	1,354,200	\$15.33	9.9	90,500	\$15.33
15.71 – 19.63 . . . . .	30,000	\$16.03	9.4	—	\$ —
19.64 – 23.55 . . . . .	135,600	\$21.75	0.2	135,600	\$21.75
23.56 – 24.63 . . . . .	9,000	\$24.63	0.3	9,000	\$24.63
Totals . . . . .	<u>6,839,641</u>	\$ 9.28	6.6	<u>4,200,442</u>	\$ 7.51

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

	<b>Number of Shares</b>	<b>Weighted Average Exercise Price</b>	<b>Weighted Average Grant Date Fair Value</b>	<b>Weighted Average Remaining Contractual Life in Years</b>	<b>Aggregate Intrinsic Value (000's)</b>
Total outstanding at January 1, 2007	6,824,648	\$ 7.72		6.6	
Options granted . . . . .	1,381,200	\$15.36	\$7.55		
Options exercised . . . . .	(1,036,794)	\$ 6.72			
Options cancelled . . . . .	(66,601)	\$18.05			
Options forfeited . . . . .	<u>(262,812)</u>	\$ 8.49			
Total outstanding at December 31, 2007 . . . . .	<u>6,839,641</u>	\$ 9.28		6.6	\$44,454
Options exercisable and vested at December 31, 2007 . . . . .	<u>4,200,442</u>	\$ 7.51		5.2	\$34,737

The total intrinsic value of options exercised during the twelve months ended December 31, 2007, 2006 and 2005 was \$13.5 million, \$6.5 million and \$2.3 million, respectively. Cash received from option exercises under all share-based payment arrangements for the twelve months ended December 31, 2007 was approximately \$8.0 million. The weighted average grant date fair value for stock options awards granted during the twelve months ended December 31, 2007, 2006 and 2005 was \$7.55, \$4.51, and \$4.00 per share, respectively.

***Restricted Stock and Restricted Stock Unit Plans***

The Company has adopted restricted stock plans which provide for the award of up to 300,000 shares of common stock to key officers and employees. In addition, the Company has issued restricted stock and restricted stock units under the Company's 2004 Long-Term Incentive Plan, 2000 Restricted Stock Plan, 1998 Restricted Stock Plan (which expires in 2008) and other applicable plans. The plans provides for the award of stock options, share appreciation rights, deferred shares, restricted stock and restricted stock units. Restricted stock units are awards that obligate the Company to issue a specific number of shares of common stock in the future if continued service vesting requirements are met. Non-forfeitable ownership of the common stock will vest over a period as determined by the Company in its sole discretion, generally in equal annual installments over a three-year period. Shares of restricted stock awarded may not be sold, assigned, transferred, pledged or otherwise encumbered by the grantee during the vesting period. Except for these restrictions, the grantee of an award of shares of restricted stock has all the rights of a common stockholder, including the right to receive dividends on and the right to vote such shares.

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

The status of the Company's restricted stock and restricted stock unit awards for the year ended December 31, 2007 is as follows:

	<u>Number of Shares/Units</u>
Total nonvested at January 1, 2007 . . . . .	1,107,535
Granted . . . . .	497,708
Vested . . . . .	(455,307)
Forfeited . . . . .	<u>(91,459)</u>
Total nonvested at December 31, 2007 . . . . .	<u>1,058,477</u>

At December 31, 2007, the intrinsic value of restricted stock and restricted stock unit awards was approximately \$16.7 million. The weighted average grant date fair value for restricted stock and restricted stock unit awards granted during the twelve months ended December 31, 2007, 2006 and 2005 was \$14.97, \$9.83, and \$7.33 per share. The total fair value of shares vested during the twelve months ended December 31, 2007, 2006 and 2005 was \$6.5 million, \$2.6 million, and \$1.1 million, respectively.

***Employee Stock Purchase Plan***

In April 1997, the Company adopted the Employee Stock Purchase Plan (ESPP), which allows all eligible employees to authorize payroll deductions at a rate of 1% to 15% of base compensation for the purchase of the Company's common stock. The purchase price of the common stock will be the lesser of 85% of the closing price on the first day of the applicable offering period (or most recently preceding trading day) or 85% of the closing price on the last day of the offering period (or most recently preceding trading day). Each offering period is six months and commences on January 1 and July 1 of each year. The ESPP is considered a compensatory plan under SFAS 123R. Therefore, the Company recorded compensation expense of approximately \$0.4 million and \$0.3 million during the years ended December 31, 2007 and 2006, respectively. The expense represents the estimated fair value of the look-back purchase option. The fair value was determined using the Black-Scholes option pricing model and is recognized over the purchase period. There were 113,763, 113,582, and 130,200 shares purchased by employees during the years ended December 31, 2007, 2006 and 2005, respectively.

***Impact of the Adoption of SFAS 123R and Pro Forma Information***

Stock-based compensation expense for the twelve months ended December 31, 2007 and 2006 was \$6.9 million and \$6.1 million before the \$(0.4) million cumulative effect of change in accounting principle resulting from the adoption of SFAS 123R, respectively. Prior to January 1, 2006, the Company accounted for equity-based compensation using the intrinsic method prescribed in APB Opinion No. 25. As required by SFAS 123R, the effect on net income and earnings per share of stock-based compensation, including stock options, that would have been recorded using the fair value based method for the year ended December 31, 2005, is as follows:

	<u>Year Ended December 31, 2005</u>
	(In Thousands, Except Per Share Amounts)
Net income applicable to common shares . . . . .	\$17,144
Add: Stock-based employee compensation expense included in reported net income. . . . .	2,500
Deduct: Stock-based employee compensation expense determined under fair value methods for all awards . . . . .	<u>(5,685)</u>
Pro forma net income applicable to common shares . . . . .	<u>\$13,959</u>
Basic net income per share — as reported . . . . .	<u>\$ 0.22</u>
Pro forma basic net income per common share. . . . .	<u>\$ 0.18</u>
Diluted net income per share — as reported . . . . .	<u>\$ 0.21</u>
Pro forma basic and diluted net income per common share . . . . .	<u>\$ 0.17</u>

## ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

SFAS 123R requires tax benefits relating to excess stock-based compensation deductions to be prospectively presented in the Company's consolidated statement of cash flows as financing cash inflows. As the Company has net operating loss carryforwards available to be utilized to reduce its income taxes payable, no benefit has been realized from any excess tax deductions during the years ended December 31, 2007 and 2006.

As of December 31, 2007, there was approximately \$16.7 million of unrecognized compensation cost related to all nonvested stock options, nonvested restricted stock, and restricted stock units issued subsequent to December 31, 2005. These costs will be recognized on a straight-line basis over a weighted-average vesting period of 2.8 years.

Prior to the adoption of SFAS 123R, the intrinsic value of restricted stock was recorded as unamortized restricted stock compensation. Upon the adoption of SFAS 123R, the unamortized restricted stock compensation balance of approximately \$3.8 million was reclassified to additional paid-in capital.

#### *Valuation Assumptions*

The Company calculated the fair value of each option award on the date of grant using the Black-Scholes option pricing model. The following assumptions were used for each respective period:

	Years Ended December 31		
	2007	2006	2005
Risk-free interest rates . . . . .	3.4% – 4.9%	4.3% – 5.2%	3.6% – 4.6%
Expected lives (in years) . . . . .	4.5 – 5.0	4.5	5.0
Expected dividend yield . . . . .	0%	0%	0%
Expected volatility . . . . .	45.0% – 53.3%	47.5% – 52.8%	60%

The computation of expected volatility during the twelve months ended December 31, 2007 and 2006 was based on an equally weighted combination of historical volatility and market-based implied volatility. Historical volatility was calculated from historical data for a period of time approximately equal to the expected term of the option award, starting from the date of grant. Market-based implied volatility was derived from traded options on the Company's common stock having a term of six months. Prior to 2006, the Company's computation of expected volatility was based on historical volatility using the Black-Scholes option pricing model. The Company's computation of expected life in 2007 and 2006 was determined based on historical experience of similar awards, giving consideration to the contractual terms of the stock-based awards, vesting schedules, and expectations of future employee behavior. The risk-free interest rate assumption is based upon the U.S. Treasury yield curve in effect at the time of grant for periods corresponding with the expected life of the option.

#### **(13) Segment and Geographic Information**

The Company evaluates and reviews results based on four segments — Land Imaging Systems, Marine Imaging Systems, Data Management Solutions (which collectively form the ION Systems Division) and the ION Solutions Division (formerly referred to as Seismic Imaging Solutions) — to allow for increased visibility and accountability of costs and more focused customer service and product development. The Company's land sensors business unit, which specializes in the design and manufacture of geophones, and its land imaging systems business unit are aggregated to form the Land Imaging Systems segment. The Company measures segment operating results based on income (loss) from operations.

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

A summary of segment information for the years ended December 31, 2007, 2006 and 2005, is as follows:

	<b>Years Ended December 31,</b>		
	<u>2007</u>	<u>2006</u>	<u>2005</u>
	(In Thousands)		
Net revenues:			
ION Systems Division:			
Land Imaging Systems . . . . .	\$325,037	\$205,779	\$155,172
Marine Imaging Systems . . . . .	177,685	127,927	69,604
Data Management Solutions . . . . .	<u>37,660</u>	<u>23,198</u>	<u>15,966</u>
Total ION Systems Division . . . . .	540,382	356,904	240,742
ION Solutions Division (Seismic Imaging Solutions) . . . . .	<u>172,729</u>	<u>146,652</u>	<u>121,940</u>
Total . . . . .	<u>\$713,111</u>	<u>\$503,556</u>	<u>\$362,682</u>
Income (loss) from operations:			
ION Systems Division:			
Land Imaging Systems . . . . .	\$ 28,681	\$ 13,463	\$ 18,413
Marine Imaging Systems . . . . .	44,727	30,258	15,895
Data Management Solutions . . . . .	<u>17,290</u>	<u>7,461</u>	<u>3,430</u>
Total ION Systems Division . . . . .	90,698	51,182	37,738
ION Solutions Division (Seismic Imaging Solutions) . . . . .	21,646	28,648	15,265
Corporate and other . . . . .	<u>(48,450)</u>	<u>(39,882)</u>	<u>(28,387)</u>
Total . . . . .	<u>\$ 63,894</u>	<u>\$ 39,948</u>	<u>\$ 24,616</u>
Depreciation and amortization (including multi-client data library):			
ION Systems Division:			
Land Imaging Systems . . . . .	\$ 4,036	\$ 2,561	\$ 2,120
Marine Imaging Systems . . . . .	1,383	825	2,295
Data Management Solutions . . . . .	<u>3,329</u>	<u>2,896</u>	<u>2,647</u>
Total ION Systems Division . . . . .	8,748	6,282	7,062
ION Solutions Division (Seismic Imaging Solutions) . . . . .	53,220	38,677	24,540
Corporate and other . . . . .	<u>2,461</u>	<u>2,088</u>	<u>2,602</u>
Total . . . . .	<u>\$ 64,429</u>	<u>\$ 47,047</u>	<u>\$ 34,204</u>
Total assets:			
ION Systems Division:			
Land Imaging Systems . . . . .	\$176,451	\$185,210	
Marine Imaging Systems . . . . .	146,239	120,898	
Data Management Solutions . . . . .	<u>62,689</u>	<u>59,788</u>	
Total ION Systems Division . . . . .	385,379	365,896	
ION Solutions Division (Seismic Imaging Solutions) . . . . .	270,211	246,235	
Corporate and other . . . . .	<u>53,559</u>	<u>43,005</u>	
Total . . . . .	<u>\$709,149</u>	<u>\$655,136</u>	

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

Total assets by geographic area:

	<u>December 31, 2007</u>	<u>December 31, 2006</u>
North America . . . . .	\$577,079	\$548,679
Europe . . . . .	94,200	89,137
Middle East . . . . .	25,104	15,273
Other . . . . .	12,766	2,047
Total . . . . .	<u>\$709,149</u>	<u>\$655,136</u>

Intersegment sales are insignificant for all periods presented. Corporate assets include all assets specifically related to corporate personnel and operations, a majority of cash and cash equivalents, and all facilities that are jointly utilized by segments. Depreciation and amortization expense is allocated to segments based upon use of the underlying assets.

A summary of net revenues by geographic area follows:

	<b>Years Ended December 31,</b>		
	<u>2007</u>	<u>2006</u>	<u>2005</u>
		(In Thousands)	
North America . . . . .	\$267,673	\$162,261	\$113,706
Europe . . . . .	179,064	51,796	38,284
Asia Pacific . . . . .	131,683	119,398	91,699
Commonwealth of Independent States (CIS) . . . . .	52,247	86,245	47,339
Africa . . . . .	37,116	37,283	12,605
Middle East . . . . .	29,311	15,267	12,860
Latin America . . . . .	16,017	31,306	46,189
Total . . . . .	<u>\$713,111</u>	<u>\$503,556</u>	<u>\$362,682</u>

Net revenues are attributed to geographical locations on the basis of the ultimate destination of the equipment or service, if known, or the geographical area imaging services are provided. If the ultimate destination of such equipment is not known, net revenues are attributed to the geographical location of initial shipment.

**(14) Income Taxes**

The sources of income before income taxes are as follows:

	<b>Years Ended December 31,</b>		
	<u>2007</u>	<u>2006</u>	<u>2005</u>
		(In Thousands)	
Domestic . . . . .	\$36,453	\$26,539	\$14,715
Foreign . . . . .	19,014	7,518	5,430
Total . . . . .	<u>\$55,467</u>	<u>\$34,057</u>	<u>\$20,145</u>

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(14) Income Taxes – (continued)**

Components of income taxes are as follows:

	Years Ended December 31,		
	2007	2006	2005
	(In Thousands)		
Current:			
Federal . . . . .	\$ 2,499	\$ 687	\$ 399
State and local . . . . .	(222)	1,798	(589)
Foreign . . . . .	7,586	3,643	2,274
Deferred . . . . .	2,960	(1,014)	(718)
Total income tax expense. . . . .	\$12,823	\$ 5,114	\$1,366

A reconciliation of the expected income tax expense on income before income taxes using the statutory federal income tax rate of 35% for the years ended December 31, 2007, 2006 and 2005 to income tax expense is as follows:

	Years Ended December 31,		
	2007	2006	2005
	(In Thousands)		
Expected income tax expense at 35% . . . . .	\$ 19,414	\$ 11,920	\$ 7,051
Alternate minimum tax . . . . .	2,499	687	325
Foreign taxes, net . . . . .	8,865	2,883	1,097
Resolution of tax contingencies . . . . .	—	—	(1,441)
State and local taxes . . . . .	(282)	1,798	(603)
Deferred tax asset valuation allowance. . . . .	(18,266)	(12,538)	(5,315)
Nondeductible expenses. . . . .	593	364	179
Return to provision. . . . .	—	—	73
Total income tax expense. . . . .	\$ 12,823	\$ 5,114	\$ 1,366

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(14) Income Taxes – (continued)**

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

	<b>December 31, 2007</b>	<b>December 31, 2006</b>
(In Thousands)		
Current deferred:		
Deferred income tax assets:		
Accrued expenses . . . . .	\$ 12,037	\$ 9,528
Allowance accounts . . . . .	5,544	5,510
Inventory . . . . .	985	860
Total current deferred income tax asset . . . . .	18,566	15,898
Valuation allowance . . . . .	(13,227)	(13,152)
Net current deferred income tax asset . . . . .	5,339	2,746
Deferred income tax liabilities:		
Unbilled receivables . . . . .	(8,131)	(8,655)
Net current deferred income tax liability . . . . .	\$ (2,792)	\$ (5,909)
Noncurrent deferred:		
Deferred income tax assets:		
Net operating loss carryforward . . . . .	\$ 3,688	\$ 49,430
Basis in research and development . . . . .	22,002	21,890
Deferred income . . . . .	21,000	—
Other, net . . . . .	6,897	4,505
Total deferred income tax asset . . . . .	53,587	75,825
Valuation allowance . . . . .	(45,186)	(63,172)
Net non-current deferred income tax asset . . . . .	8,401	12,653
Deferred income tax liabilities:		
Basis in identified intangibles . . . . .	(9,063)	(10,581)
Basis in property, plant and equipment . . . . .	151	(17)
Net non-current deferred income tax asset (liability) . . . . .	\$ (511)	\$ 2,055

In 2002, the Company established a valuation allowance for substantially all of its deferred tax assets. Since that time, the Company has continued to record a valuation allowance. The valuation allowance was calculated in accordance with the provisions of SFAS 109, "Accounting for Income Taxes," which requires that a valuation allowance be established or maintained when it is "more than likely than not" that all or a portion of deferred tax assets will not be realized. The Company will continue to reserve for substantially all net deferred tax assets until there is sufficient evidence to warrant reversal. At December 31, 2007, the Company had net operating loss carry-forwards of approximately \$18.6 million, which expire in 2024. Included in the total net operating loss carryforward are approximately \$14.2 million related to acquired net operating losses. The future tax benefits of such losses, if utilized, will be reflected as reductions in goodwill of the acquired companies. In 2007, approximately \$3.6 million of tax benefits related to acquired net operating losses were recorded as reductions of goodwill.

In 2007, the Company began implementation of a plan to reorganize the legal entities within its world-wide affiliated group. The objective of this reorganization is to make its legal structure more consistent with the geographic mix of its customers and suppliers. Once fully implemented, this new structure will include expanded operations in Dubai that will provide operational and financial services to all of its international

## ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### (14) Income Taxes – (continued)

locations. The 2007 impact of the restructuring was the utilization of approximately \$60 million of the Company's U.S. net operating loss carry-forward.

As a result of the implementation of FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes — an Interpretation of FASB Statement No. 109" (FIN 48) adopted on January 1, 2007, the Company recorded no adjustment to beginning retained earnings because there were no unrecognized tax benefits. The Company does not expect to recognize significant increases in unrecognized tax benefits during the next twelve month period.

Interest and penalties, if any, related to unrecognized tax benefits are recorded in income tax expense.

The Company's U.S. federal tax returns for 2004 and subsequent years remain subject to examination by tax authorities. The Company is no longer subject to IRS examination for periods prior to 2004, although carryforward attributes that were generated prior to 2004 may still be adjusted upon examination by the IRS if they either have been or will be used in a future period. In the Company's foreign tax jurisdictions, tax returns for 2000 and subsequent years generally remain open to examination.

United States income taxes have not been provided on the cumulative undistributed earnings of the Company's foreign subsidiaries as it is the Company's intention to reinvest such earnings indefinitely. These foreign earnings could become subject to additional tax if remitted, or deemed remitted, to the United States as a dividend; however, it is not practicable to estimate the additional amount of taxes payable.

During 2004, the Company recorded \$52.9 million and \$21.4 million as identifiable intangible assets related to its purchase of GXT and Concept Systems, respectively. These intangible assets are not deductible for federal income taxes. The deferred tax liability related to the GXT intangibles, along with a related reduction in the valuation allowance, is included in the December 31, 2007 and 2006 deferred tax balances. The net deferred income tax liability of \$3.3 million and \$3.9 million at December 31, 2007 and 2006, respectively, primarily relates to the acquired intangible assets of Concept Systems.

#### (15) Operating Leases

*Lessee.* The Company leases certain equipment, offices, and warehouse space under non-cancelable operating leases. Rental expense was \$11.7 million, \$9.1 million, and \$7.0 million for the years ended December 31, 2007, 2006 and 2005, respectively.

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

Years Ended December 31,	(In Thousands)
2008 .....	\$ 9,964
2009 .....	9,495
2010 .....	9,057
2011 .....	7,638
2012 .....	7,949
Total .....	<u>\$44,103</u>

#### (16) Benefit Plans

*401(k).* The Company has a 401(k) retirement savings plan which covers substantially all employees. Employees may voluntarily contribute up to 60% of their compensation, as defined, to the plan. Effective June 1, 2000, the Company adopted a company matching contribution to the 401(k) plan. The Company matches the employee contribution at a rate of 50% of the first 6% of compensation contributed to the plan.

## ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### (16) Benefit Plans – (continued)

Company contributions to the plans were \$1.5 million, \$1.2 million, and \$1.0 million, during the years ended December 31, 2007, 2006 and 2005, respectively.

*Supplemental executive retirement plan.* The Company previously had a non-qualified, supplemental executive retirement plan (SERP). The SERP provided for certain compensation to become payable on the participants' death, retirement or total disability as set forth in the plan. The only remaining obligations under this plan are the scheduled benefit payments to the spouse of a deceased former executive. The present value of the expected obligation to the spouse has been provided for in the Company's balance sheet.

#### (17) Legal Matters

In September 2003, a former employee of the Company filed a lawsuit against the Company in the 127th Judicial District Court, Harris County, Texas, alleging that the Company terminated the employee's employment as the result of age discrimination. The case was transferred to the 268th District Court for Fort Bend County, Texas, and, in November 2005, the case was removed to the United States District Court for the Southern District of Texas (*Gaines Watkins v. Input/Output, Inc., Civil Action No. H-05-03940*). In June 2007, the case was tried to a jury, and the jury returned a verdict in favor of the plaintiff and found that the plaintiff was entitled to a total of \$500,000 in pay. The jury also found that the Company acted willfully in discharging the plaintiff. Under the Age Discrimination in Employment Act of 1967, the plaintiff may be awarded an additional amount of liquidated damages equal to the plaintiff's lost back wages if the jury determined that the age discrimination was willful. On August 17, 2007, the presiding judge awarded a total of \$1,270,486 to the plaintiff. On September 28, 2007, the Company and the plaintiff entered into a Settlement Agreement and Release, whereby the parties agreed that the Company would pay \$1,150,000 in full settlement of the case and the judgment. An estimated loss of \$1.0 million was recorded in general and administrative expense during the second quarter of 2007. The remainder of the settlement amount was expensed in the third quarter of 2007.

The Company has been named in various lawsuits or threatened actions that are incidental to its ordinary business. Such lawsuits and actions could increase in number as the Company's business expands and the Company grows larger. Litigation is inherently unpredictable. Any claims against the Company, whether meritorious or not, could be time consuming, cause the Company to incur costs and expenses, require significant amounts of management time, and result in the diversion of significant operational resources. The results of these lawsuits and actions cannot be predicted with certainty. Management currently believes that the ultimate resolution of these matters will not have a material adverse impact on the financial condition, results of operations or liquidity of the Company.

**ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**(18) Selected Quarterly Information — (Unaudited)**

A summary of selected quarterly information is as follows:

<u>Year Ended December 31, 2007</u>	<b>Three Months Ended</b>			
	<u>March 31</u>	<u>June 30</u>	<u>September 30</u>	<u>December 31</u>
	(In Thousands, Except Per Share Amounts)			
Product revenues . . . . .	\$123,480	\$135,861	\$126,246	\$152,104
Service revenues . . . . .	41,565	29,295	47,306	57,254
Total net revenues . . . . .	<u>165,045</u>	<u>165,156</u>	<u>173,552</u>	<u>209,358</u>
Gross profit . . . . .	37,980	45,472	51,752	67,716
Income from operations . . . . .	5,944	11,506	16,864	29,580
Interest expense . . . . .	(1,453)	(1,800)	(1,764)	(1,266)
Loss of debt conversion . . . . .	—	—	—	(2,902)
Interest and other income . . . . .	388	104	(550)	816
Income tax expense . . . . .	1,204	2,145	1,322	8,152
Preferred stock dividends and accretion	602	589	589	608
Net income applicable to common shares	<u>\$ 3,073</u>	<u>\$ 7,076</u>	<u>\$ 12,639</u>	<u>\$ 17,468</u>
Net income per basic share . . . . .	<u>\$ 0.04</u>	<u>\$ 0.09</u>	<u>\$ 0.16</u>	<u>\$ 0.20</u>
Net income per diluted share . . . . .	<u>\$ 0.04</u>	<u>\$ 0.08</u>	<u>\$ 0.14</u>	<u>\$ 0.18</u>

<u>Year Ended December 31, 2006</u>	<b>Three Months Ended</b>			
	<u>March 31</u>	<u>June 30</u>	<u>September 30</u>	<u>December 31</u>
	(In Thousands, Except Per Share Amounts)			
Product revenues . . . . .	\$65,649	\$ 92,829	\$ 76,824	\$118,956
Service revenues . . . . .	<u>20,700</u>	<u>48,162</u>	<u>33,149</u>	<u>47,287</u>
Total net revenues . . . . .	<u>86,349</u>	<u>140,991</u>	<u>109,973</u>	<u>166,243</u>
Gross profit . . . . .	23,762	46,958	33,013	50,482
Income (loss) from operations . . . . .	(1,127)	17,393	6,453	17,229
Interest expense . . . . .	(1,399)	(1,426)	(1,484)	(1,461)
Interest and other income . . . . .	301	(36)	(57)	(329)
Income tax expense . . . . .	942	971	1,419	1,782
Cumulative effect of change in accounting principle . . . . .	398	—	—	—
Preferred stock dividends and accretion	565	600	636	628
Net income (loss) applicable to common shares . . . . .	<u>\$(3,334)</u>	<u>\$ 14,360</u>	<u>\$ 2,857</u>	<u>\$ 13,029</u>
Net income (loss) per basic share before change in accounting principle . . . . .	<u>\$ (0.05)</u>	<u>\$ 0.18</u>	<u>\$ 0.04</u>	<u>\$ 0.16</u>
Cumulative effect of change in accounting principle . . . . .	0.01	—	—	—
Net income (loss) per basic share . . . . .	<u>\$ (0.04)</u>	<u>\$ 0.18</u>	<u>\$ 0.04</u>	<u>\$ 0.16</u>
Net income (loss) per diluted share before change in accounting principle	<u>\$ (0.05)</u>	<u>\$ 0.16</u>	<u>\$ 0.04</u>	<u>\$ 0.15</u>
Cumulative effect of change in accounting principle . . . . .	0.01	—	—	—
Net income (loss) per diluted share . . . . .	<u>\$ (0.04)</u>	<u>\$ 0.16</u>	<u>\$ 0.04</u>	<u>\$ 0.15</u>

## ION GEOPHYSICAL CORPORATION AND SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### (19) Related Parties

Mr. James M. Lapeyre, Jr. is the chairman and a significant equity owner of Laitram, L.L.C. (Laitram) and has served as president of Laitram and its predecessors since 1989. Laitram is a privately-owned, New Orleans-based manufacturer of food processing equipment and modular conveyor belts. Mr. Lapeyre and Laitram together owned approximately 9.6% of the Company's outstanding common stock as of February 14, 2008.

The Company acquired DigiCourse, Inc., the Company's marine positioning products business, from Laitram in 1998 and renamed it I/O Marine Systems, Inc. In connection with that acquisition, the Company entered into a Continued Services Agreement with Laitram under which Laitram agreed to provide the Company certain accounting, software, manufacturing, and maintenance services. Manufacturing services consist primarily of machining of parts for the Company's marine positioning systems. The term of this agreement expired in September 2001 but the Company continues to operate under its terms. In addition, when the Company requests, the legal staff of Laitram advises the Company on certain intellectual property matters with regard to the Company's marine positioning systems. Under a lease of Commercial Property dated February 1, 2006, between Lapeyre Properties L.L.C. (an affiliate of Laitram) and ION, the Company agreed to lease certain office and warehouse space from Lapeyre Properties until January 2011. During 2007, the Company paid Laitram a total of approximately \$4.9 million, which consisted of approximately \$4.0 million for manufacturing services, \$0.8 million for rent and other pass-through third party facilities charges, and \$0.1 million for other services. For the 2006 and 2005 fiscal years, the Company paid Laitram a total of approximately \$3.6 million and \$2.7 million, respectively, for these services. In the opinion of the Company's management, the terms of these services are fair and reasonable and as favorable to the Company as those that could have been obtained from unrelated third parties at the time of their performance.

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# [ CORPORATE INFORMATION ]

## → Executive Officers

Robert P. (Bob) Peebler  
President and Chief Executive Officer

R. Brian Hanson  
Executive Vice President  
and Chief Financial Officer

James R. (Jim) Hollis  
Executive Vice President and  
Chief Operating Officer, ION Solutions

Charles J. (Chuck) Ledet  
Executive Vice President and  
Chief Operating Officer, ION Systems

TengBeng Koid  
Executive Vice President  
and Chief Operating Officer,  
Global Business Development

Christopher M. Friedemann  
Senior Vice President, Corporate Marketing

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

Michael L. Morrison  
Vice President and Corporate Controller

## → Board of Directors

James M. (Jay) Lapeyre, Jr.  
Chairman of the Board  
President, Laitram L.L.C.

Bruce S. Appelbaum, PhD  
Chairman, Mosaic Natural Resources, Ltd.

Theodore H. Elliott, Jr.  
Chairman, Prime Capital Management Co., Inc.

Franklin Myers  
Senior Advisor  
Cameron International Corporation

S. James Nelson, Jr.  
Retired Vice Chairman, Cal Dive International, Inc.  
(now Helix Energy Solutions Group, Inc.)

Robert P. (Bob) Peebler  
President and Chief Executive Officer  
ION Geophysical Corporation

John N. Seitz  
Vice Chairman of the Board  
Endeavour International Corporation

Sam K. Smith  
Consultant, Private Investments

## → Investor Relations

Shareholders, securities analysts, portfolio managers, or brokers seeking information about the Company are welcome to call Investor Relations at +1.281.933.3339. If you prefer, you may send your requests to the Investor Relations email address: [ir@iongeo.com](mailto:ir@iongeo.com). Recent news releases, financial information, and SEC filings can be downloaded from the Company's website at [iongeo.com](http://iongeo.com).

## → Annual Report on Form 10-K

**ION Geophysical Corporation's Annual Report on Form 10-K for the fiscal year ended December 31, 2007, although furnished as an integral part of this Annual Report to Shareholders, is also available upon request without charge from:**

**ION Geophysical Corporation  
Attn: Investor Relations  
2105 CityWest Blvd, Suite 400  
Houston, Texas 77042-2839**

## → Annual Meeting

The Annual Meeting of Stockholders of ION Geophysical Corporation will be held at the offices of the Company located at 2105 CityWest Blvd., Suite 900, Houston, Texas, on May 27, 2008, at 10:30 AM CST.

## → Stock Transfer Agent

Computershare Investor Service  
2 North LaSalle St.  
Chicago, Illinois 60602

## → Independent Auditors

Ernst & Young LLP  
5 Houston Center  
Suite 1200  
1401 McKinney St.  
Houston, Texas 77010  
713.750.1500

## → CEO and CFO Certificates

The Company has included as Exhibit 31 to its Annual Report on Form 10-K for the fiscal year ended December 31, 2007, filed with the Securities and Exchange Commission, certificates of the Chief Executive Officer and Chief Financial Officer of the Company certifying the quality of the Company's public disclosure and the Company has submitted to the New York Stock Exchange a certificate of the Chief Executive Officer of the Company certifying that he is not aware of any violation by the Company of the New York Stock Exchange corporate governance listing standards.

## → Statement of Purpose of Forward-Looking Statements

The information included herein contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These forward-looking statements include statements concerning expected future financial positions, segment sales, results of operations, cash flows, funds from operations, financing plans, gross margins, business strategy, budgets, projected costs and expenses, capital expenditures, competitive position, product offerings, technology developments, access to capital and growth opportunities, future sales and market growth, and other statements that are not of historical fact. Actual results may vary materially from those described in these forward-looking statements. All forward-looking statements reflect numerous assumptions and involve a number of risks and uncertainties. These risks and uncertainties include the timing and development of the Company's products and services and market acceptance of the Company's new and revised product offerings and pricing pressures resulting therefrom; the relatively small number of customers that the Company currently relies upon; the fact that a significant portion of the Company's revenues is derived from foreign sales; the Company's ability to successfully manage the integration of its acquisitions into the Company's operations; the risks that sources of capital may not prove adequate; the Company's inability to produce products to preserve and increase market share; collection of receivables; and technological and marketplace changes affecting the Company's product line. Additional risk factors, which could not affect actual results, are disclosed by the Company from time to time in its filings with the Securities and Exchange Commission, including its Annual Report on Form 10-K for the year ended December 31, 2007. The information contained herein includes references to trademarks, service marks and registered marks of ION Geophysical Corporation and our subsidiaries as indicated. Except where stated otherwise or unless the context otherwise requires, the terms "DigiCOURSE," "DigiSHOT," "DigiRANGE II," "DigiBIRD," "Orca," "FireFly," "Scorpion," and "VectorSeis" refer to our DigiCOURSE®, DigiSHOT®, DigiRANGE II®, DigiBIRD®, Orca®, FireFly®, Scorpion®, and VectorSeis® registered marks, and the terms "DigiSTREAMER," "AtlanticSPAN," "AfricaSPAN," "ArcticSPAN," "GulfSPAN," "IndiaSPAN," "JavaSPAN," "BasinSPAN," and "DigiFIN" refer to our DigiSTREAMER™, AtlanticSPAN™, AfricaSPAN™, ArcticSPAN™, GulfSPAN™, IndiaSPAN™, JavaSPAN™, BasinSPAN™, and DigiFIN™ trademarks and service marks.



**ion**

[ CHARGED WITH INNOVATION ]™

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