



# 2016

Annual Report











# OUR MISSION

Energy starts with us.

TGS will be the leading energy information company with the best people, quality and service.

Our unique culture, people and quality library assures that we are the principal resource for global geoscientific data products and services in the oil and gas industry.





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# FINANCIAL HIGHLIGHTS

TGS' flexible, asset light business model and ability to rapidly adjust costs allow us to deliver significant shareholder value even in a difficult market.



# 2016 Financial Highlights

(All amounts in USD 1,000s apart from EPS, ratios and dividend per share)

	2016	2015	2014	2013	2012
 Net operating revenues	<b>455,991</b>	612,347	914,785	883,444	932,239
 EBIT	<b>53,035</b>	(21,230)	294,516	386,976	402,304
 Pre-tax profit	<b>52,675</b>	(24,505)	288,327	381,460	407,550
 Net income	<b>27,653</b>	(28,347)	216,074	269,106	284,533
 EBIT margin	<b>12%</b>	-3%	32%	44%	43%
 Net income margin	<b>6%</b>	-5%	24%	30%	31%
 Return on average capital employed*	<b>5%</b>	-2%	28%	42%	55%
 Earnings per share	<b>0.28</b>	(0.28)	2.12	2.63	2.79
 Earnings per share fully diluted	<b>0.28</b>	(0.28)	2.09	2.59	2.76
 Total assets	<b>1,476,575</b>	1,455,247	1,767,618	1,736,257	1,660,721
 Shareholders' equity	<b>1,169,124</b>	1,198,088	1,339,201	1,292,979	1,168,360
 Equity ratio	<b>79%</b>	82%	76%	74%	70%
 Share buy-back	-	4.8	24.6	5.0	-
 Dividend per share (paid in year)	<b>USD 0.60</b>	NOK 8.5	NOK 8.5	NOK 8	NOK 6

\* Return on average capital employed = EBIT/Average capital employed. Capital employed = Equity + Net interest bearing debt

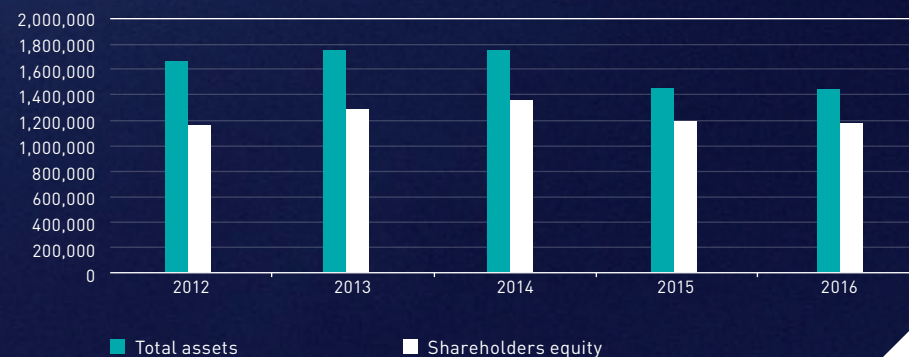
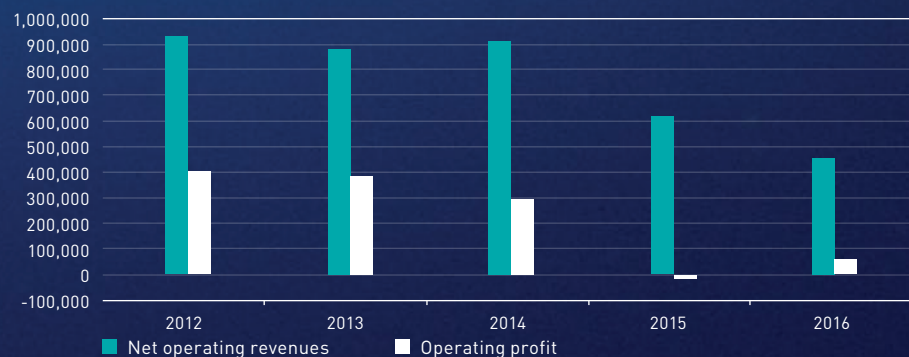
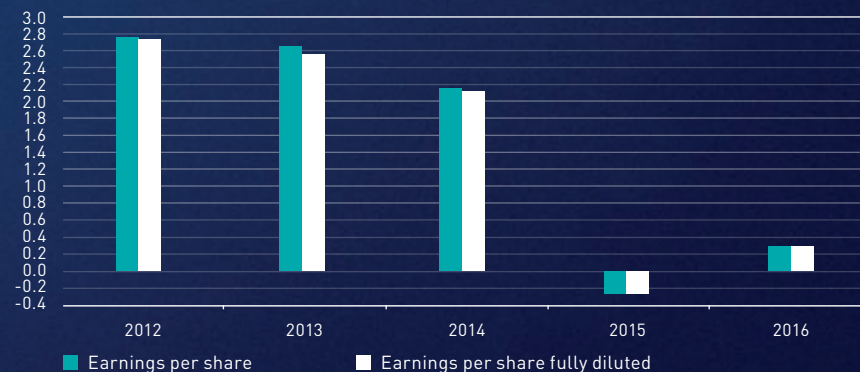
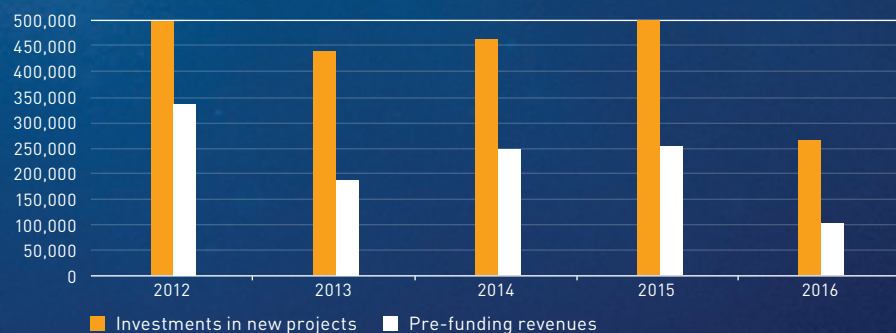
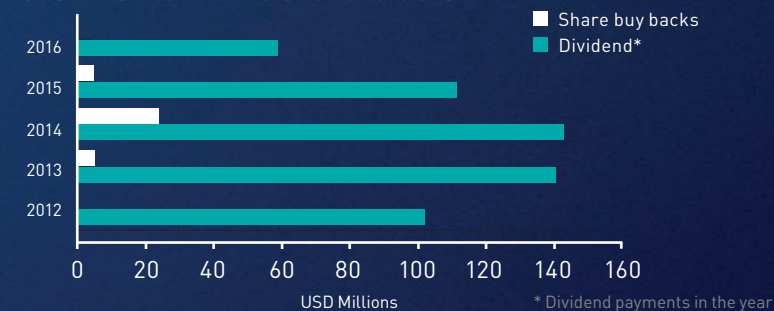


## Multi-client Library

	2016	2015	2014	2013	2012
Multi-client data purchased from third parties	166	26,407	-	-	31,100
Investments in new projects	271,010	501,653	462,318	438,869	496,240
Ending net book value	812,399	838,916	818,132	758,093	651,165
Prefunding % on operational investments*	48%	52%	53%	42%	68%

\*Defined in the Alternative Performance Measures section in Annual Report

## Cash Distribution to Shareholders





*"Our financial platform and a highly competent organization position us well to handle both the up and down cycles in the industry."*

***Kristian Johansen***, CEO





# Dear Fellow Shareholders

In 2016, lower oil and gas prices led to substantial reductions in global exploration and production spending, resulting in the most challenging year in decades. Sharply reduced exploration activity had a particularly negative impact on demand for seismic data, which is a product primarily utilized for exploration purposes.

Despite the significant drop in exploration spending, TGS managed to grow net cash flow before dividends by 198% from 2015 to USD 86 million. The strong cash flow enabled us to pay a dividend of USD 59 million to our shareholders in 2016, and we are proud to be one of few international oil service companies which have maintained a dividend throughout the severe down cycle.

True to TGS' historic ability to utilize its strong balance sheet in a challenging period for the industry, the Company was able to once more take a countercyclical investment posture in 2016. While our dollar investments were reduced from previous years, we were able to take advantage of seismic acquisition economics that were very favorable for TGS. The amount of data acquired in 2016 was therefore comparable to the average volume acquired of the last five years. Lower seismic acquisition rates, risk-sharing with suppliers and significant reductions in processing unit rates made this possible and highlights the strength of our flexible, asset light business model.

An important milestone for TGS in 2016, was the completion of acquisition of the Gigante project in Mexico. This is the largest multi-client 2D survey in the world, including more than 186,000 km of 2D seismic and 600,000 km<sup>2</sup> of multibeam, coring and geochemical analysis. In addition, TGS was active acquiring marine 2D and/or 3D data in Newfoundland and Labrador, US Gulf of Mexico, Greenland, Australia and North West Africa in 2016. Data from these projects are critical for clients to get a better understanding of the subsurface prior to future license rounds.

In our onshore business in North America, TGS continued to grow the data library with new data in the Duvernay fairway in Canada, while new project opportunities were developed in the Permian basin in the U.S. TGS has a data library with more than 430,000 well logs in the Permian basin and sees great opportunities to acquire the right seismic data based on this strong market intelligence.

TGS' asset light, technology-neutral business model makes us a trustworthy partner for clients who want to utilize new technologies. In 2016, we completed acquisition of a proprietary P-Cable survey in the Barents Sea. In addition, we delivered final processed data volumes of TGS' first two ocean-bottom full azimuth nodal projects on the U.S. Gulf of Mexico shelf. Finally, TGS, in collaboration with Schlumberger, commenced acquisition of our first dual coil survey in the U.S. Gulf of Mexico. Our

Imaging groups in Houston, Calgary and London continue to gain industry recognition for new technologies helping to improve subsalt images.

An important part of our countercyclical strategy has been to pursue non-organic investment opportunities. Following the acquisition of Polarcus' data library in 2015, TGS signed a letter of intent to acquire the multi-client data library of Dolphin Geophysical in 2016. The transaction, which was closed in early 2017, was in partnership with PGS, and the library is very complementary to TGS' existing data sets in prolific regions such as the Barents Sea, North Sea, West Africa, Brazil and Australia.

In this period of weak exploration spending, the Company has continued its' extraordinary focus on cost management. Reported operating expenses were reduced 22% from the previous year, head count was reduced by another 18%, and our processing center in Perth was closed. The staff reductions were particularly difficult but necessary in what is one of the worst exploration spending climates in decades.

TGS' flexible, asset light business model and ability to rapidly adjust costs allow us to deliver significant shareholder value even in a difficult market. In May 2017, the Board will propose to the AGM authorization to pay further quarterly dividends for the following 12 months. Management's focus is to deliver long-term shareholder growth.

Turning the page to 2017, market visibility remains limited. A potential recovery will depend on commodity prices, which will impact our customers' exploration budgets. Due to the exploration cuts, discovery of new hydrocarbon resources have been down to historically low levels over the past couple of years. This has driven reserve replacement ratios down to unsustainably low levels. Energy companies will need to increase exploration efforts at some stage in order to grow production levels in the longer term to meet the expected long-term growth in demand.

When energy companies return to the business of replacing the reserves that they are producing, they will need geoscience information. TGS' unique culture, people and quality library assures that it will be the leading company providing this information when companies return to exploring for hydrocarbons.

TGS has become the largest and most successful multi-client geoscientific data provider in the world. The employees of TGS are strongly committed to our core values of quality, service, integrity and growth. Our financial platform and a highly competent organization position us well to handle both the up and down cycles in the industry.

On behalf of the TGS family, I would like to thank our shareholders and clients for their continued confidence in us. I would also like to thank our employees for all the hard work, passion and client focus during a challenging year for our industry.

**Kristian Johansen**  
Chief Executive Officer / TGS



# 2016 Highlights

## Offshore Marine Library

- Completed acquisition of the Gigante regional survey, offshore Mexico, the largest multi-client 2D survey in the World, including more than 186,000 km of 2D seismic and 600,000 km<sup>2</sup> of multibeam, coring and geochemical analysis. Fast track volumes were made available for the 2016 licensing rounds
- Completed 2016 seismic acquisition season offshore Newfoundland and Labrador, in partnership with PGS. The largest of six concurrent seasons with acquisition of approximately 41,800 km of 2D multi-client seismic data. Additionally, over 2,300 km<sup>2</sup> of multi-client 3D seismic data was also added to the data library
- Delivered final processed data for the 9,000 km<sup>2</sup> Declaration MWAZ survey in the Mississippi Canyon and Viosca Knoll protraction areas of the U.S. Gulf of Mexico. This project provides a new standard for data quality in the area and has been well received by customers
- Began acquisition of the 7,150 km<sup>2</sup> Revolution XII & XIII dual coil surveys in partnership with Schlumberger in the Green Canyon, Atwater Valley and Ewing Bank areas of the U.S. Gulf of Mexico
- Delivered final processed data volumes of TGS' first two ocean-bottom full-azimuth nodal projects on the U.S. Gulf of Mexico shelf, Nessie FAN and Ogo FAN, in collaboration with Fairfield Nodal
- Completed the final season of the multi-year 2D program offshore northeast Greenland, bringing the total amount of seismic data acquired to approximately 15,000 km. This highly prefunded program required the use of an ice breaker vessel and significant operational experience and expertise
- Completed the 8,000 km North West Shelf Renaissance 2D survey in Australia. This survey ties recent and deep wells with TGS' existing 3D coverage in the region and traverses all the North Carnarvon blocks on offer in the 2016 Australian Offshore Petroleum Exploration Acreage Release
- Commenced the North West African Atlantic Margin (NWAAM 2017) 2D survey in collaboration with PGS. The survey will comprise more than 11,500 km of long offset, broadband 2D seismic in the MSGBC basin and will infill, extend and complement the NWAAM 2012 2D survey which helped with recent commercial discoveries in this region
- Building on TGS' experience with multi-client P-Cable acquisition in the Barents Sea, TGS completed acquisition of a proprietary P-Cable survey in this same region
- Together with PGS, acquired the majority of the Dolphin multi-client library including data in the Barents Sea, North Sea, NW Africa and Australia. This is the second strategic library acquisition concluded by TGS in the down cycle, following the purchase of most of the Polarcus library in the prior year

## Onshore Seismic Library

- Completed acquisition of 206 km<sup>2</sup> Chickadee 3C-3D survey in West Central Alberta, Canada. This survey is an expansion of TGS' existing coverage along the Duvernay fairway
- Delivered final products from the 722 km<sup>2</sup> Kaybob-Bigstone 3C-3D survey, also located in the Duvernay fairway
- Completed processing of the 1,777 km<sup>2</sup> Freeport 3D survey in the Utica play, central Ohio and the 1,100 km<sup>2</sup> Blanchard 3D survey in the South Central Oklahoma Oil Play (SCOOP)

- Completed the processing merge of the Kingfisher and Loyal projects which reside in the heart of the STACK play fairway, Oklahoma. The resulting merged survey (Loyal Complex) covers over 1,950 km<sup>2</sup> in this prolific part of the Anadarko Basin

- Commenced project development activities to prepare for first investment in Permian basin

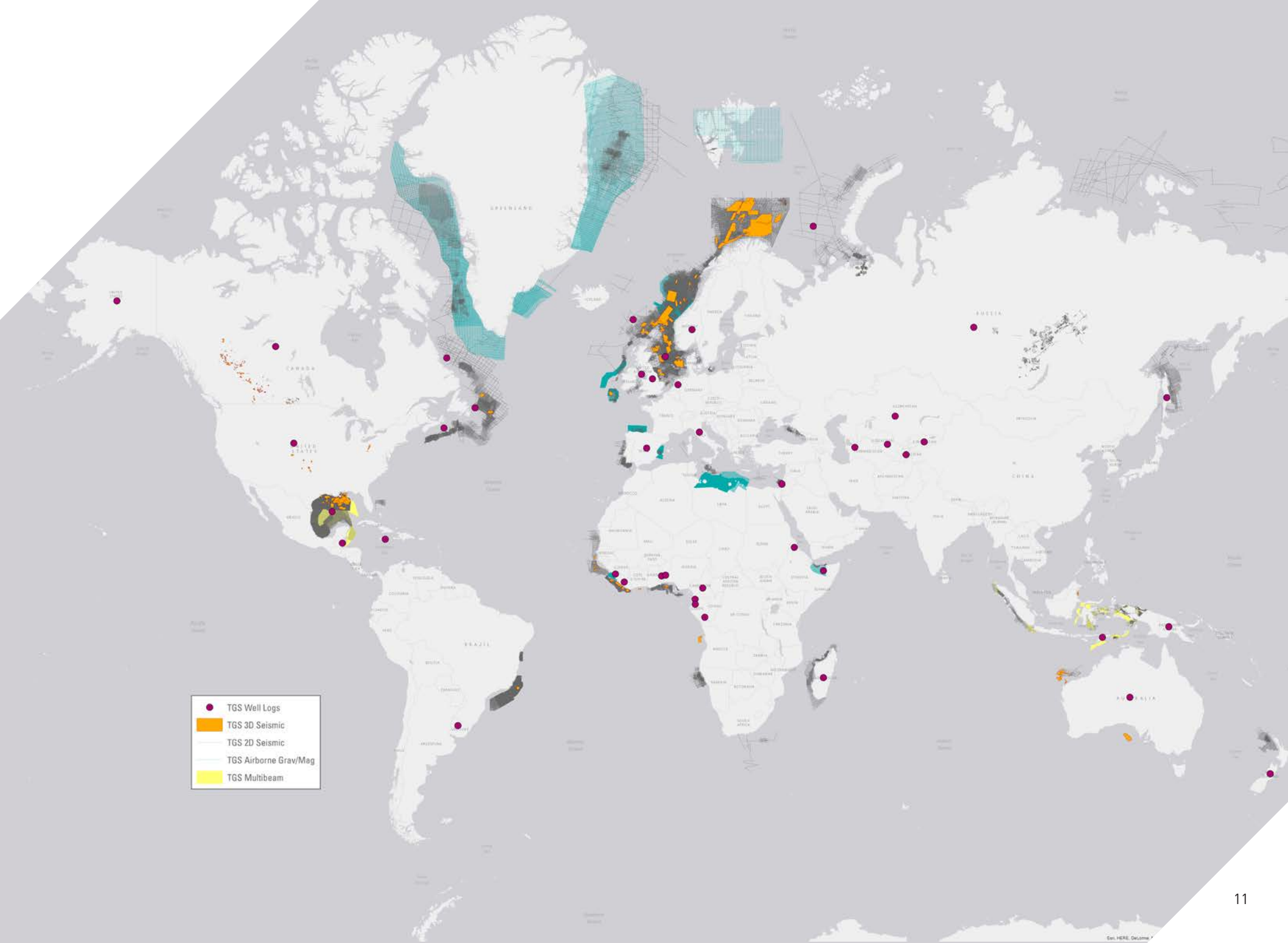
## Geological Data Library

- Added over 107,000 new Log ASCII Standard (LAS) wells, 595,000 validated well headers, 184,000 raster logs, 7,900 LAS+ wells, and 21,000 DS+ directional surveys
- Concluded deal with ANCAP to add Uruguay wells to TGS geological database. The global database now includes well data from 34 different countries
- Completed Permian Basin and Anadarko Basin Validated Well Header programs, adding significant value to TGS well data library in these high activity regions
- Launched R360™, a modern eCommerce tool to enable simpler integration of geologic data with customer systems. R360™ allows clients to perform data reconnaissance, identification and selection through a map-based interface with purchase and data delivery online.
- Completed nine new multi-client interpretation studies including projects in Norway, UK, Canada, US Gulf Of Mexico, US Onshore and Madagascar. Another eight studies were in progress at year end

## Technology

- Processed one of the industry's largest orthorhombic depth imaging projects (9,000 km<sup>2</sup>) Declaration survey in the Gulf of Mexico
- Processed the industry's largest single 2D project (186,000 km) in Mexican Gulf of Mexico. Delivered fast-track time and depth products ahead of licensing rounds
- Application of leading 3D deghosting with implicit searching for ghost delay applied to TGS' proprietary Clari-Fi™ broadband processing solution
- Two new high-end depth imaging technologies: Common Offset RTM gathers (COR) and Least Squares RTM (LSRTM) have gained industry recognition and helped to improve subsalt images. COR-based tomography is now routinely used in production to update subsalt and dirty salt velocity model. LSRTM has been applied to enhance subsalt imaging and effectively reduce the well-known salt halo coherent noise
- Seismic data acquired using latest acquisition techniques including broadband, long offsets, coil-shooting and P-Cable and complemented by ancillary products such as multibeam and geochemical seafloor sampling













# THIS IS TGS

## The Business of Better Decisions

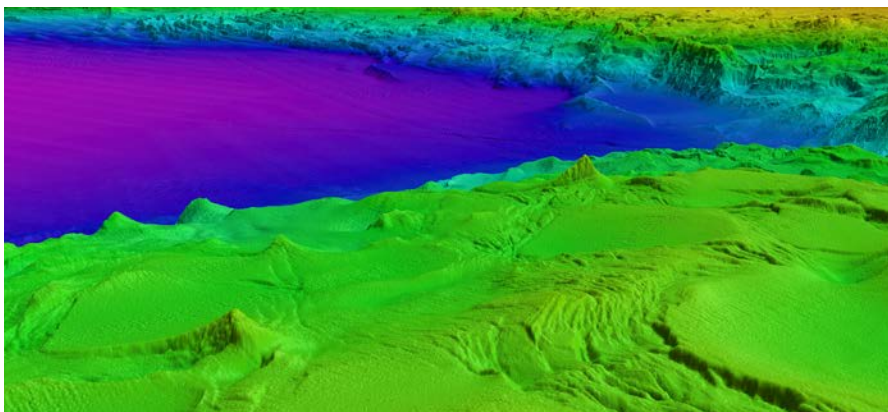
TGS provides the industry with the right data, at the right time, in the right place.

Specializing in the design, acquisition and processing of global multi-client seismic surveys; TGS has become the largest and most successful multi-client geoscientific data provider in the world.



# This is TGS

TGS is the world's largest geoscience data company, known for its asset-light, multi-client business model and global data library. TGS has approximately 600 employees and has its corporate headquarters in Asker, Norway and its operational headquarters in Houston, Texas, U.S.A. The company's other main offices are in Calgary, London and Perth, with employees also in other cities around the globe. The company's stock is traded on the Oslo Stock Exchange as part of OBX Index (25 most liquid shares at the OSE) with a market capitalization of approximately \$2.3 billion (December 2016). TGS' primary business is to provide geoscience data to energy companies worldwide. TGS offers extensive global libraries that include seismic data, magnetic and gravity data, multibeam and coring data, digital well logs and production data. Additionally, the company offers advanced processing and imaging services, interpretation products and data integration solutions.



## A Brief History

TGS was founded in Houston in 1981 and over time built the dominant 2D multi-client data library in the Gulf of Mexico. The company expanded further into North America and West Africa and added a substantial 3D portfolio in the Gulf of Mexico. Also in 1981, NOPEC was founded in Oslo and began building an industry-leading multi-client 2D database in the North Sea, with additional operations in Australia and the Far East. In 1997, NOPEC went public on the Oslo Stock Exchange. In 1998, the companies merged to form TGS-NOPEC Geophysical Company (TGS), creating a winning combination for investors, customers and

employees. Since then, TGS has set the standard for geoscientific data around the world.

## Multi-client: Our Distinct Approach

Deepwater offshore wells can cost hundreds of millions of dollars to drill. Before taking on this risk, energy companies often look for assurance in the form of seismic and other geophysical data. These data types are becoming even more valuable as exploration moves into more geologically, environmentally and operationally challenging areas.

Typically, seismic data is delivered through either a proprietary or multi-client business model. For proprietary, the energy company contracts a seismic service company to acquire and process data on its behalf. By contrast, TGS works in the multi-client realm. We retain ownership and control of the data and can license it to multiple parties.

Energy companies often prefer multi-client over proprietary because the cost is substantially lower. Typically, one or more clients will commit to licensing the data before acquisition begins, which is called "pre-funding". Licenses sold after data acquisition has commenced are called "late sales".

TGS applies a firm definition to pre-funding, so our stakeholders can assess the level of risk in our business by seeing how much of our new project investments are covered by client commitments. TGS capitalizes its seismic investments to the balance sheet and amortizes each project during the work in progress (WIP) phase based on total cost versus forecasted total revenues. As from 2016, a straight-line amortization is applied after a project is completed. The straight-line amortization will be assigned over a remaining useful life, which for most projects is expected to be four years. Geological data investments are also booked to the balance sheet and amortized on a straight-line basis over seven years.

## Our Competitive Advantages

### Focus

Last year, over 96% of our revenues came from multi-client data sales. This is



our lifeblood, and our entire company is intensely focused on developing the best multi-client projects to maximize returns and achieve long-term profitable growth. Our culture drives achievement because all employees have common goals and share in our success through profit-related bonuses.

### **Asset-Light**

TGS does not own acquisition equipment. Nor do we have seismic crews on the payroll. All data acquisition is outsourced, which gives us flexibility to execute only those projects that meet our investment criteria and align with client goals. We are not influenced by vessel or crew utilization targets. Instead, we only access these resources when needed, and we're free to use the most appropriate vendors and technologies to tackle specific imaging challenges. TGS is asset-light, which means low overhead and high stability regardless of industry cycles.

### **Quality Processing**

While acquisition is outsourced, TGS processes the data in-house. This is how we ensure our customers are getting the highest quality. Energy companies often consider processing capabilities when assessing whether to commit pre-funding to a project. As one of the industry's leading processing companies, we give them confidence to move forward. We also maintain our competitive edge by continuously investing in new computer capacity and R&D. In addition we use custom developed algorithms to reprocess old data sets at low cost to attract additional sales from our library.

### **ROI Discipline**

TGS typically targets projects that will earn sales returns between 2 and 2.5 times the investment. On projects with lower targeted returns we require high levels of pre-funding to keep the investment attractive. An example of this is a project on acreage that has already been largely awarded to energy companies, meaning that late sales opportunities are later in the cycle when farm-ins, relinquishments and M&A create new activity. Conversely, we may accept lower pre-funding on projects where our confidence in rapid late sales is higher, such as when we make an investment in a region with frequent license rounds and high customer interest.

### **Renowned Library**

TGS has one of the largest and best performing multi-client data libraries in the world. This provides an ongoing revenue stream and re-processing opportunities. Exploring our own library also helps our project developers and interpretation teams to identify high-profile prospects for new surveys. In fact, most of our 3D seismic investments are in areas where we previously acquired 2D data.

### **Active Portfolio Management**

The multi-client business is a portfolio business. Some projects may underperform and others exceed expectations. A 3D project is a significant financial undertaking, and TGS has the means to invest in a broad portfolio of projects to balance risks and rewards.

### **Geographic Diversity**

TGS has a truly global data library. We strive to build and maintain leadership positions in both mature and frontier basins around the world. Our library covers a wide variety of exploration plays including deep water, pre-salt geologies, the Arctic and North America onshore. This diversity gives us significant stability and business continuity in the face of shifting markets, regional economic strain and geopolitical challenges.

### **Superior Team**

Our most important competitive advantage is our people. The outstanding work of our project developers, geologists, geoscientists, data processors, sales and support people has made TGS the leading multi-client player. They're the reason TGS delivers superior project quality and financial performance year after year.

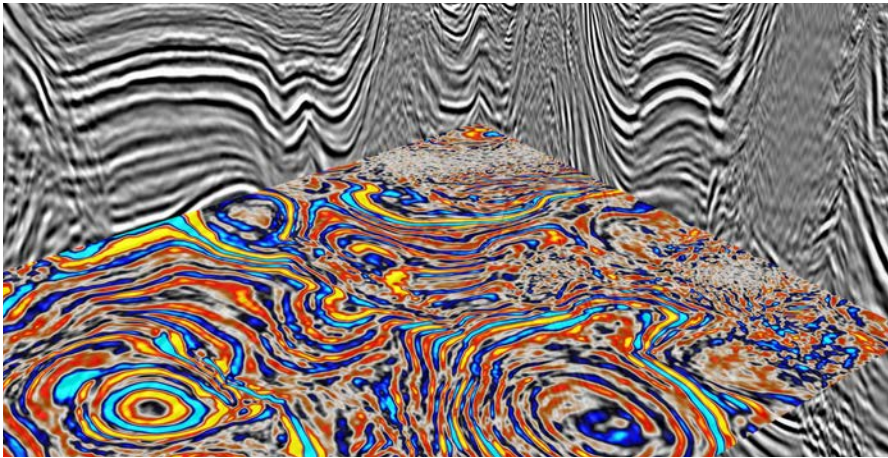
### **Strategic Acquisitions**

While most of our growth has been organic, TGS has also expanded its business through acquisitions. These opportunities allow us to add data processing capabilities and new geoscience data types to our library. TGS will also purchase other multi-client libraries when the price is attractive and we see strong potential returns.



# Core Product Lines

## Geophysical Multi-client Data

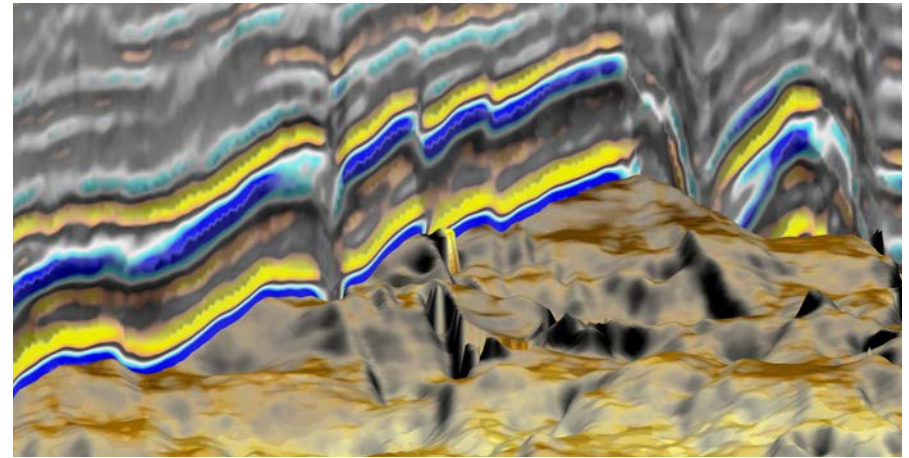


For more than 35 years, TGS has provided multi-client seismic data to energy companies globally. Over that time we have built experience in exploration areas worldwide, established a vast global database, and become the leading multi-client data provider. We offer the most current data, acquired and imaged with the latest technologies.

In addition to seismic data, our geophysical library includes gravity, magnetics, seep, geothermal, controlled-source electromagnetic and multi-beam data. This library generates over 90% of our revenues and is organized by region: North and South America, Europe and Russia, Africa - Middle East and Asia Pacific.

Our multi-client success begins with a professional, geoscience and commercial approach to project development. When planning new seismic surveys, our first priority is to gain thorough geological and geophysical understanding. Our experienced geoscientists evaluate all available seismic, gravity and magnetic data to set the project objectives and optimize the survey design. We also work closely with energy companies, local governments and geoscience specialists to address each survey's specific challenges. Our process ensures we acquire the right data to meet our clients' needs.

## Geological Multi-client Data

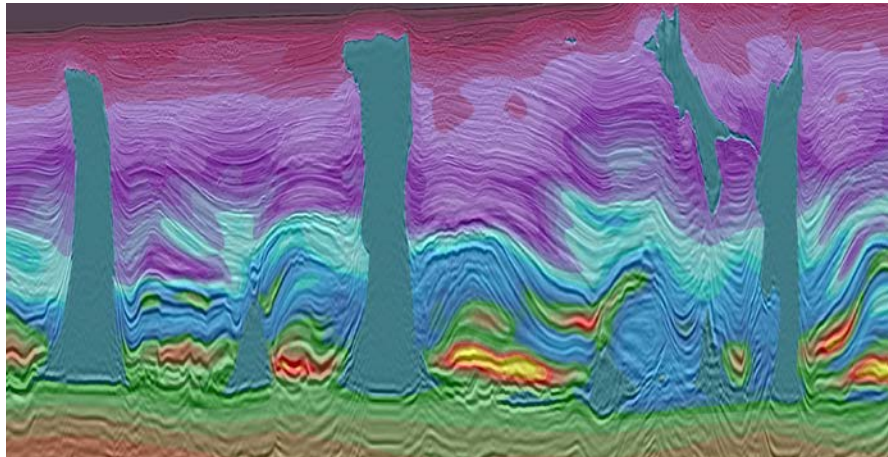


TGS also offers well data products, interpretive studies and services to help energy companies find hydrocarbons. We have the industry's largest global collection of digital well logs, and our U.S. library has expanded to include nationwide production data, directional surveys and a custom well file database. Additionally, we offer clients robust data-application integration, with advanced platforms, interfaces and adapters.

In 2016, we added over 107,000 new Log ASCII Standard (LAS) wells, 595,000 validated well headers, 184,000 raster logs, 7,900 LAS+ wells, and 21,000 DS+ directional surveys. This solidifies our position as one of the largest providers of well data in North America and in over 34 countries worldwide.



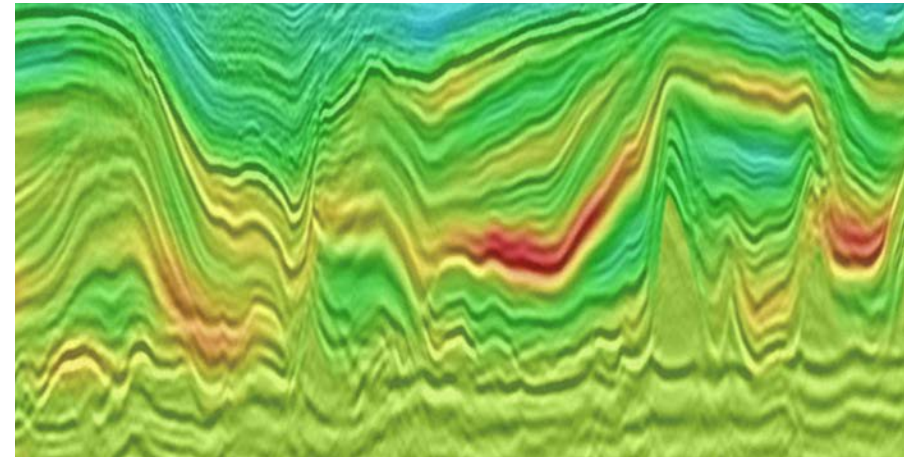
## Imaging Services



TGS employs the latest processing technologies to deliver the imaging products demanded by energy companies. We invest substantially in developing new proprietary technologies and workflows, which we use to provide imaging solutions directly to clients and to process our own global multi-client database.

TGS has offerings for both 2D and 3D, including depth and time imaging, marine, land, ocean bottom cable and nodes, anisotropic imaging, transition zone, multicomponent, shear wave, 4D time-lapse, and wide azimuth (WAZ) data processing. Our imaging teams have direct access to our well log database to calibrate seismic and well data.

In 2016 we processed 500,000 km of 2D marine data, 30,000 km<sup>2</sup> of 3D marine data and 20,000 km<sup>2</sup> of WAZ/Node and onshore data from basins around the world. During 2016 TGS maintained its position as one of the largest (top 20) compute centers globally. TGS also continued to advance its seismic processing algorithms and imaging technologies.



Recent TGS imaging advances include:

- 2DCube™: a high fidelity interpolation algorithm that generates a 3D volume from a sparse set of 2D data
- IG Tomo: an image-guided approach to tomography that produces a higher resolution velocity model and better conforms to the structural geology
- Least Squares RTM (LSRTM), Orthorhombic Kirchhoff, Beam and RTM, and Full Waveform Inversion: the latest depth-imaging technologies
- Shear wave splitting analysis, fracture detection and converted wave imaging: for multi-component data processing
- Common offset RTM (COR) gathers delivering improved accuracy in sub-salt velocity model building
- Hessian-based RTM gathers for subsalt AVO analysis
- Inversion-based explicit 3D deghosting



# Executive Management



**Kristian Johansen**  
CEO

Kristian joined TGS in 2010 as Chief Financial Officer and became Chief Operating Officer in early 2015 before being appointed Chief Executive Officer in March 2016. Prior to joining TGS, Kristian was the Executive Vice President and CFO of EDB Business Partner in Oslo (now Evry). Mr. Johansen also has experience from executive positions in the construction, banking and oil industries. A native of Norway, Kristian earned his undergraduate and Master's degrees in business administration from the University of New Mexico in 1998 and 1999.



**Katja Akentieva**  
Sr. VP Onshore

Katja joined TGS in 2012 with the acquisition of Arcis and was appointed Managing Director Arcis and North American Arctic. Prior to joining Arcis in 2008, Katja spent 11 years with Schlumberger where she held various positions within geophysics, sales and business development based in the UK, Norway and Canada. Katja received her Master's degree in geology and geophysics from Moscow State University in 1996, she also holds a Bachelor's degree in Foreign Languages from Moscow State University and an MBA from the Erasmus University in the Netherlands.



**Sven Børre Larsen**  
CFO

Sven Børre Larsen, joined TGS in September 2015 as Chief Financial Officer. Prior to joining TGS, Sven was CFO of Prosafe, the world's leading owner and operator of semi-submersible accommodation vessels for the offshore oil and gas industry. He has also been CFO of Prosafe Production, which was one of the world's leading FPSO contractors. Sven holds a M.S. degree in Business with a specialization in finance from Bodo Graduate School of Business in Norway.



**Fredrik Amundsen**  
Sr. VP Europe and Asia Pacific

Fredrik joined TGS in 2003 as Financial Controller and has since served TGS in a variety of capacities. These include Corporate Controller, Director of Finance, Director of Sales, and lately VP of Europe & Russia before being appointed Senior Vice President Europe and Asia Pacific in 2016. Fredrik received B.A (Hons) in Business Administration from Washington State University in 2001.



**John A. Adamick**  
Sr. VP GPS

John joined TGS in 1986 and has served the company in a variety of capacities. Most recently, he served as Vice President, Business Development before being appointed Senior Vice President Geological Products & Services in 2008. John holds a B.S. degree in Geology from Texas A&M University, an M.S. degree in Geology from Stephen F. Austin, and an Executive M.B.A. from Harvard University.



**Zhiming Li**  
Sr. VP Data Processing & Research and Development

Zhiming joined TGS in 2007 as Senior VP of Data Processing, Research & Development. He has 32 years' experience in energy companies, geophysical companies and academia. In 2003, he became one of the partners of Parallel Data Systems, a premier depth imaging company acquired by TGS in 2007. He received a B.S. degree in Exploration Geophysics from East China Petroleum Institute in 1982 and a Ph. D. degree in Geophysics from Stanford University in 1986.





**Knut Agersborg**  
VP Global Services

Knut joined TGS in 2005 as Manager of Operations. In December 2008, he was appointed Vice President Global Services. Knut has more than 30 years of industry experience including 22 years with Schlumberger/WesternGeco where he held senior managerial positions in Operations and Human Resources in Europe and North America. Knut graduated from Narvik University College in 1979 with a degree in Electronic Engineering.



**Will Ashby**  
VP HR & Communication

Will joined TGS in 2011 with the acquisition of Stingray Geophysical. He has served TGS in a number of Director roles including M&A, Finance, and Investor Relations before being appointed Vice President HR & Communication. Prior to founding Stingray Geophysical, Will worked in various commercial positions with BP, TradeRanger and QinetiQ. Will received M.A (Hons) and B.A (Hons) degrees in Geography from the University of Oxford in 1997.



**Tanya Herwanger**  
VP Africa and Middle East

Tanya joined TGS in 2014 as Corporate Counsel. In 2015, she made a cross function move to sales and business development and then in January 2016 was appointed Vice President for the Africa and Middle East business unit. Prior to joining TGS, she spent eight years with Schlumberger based in the US and in the UK. Tanya received her Law degree from the University of London, Queen Mary and Westfield College and professional legal qualifications from the Inns of Court School of Law in London and previously served as a dual qualified Solicitor in the UK and in her native home of Belize.



**Tana Pool**  
VP General Counsel and Corporate Secretary

Tana joined TGS in 2013 as VP General Counsel and Corporate Secretary. She has over 25 years of legal experience, with significant knowledge of the energy and construction industries. Tana's previous experience includes over nine years of private practice in corporate and transactional law with several global law firms, including most recently Akin Gump Strauss Hauer & Feld LLP. Tana received her BBA degree in Accounting from Texas Tech University and her JD degree from the University of Houston Law Center.



# Board of Directors



**Henry H. Hamilton III**  
Chairman

Mr. Hamilton served as CEO of TGS from 1995 through June 2009. He started his career as a Geophysicist with Shell Offshore (1981-1987) before he became employed by Schlumberger (1987-1995), where he ultimately held the position of VP and General Manager for all seismic product lines in North and South America. Mr. Hamilton joined TGS as its CEO in 1995 and remained in the position following the 1998 merger with NOPEC International. He also serves on the Board of Odfjell Drilling and for two non-profit organizations: the University of North Carolina College of Arts and Sciences Foundation and Defy Ventures. Mr. Hamilton was first elected as a director in 1998 and as Chairman in 2009.



**Elisabeth Grieg**  
Director

Ms. Grieg is currently CEO of Grieg International AS, co-owner of the Grieg Group and a member of the founding family. Ms. Grieg serves on the board of several of the Grieg Group companies. She has also been a board member of many prominent Scandinavian companies, such as Statoil, Norsk Hydro and Nordea AB, as well as a member of the corporate assembly of Orkla ASA. Ms. Grieg has chaired the board of GIEK (Norwegian Guarantee Institute for Export Credits) and been the President of the Norwegian Shipowners' Association. She was first elected as a director in 2015.



**Elisabeth Harstad**  
Director

Ms. Harstad is currently Senior Vice President of DNVGL Oil and Gas, a subsidiary of DNVGL. She has held various positions within DNV since 1981, including Acting CEO and COO of the Energy Business Area in 2016, Technology Director of Energy from 2012 to 2015, Corporate Director for Research and Innovation from 2006 to 2011 and COO for the oil and gas business area from 2002 to 2006. She was first elected as a director in 2007.



**Wenche Agerup**  
Director

Ms. Agerup is EVP Corporate Affairs and General Counsel Executive of Telenor ASA. From 1997 to 2010, Ms. Agerup held various leading positions within Norsk Hydro ASA, including Plant Manager at Årdal Metal Plant in Norway and Project Director in Hydro UMC Joint Venture in Australia. From 2010 to 2015, Ms. Agerup was Executive Vice President, Corporate Staffs & General Counsel of Norsk Hydro and member of the Corporate Management Board, reporting to the Chief Executive Officer. Ms. Agerup serves as a board member of Statoil. She was first elected as a director in 2015.





**Mark Leonard**  
Director

Mr. Leonard is currently the President of Leonard Exploration, Inc. He retired in 2007 from Shell Oil Company after 28 years of service. During his tenure at Shell, Mr. Leonard held a number of executive positions including Director of New Business Development in Russia/CIS, Director of Shell Deepwater Services, Director of Shell E&P International Ventures and Chief Geophysicist for Gulf of Mexico. He was first elected as a director in 2009.



**Tor Magne Lønnum**  
Director

Mr. Lønnum is currently Chief Financial Officer of Aimia Inc. Prior to joining Aimia, he was Group CFO in Tryg AS and Tryg Forsikring AS from 2011 to 2016. He has also previously held the positions of CFO in Skipper Electronics AS, Accountant in Samarbeidende Revisorer AS, Manager in KPMG, Group CFO and Group Director in Gjensidige NOR Insurance, Deputy CEO and Group CFO in Gjensidige Forsikring ASA. He was first elected as a director in 2013.



**Vicki Messer**  
Director

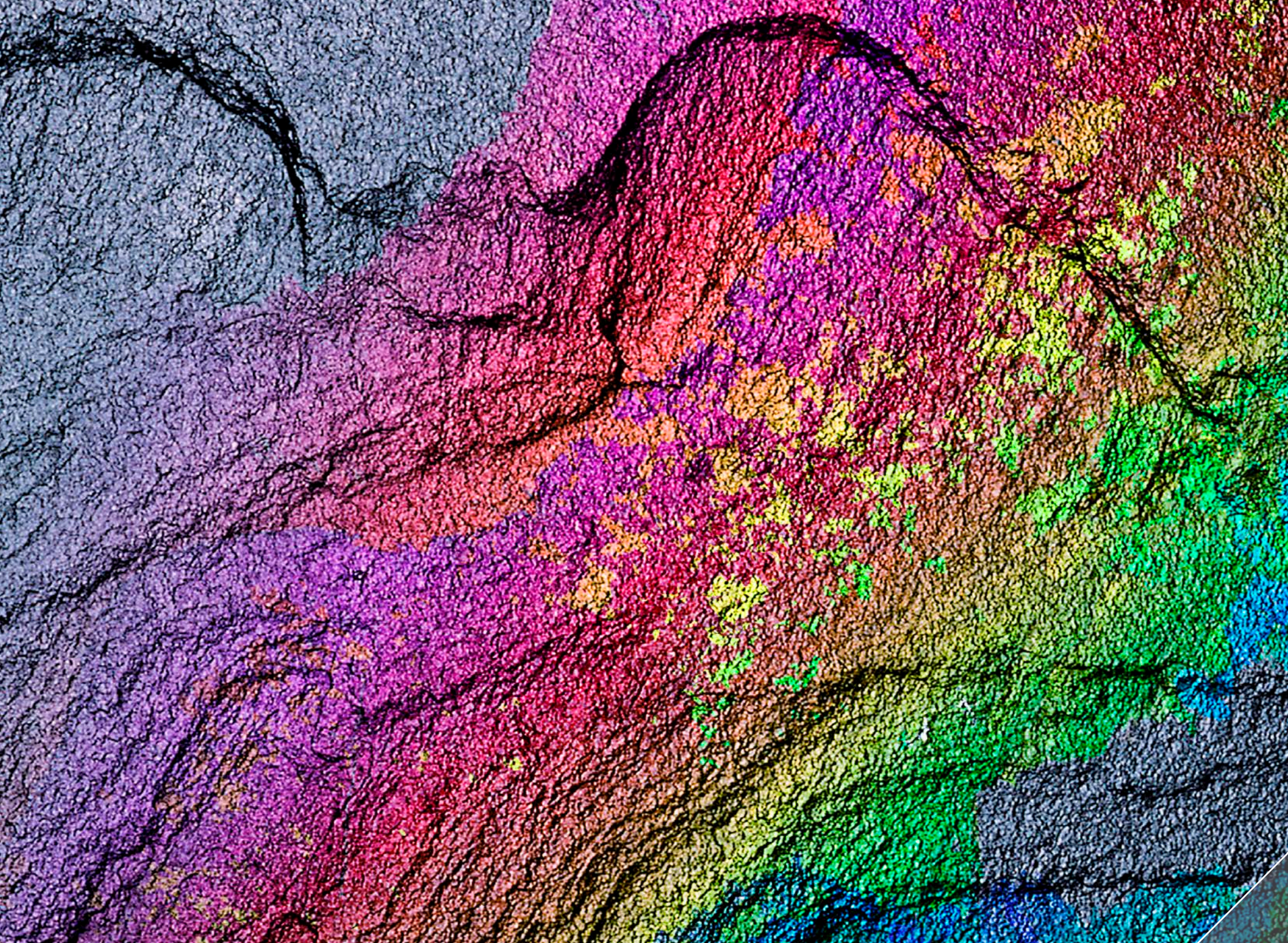
Ms. Messer is currently an independent consultant. She has 32 years of geophysical industry experience in various executive, management and supervisory positions for CGG Veritas, Veritas DGC, Halliburton Energy Services/Halliburton Geophysical, and Geophysical Services Inc. She was first elected as a director in 2011.



**Torstein Sanness**  
Director

Mr. Sanness served as the Chairman of Lundin Norway from April 2015 to March 2017, when he moved to the board of International Petroleum Corp., a Lundin Group company. He previously served as the Managing Director of Lundin Norway from 2004 to 2015. From 2000 to 2004, he served as Managing Director of Det Norske Oljeselskap AS, and from 1972 to 2000, he served in various capacities for Saga Petroleum, working primarily in the exploration and development of Saga's oil and gas interests globally. Mr. Sanness serves as a board member for Panoro Energy ASA. He was first elected as a director in 2016.









# BOARD OF DIRECTORS REPORT

With an efficient cost base, strong balance sheet and flexible business model, TGS is in a unique position to continue enhancing its status as the world's leading multi-client geophysical company.



# 2016 Board of Directors' Report

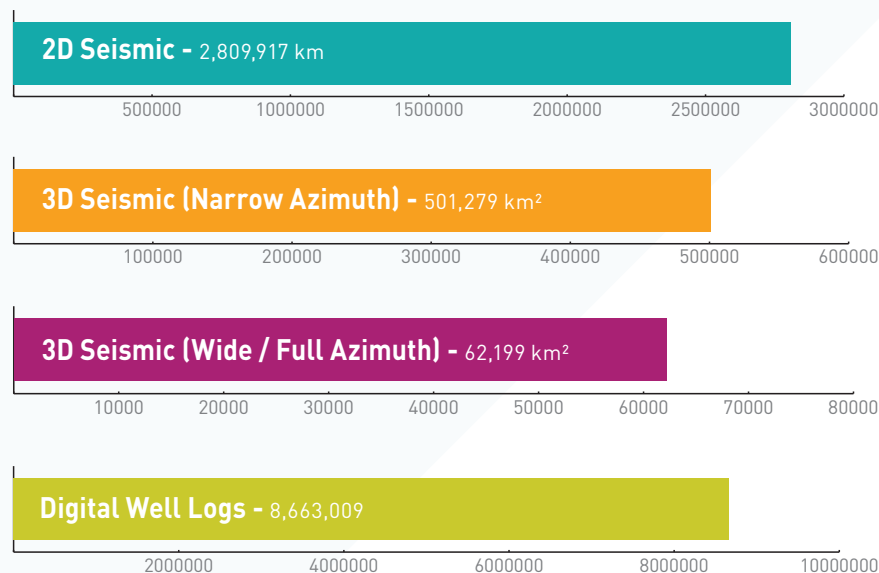
TGS-NOPEC Geophysical Company ASA (the Parent Company, and together with its subsidiaries, TGS or the Company) is a leading resource for global geoscientific data products and services in the oil and gas industry. TGS specializes in the design, acquisition and processing of multi-client seismic surveys worldwide. In addition to extensive global geophysical and geological data libraries that include multi-client seismic data, magnetic and gravity data, digital well logs, production data and directional surveys, TGS also offers advanced processing and imaging services, interpretation products, and data integration solutions. TGS operates globally and is presently active in North and South America, Europe, Russia, Africa, Asia and Australia.

The corporate headquarters of the Parent Company and TGS are located in Asker, Norway. Its primary subsidiary, TGS-NOPEC Geophysical Company, is based in Houston, Texas, U.S.A. TGS also has regional offices in the United Kingdom, Canada, Australia, Brazil, Mexico, Singapore and elsewhere in the U.S. All financial statements in this report are presented on the basis of the going concern assumption in accordance with the Norwegian Accounting Act section 3-3a, and the Board of Directors confirms that it is of the opinion that the prerequisites for a going concern assumption are indeed present.

## Operations

Market conditions continued to be difficult during 2016, with further declines in oil companies' E&P spending. As a result, the downward pressure on volumes and prices continued and TGS' net revenues decreased by 26% compared to 2015.

TGS' geoscientific data library is one of the industry's most comprehensive multi-client resources, encompassing a wide range of geophysical, geological, gravity, magnetic and bathymetry data. The following table summarizes the data inventory at year-end.



TGS' primary focus is developing, managing and selling licenses of the Company's multi-client geoscientific data, which accounted for over 96% of revenues in 2016. Customer pre-funding of new multi-client projects reduces the Company's investment exposure, while late sales from its library of data products have historically provided the bulk of the revenue stream. Net late sales after partner share was at USD 333.4 million in 2016, compared to USD 333.9 million in 2015. Pre-funding revenues on new projects of USD 105.2 million, representing a decrease of 59% from USD 256.7 million in 2015, funded 48% of the operational investments in new multi-client data for 2016 (39% when including multi-client investments of USD 50.7 million that were contingent on sales), compared to 51% in 2015. Proprietary contract revenues decreased by 20% due to lower proprietary acquisition activity, and represented 4% of total net revenues in 2016 (2015: 4%).

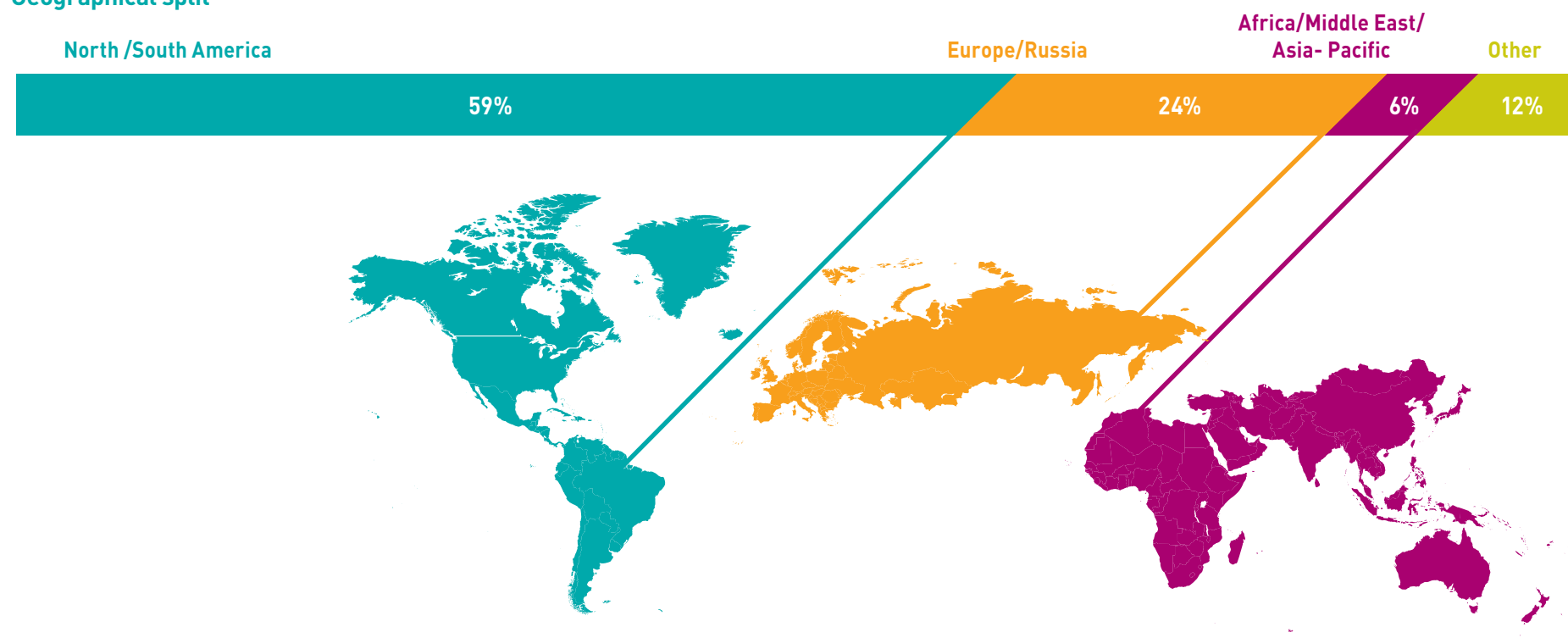


## Revenue split



TGS continues to generate multi-client revenues from a well-balanced mix of products. Comparing 2016 to 2015, multi-client 2D seismic revenues increased 11%, multi-client 3D seismic revenues decreased 42%, and multi-client revenues from geological products decreased 28%.

## Geographical split



TGS generates revenues from a geographically diversified portfolio. In 2016, revenues from North and South America (NSA) decreased by 10% from 2015. Revenues from Europe and Russia (EUR) decreased 13% as compared to 2015, while revenues from Africa, Middle East and Asia Pacific (AMEAP) decreased by 77% from 2015.



## Multi-client Geoscientific Data Library

TGS' library of multi-client seismic data and integrated products represents 55% of the total assets as of 31 December 2016 (58% in 2015). Seismic data, representing 90% of the library's net book value at year-end, is amortized on a project-by-project basis. Due to an amendment in IAS 38, the accounting practice with respect to amortization of the multi-client library changed with effect from 1 January 2016 as follows:

- During the work in progress (WIP) phase, amortization has continued to be based on total cost versus forecasted total revenues of the project.
- After a project is completed, a straight-line amortization is applied. The straight-line amortization is assigned over the remaining useful life, which for most marine projects is considered to be 4 years. For most onshore projects, the remaining useful life after completion of a project is considered to be 7 years. The straight-line amortization is distributed evenly through the financial year independently of sales during the quarters.

The well data library is amortized on a straight-line basis over seven years, while data purchased from third-parties follow a straight-line amortization profile over the remaining useful life.

## Commitments to Seismic Acquisition Capacity

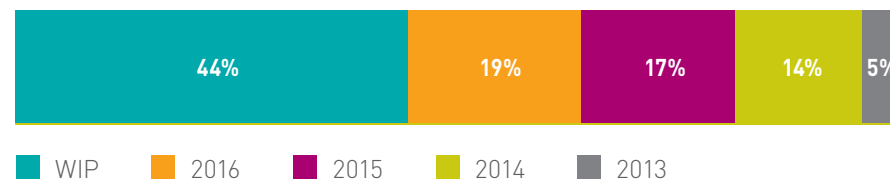
TGS secures all seismic acquisition capacity from external suppliers, for both offshore and onshore projects. At year-end 2016, the Company had entered commitments for two 3D vessels, two source vessels and one 2D vessel. All these commitments will expire in 2017, and the amount committed, included contractual lease agreements, totaled USD 50 million (2015: USD 199 million).

## Results from Operations, Operating Cash flows and Financial Position

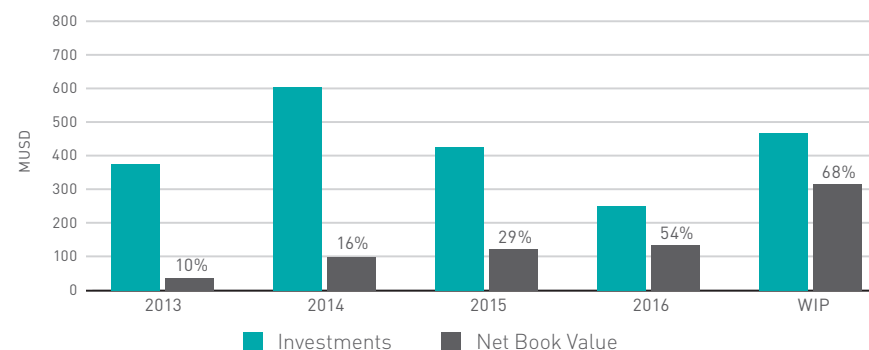
Net revenues in 2016 were USD 456.0 million, a decrease of 26% compared to 2015 (USD 612.3 million). Operating profit (EBIT\*) for 2016 was USD 53.0 million, compared to an operating loss of USD 21.2 million in 2015.

The 2016 EBIT margin was 12% compared to -3% in 2015. Pre-tax profit in 2016 was USD 52.7 million, compared to a pre-tax loss in 2015 of USD 24.5 million. Net income in 2016 was USD 27.7 million, compared to a net loss of USD 28.3 million in 2015.

## Net Book Value of Seismic Library by Year as a Percentage of Total

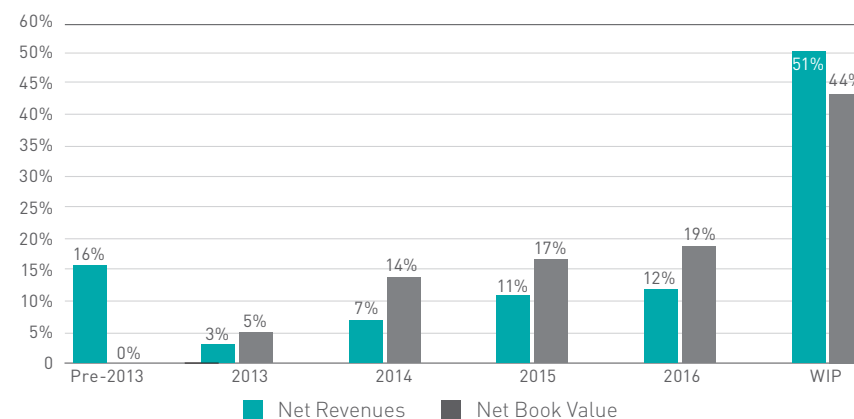


## Net Book Value vs. Investments per Year of Completion



- In relation to allowed net book value at year-end 2016 (in accordance with minimum amortization policy)

## 2016 Annual Net Revenues vs. Net Book Value per Completion





TGS' operating cash flow in 2016 was USD 324.4 million, a decline of 43% from USD 566.5 million in 2015. Operating cash flow is significantly higher than the operating profit as amortization and impairment of the multi-client library, a non-cash expense, is the Company's largest expense item.

From 2016, TGS has started to pay quarterly dividends in accordance with the resolution made by the Annual General Meeting on 6 May 2015. The Annual General Meeting held 10 May 2016 renewed the Board of Directors' authorization to distribute quarterly dividends. In 2016, TGS paid dividends totaling USD 59.5 million (equal to USD 0.60 per share), down from USD 112.9 million (NOK 8.5 per share) paid in 2015.

At year-end 2016, TGS had cash and cash equivalents of USD 190.7 million compared to USD 162.7 million at the end of 2015. TGS held current assets of USD 544.2 million at 31 December 2016 and current liabilities of USD 262.1 million. In addition, TGS had USD 75.0 million in undrawn credit facilities at year-end 2016. In January 2016, the Company entered into an amended and restated revolving credit facility to expand its primary facility to USD 75.0 million from USD 50.0 million.

As of 31 December 2016, total equity amounted to USD 1,169.1 million, corresponding to an equity ratio of 79% (2015: 82%).

Shareholders value metrics	2016	2015
Net revenues	455,991	612,347
Operating profit (EBIT) margin*	12%	-3%
Multi-client net revenues / average netbook value ratio	0.53	0.71
Return on average capital employed (ROACE)*	5%	-2%
Cash flow from operations after multi-client investments	91,069	62,901
Shareholders equity as % of total assets	79%	82%

\*Defined in the Alternative Performance Measures section in Annual Report

## Mergers and Acquisitions

In 2016 TGS, together with subsidiaries of Petroleum Geo-Services ASA (PGS) agreed principal terms and conditions for jointly acquiring the majority of the multi-client library of Dolphin UK Ltd. The transaction was concluded in January 2017. The total acquisition price paid by the TGS entities for the 50% interest acquired amounted to USD 6.2 million.

The Dolphin library is considered to be a good strategic fit for TGS and will add to

the already strong position in areas such as the Barents Sea, the North Sea, NW Africa and Australia, including several surveys where TGS has held a joint interest with Dolphin. The Dolphin transaction is the second strategic library acquisition TGS has concluded in this down cycle, following the purchase of most of the Polarcus library in 2015.

## Investments, Capital, Financing and Dividends

TGS is listed on the Oslo Stock Exchange with a market capitalization of USD 2.3 billion on 31 December 2016. As of year-end, TGS was the 15th largest company on the Oslo Stock Exchange and is part of the OBX index consisting of the 25 most liquid stocks in Norway. TGS did not issue any new equity during 2016.

During 2016, TGS invested USD 271.0 million (compared to USD 501.7 million during 2015) in organic growth of its multi-client library. Of this USD 50.7 million was related to agreements where parts of vendor payments were contingent on sales of the respective surveys being closed. The net book value of the multi-client library amounted to USD 812.4 million at 31 December 2016 as compared to USD 838.9 million at 31 December 2015 after recognizing USD 286.7 million in amortization and USD 11.0 million in impairments (2015: USD 331.2 million in amortization and USD 176.1 million in impairments).

From 2016, TGS has commenced paying quarterly dividends in accordance with the resolution made by the Annual General Meeting on 6 May 2015. The Annual General Meeting held 10 May 2016 renewed the Board of Directors' authorization to distribute quarterly dividends. The aim will be to keep a stable quarterly dividend in US dollars through the year, but the actual level paid will be subject to continuous evaluation of the underlying development of the Company and the market.

In its meeting on 1 February 2017, the Board of Directors resolved to pay a dividend of USD 0.15 per share (NOK equivalent of 1.23 per share) in Q1 2017 based on the 2015 financial statements. The dividends were paid on 23 February 2017.

The Board will propose to the May 2017 Annual General Meeting that the Board should be authorized to distribute quarterly dividends on the basis of the 2016 financial statements.

## Risk Management and Internal Control

TGS' activities are heavily dependent on the spending budgets of its clients, which are exploration and production companies in the oil and gas industry. These budgets are in turn largely a function of actual and/or expected shifts in oil and gas prices. Consequently, TGS' activities, opportunities and profitability are linked to the development of these prices. Under TGS' business model, discretionary



investments in new multi-client projects are by far the largest use of cash. Because the Company outsources mostly short-term vessel and land crew contracts for the vast majority of these discretionary investments and the prices of such contracts are becoming more favourable, TGS is able to actively manage the cash flow risks associated with fluctuations in market conditions.

TGS is exposed to other financial risks such as currency, liquidity and credit risk. TGS' operational exposure to currency risk is low as significant portions of its revenues earned and costs incurred are in USD. However, as significant parts of the taxes are calculated and paid in NOK, fluctuations between the NOK and the USD result in currency exchange gains or losses. From 2016, the quarterly dividend payments have been linked to USD which has reduced the NOK exposure significantly.

Liquidity risk arises from a lack of correlation between cash flow from operations and financial commitments. As of 31 December 2016, TGS held current assets of USD 544.2 million, of which cash and cash equivalents represented USD 190.7 million, while current liabilities were USD 262.1 million. TGS also had unused credit facilities of USD 75.0 million at 31 December 2016. As a result, the Company considers its liquidity risk to be low.

TGS is exposed to credit risk through sales and receivables and uses its best efforts to manage this risk by monitoring receivables and implementing credit checks and other actions as deemed appropriate. In addition, excess cash is placed in either bank deposits or financial instruments that have a minimum rating of "investment grade". The maximum exposure to credit risk at the reporting date is the carrying value of each class of financial assets, such as accounts receivables, other short-term receivables, and other non-current assets. TGS evaluates the concentration of risk with respect to trade receivables as low due to the Company's credit rating policies and as the clients are mainly large energy companies considered to be financially sound. Due to the current market situation, TGS has also increased focus on credit checks and monitoring of receivables.

TGS is highly focused on maintaining adequate internal controls. The Company's primary business activity is building its multi-client geoscientific data library, which represents its largest financial asset, through multiple investments in new data for licensing to clients. TGS utilizes custom investment proposal models and reporting tools in order to assess and monitor the status and performance of the Company's multi-client projects. Reference is made to Note 13 to the financial statements and the more detailed information on risk management and internal control in the Corporate Governance section of the Annual Report.

## **Organization, Working Environment and Equal Opportunity**

Following two organizational restructuring processes during 2015, TGS initiated a further down-sizing initiative during 2016 to remove management layers from the organization and to ensure that the company operates at a staffing level consistent with activity. As a result the global workforce has been reduced by approximately 35% over the last two years. This reduction, combined with the challenging market environment, continues to cause some stress and uncertainty in the organization, which is reflected in the results from the 2016 Employee Engagement Survey. Overall Engagement Capital (measured by an independent third party, CEB) fell to 60% in 2016, which is down from 72% in the 2013 Survey. However, this is still on a par with the cross-industry benchmark comprising 400 similar-sized companies from more than 20 industries. Furthermore, TGS continues to significantly outperform the benchmark in areas such as culture, values, commitment and discretionary effort. This was evident in the efforts made by employees during 2016 as staff went above and beyond to close deals, deliver data and contribute to a great team success in the fourth quarter of 2016.

The Parent Company had 43 employees as of 31 December 2016. At year-end, TGS had a total of 614 employees in the following locations: 409 employees in the United States, 43 employees in Norway, 98 employees in the United Kingdom, 50 employees in Canada, 12 employees in Australia and 2 employees in other countries. The average number of employees during 2016 was 644.

The Board considers the working environment in the Company to be good. The Board and management believe that employees of diversified gender, age, ethnicity and nationality are provided with equal opportunity and treated fairly within the Company, and have not considered it necessary to take special measures to prevent any discrimination.

At the end of 2016, women comprised 43% of the total workforce in the Company, which is higher than the prior year (41% in 2015). The corresponding figure for managers is 29% at the end of 2016, also up on the prior year (26% in 2015).

## **Health, Safety and Environmental Issues**

TGS interacts with the external environment through the collection of seismic, gravity and magnetic data and the operation of offshore vessels, land crews and aircraft. TGS is dedicated to safeguarding and maintaining the environment in which the Company works and providing a safe and healthy workplace for employees and contractors through the active implementation of a comprehensive HSE Management System that includes appropriate policies

and procedures. Not only does TGS comply with mandated legislation and local regulations, the Company also works closely with industry associations in an effort to investigate ways to mitigate the impact of seismic operations on the environment. TGS typically conducts environmental impact assessments as part of the permitting process prior to initiating seismic data acquisition. Additionally TGS works with the vessel owners and seismic contractors through the Subcontractor Management System to ensure compliance under the TGS sustainability program.

In 2016, TGS employees worked 1,103,828 man-hours. We had one lost time employee injury, which was incurred in one of the offices. The injury frequency rate for 2016 was 0.18 per million man-hours. The sickness absence frequency for TGS in 2016 was 1.11% as compared to 0.53 % in 2015.

As part of the continuous improvement strategy, Management participates in audits of office locations, and all TGS staff completed two training modules and are assessed on active HSE commitment during annual performance reviews.

In 2016, all TGS Executive Team members conducted at least 1 HSE facility inspection. All office locations performed at least one HSE related lunch and learn activity. This included activities such as First Aid / CPR Training, Bicycle Safety, Home Safety, and Fire Extinguisher Training.

## **Corporate Social Responsibility Report**

TGS has prepared a Corporate Social Responsibility Report in accordance with the Norwegian Accounting Act, section 3-3c. It is the opinion of the Board of Directors that the Company complies with the reporting requirements. TGS' Corporate Social Responsibility Policy is included as a separate section of this Annual Report and on TGS' website at [www.tgs.com](http://www.tgs.com).

## **Board Structure and Corporate Governance**

The Board of Directors consists of eight directors, each serving a one-year term. The Board's Audit and Compensation Committees are composed exclusively by independent directors. No material transactions other than the remuneration disclosed in note 7 have occurred in 2016 between the Company and its management, Directors or shareholders.

The independent Nomination Committee, elected by the shareholders, consists of the following members:

Tor Himberg-Larsen (Chairman), Christina Stray, and Herman Kleeven.

Himberg-Larsen and Stray were elected for a two-year term at the Annual General Meeting on 6 May 2015, while Kleeven was elected for a two-year term on 10 May 2016.

TGS emphasizes independence and integrity in all matters among the Board, management and the shareholders.

TGS conducts an active compliance program designed to continually inform and educate employees on ethical and legal issues. The Company employs a full-time Board-appointed compliance officer who reports quarterly on progress on compliance activities and objectives.

TGS has based its corporate governance policies and practices on the Norwegian Code of Practice for Corporate Governance published on 30 October 2014. It is the opinion of the Board of Directors that the Company complies in all areas with the Code of Practice and any subsequent amendments. A more detailed description of how TGS complies with the Code of Practice and the Norwegian Accounting Act's requirements for reporting on corporate governance is included in the Report on Corporate Governance included in this Annual Report and on TGS' website at

[www.tgs.com](http://www.tgs.com).

## **Salary and Other Compensation**

TGS compensates its employees according to market conditions that are reviewed on an annual basis by the Compensation Committee. Compensation includes base salary, insurance and retirement benefit programs, a profit-sharing bonus plan based on the Company's performance and, in certain cases stock options plans or other long-term incentive programs. For further details please refer to item 12 in the Report on Corporate Governance and the Declaration on Executive Remuneration.

The members of the Board of Directors do not participate in any bonus plan, profit-sharing plan or stock option plan. In recent years, the directors' compensation has been composed of both a fixed fee and a number of restricted TGS shares. The remuneration is not related to the Company's financial result. Refer to note 7 to the Consolidated Financial Statements for details on the remuneration for 2016.

## **Significant Litigation**

The Board is regularly updated on significant litigation matters. As a result, at each meeting the Board receives an update on the Økokrim criminal charges and investigation as well as related civil claims. See note 21 to the Consolidated Financial Statements for further details and section "Events after the Balance Sheet Date" below.



## Outlook

The global seismic market is likely to remain challenging in the near-term. Oil companies are still careful with their spending and although there are some signs of a flattish or even slightly increasing development in exploration activity, the monetary value of spending is likely to be lower in 2017 compared to 2016. This means that it is important for TGS to continue focusing on cash flow and maintaining strict cost control.

Due to the substantial reduction of exploration budgets, discovery of new hydrocarbon resources dropped to historically low levels over the past couple of years. This has driven reserve replacement ratios down to unsustainably low levels. Oil companies will need to increase exploration efforts at some stage in order to grow production levels in the longer term to meet the long-term oil demand, which is likely to continue to increase in the foreseeable future.

Simultaneously, both the E&P sector and the service industry are continuing to cut costs, leading to substantial reduction of marginal costs of bringing new resources on stream. TGS has reduced cash operating expenses by 40% from 2014 to 2016, enabling the company to continue to deliver quality products to customers at a lower cost.

In accordance with its counter-cyclical investment strategy, the Company has over the past couple of years added substantial amounts of data to its multi-client library at attractive unit cost through both organic and inorganic investments. This should, in combination with an efficient cost base, strong balance sheet and flexible business model, put TGS in a unique position to continue enhancing its status as the world's leading multi-client geophysical company in the years to come.

These forward-looking statements reflect current views about future events and are, by their nature, subject to significant risks, uncertainties and assumptions that are difficult to predict because they relate to events, and depend on circumstances, that will occur in the future.

## Events after the Balance Sheet Date

On 2 March 2017, Økokrim issued a corporate fine of NOK 85 million (approximately USD 10 million) against TGS, based on alleged violations of the Tax Assessment Act related to a contract for the purchase of seismic data entered into in 2009 with Skeie Energy AS (later known as E&P Holding AS). Økokrim dismissed the charges against TGS for market manipulation in violation of the Securities Trading Act due to insufficient evidence. The Company has rejected the fine, and a trial regarding the alleged violations is expected to occur in late 2017 or early 2018.

On 17 January 2017, TGS, together with certain subsidiaries of Petroleum Geo-Services ASA, concluded the acquisition of the majority of the multi-client library of Dolphin UK Ltd. See section "Mergers and Acquisitions" above and note 25 to the Consolidated Financial Statements" for further details.

To the best of the Directors' knowledge, no other subsequent events have occurred that would impact the accounts as presented for 2016 have occurred since 31 December 2016.

## Annual result of the Parent Company and Allocation of Profit

The Board proposes that the Parent Company's net profit of USD 2.2 million shall be allocated as follows:

Allocated to Other Equity	USD 2.2 million
---------------------------	-----------------

The Board of Directors resolved on 1 February 2017 to pay a quarterly dividend of USD 15.2 million (NOK equivalent of 1.23 per share) from the 2015 financial statements, which is covered by other equity

The Board of Directors would like to thank all employees for their good efforts throughout the year.

23 March 2017



Henry H. Hamilton III  
Chairman



Mark S. Leonard  
Director



Wenche Agerup  
Director



Elisabeth Grieg  
Director



Elisabeth Harstad  
Director



Vicki Messer  
Director



Tor Magne Lønnum  
Director



Torstein Sanness  
Director



Kristian Johansen  
Chief Executive Officer

## Confirmation from the Board of Directors and CEO

We confirm, to the best of our knowledge that the financial statements for the period 1 January to 31 December 2016 have been prepared in accordance with current applicable accounting standards, and give a true and fair view of the assets, liabilities, financial position and profit or loss of the entity and the group taken as a whole. We also confirm that this report of the Board of Directors with references to the notes to the accounts and the Corporate Governance section of the Annual Report includes a true and fair review of the development and performance of the business and the position of TGS, together with a description of the principal risks and uncertainties facing the Company.

23 March 2017



Henry H. Hamilton III  
Chairman



Mark S. Leonard  
Director



Wenche Agerup  
Director



Elisabeth Grieg  
Director



Elisabeth Harstad  
Director



Vicki Messer  
Director



Tor Magne Lønnum  
Director

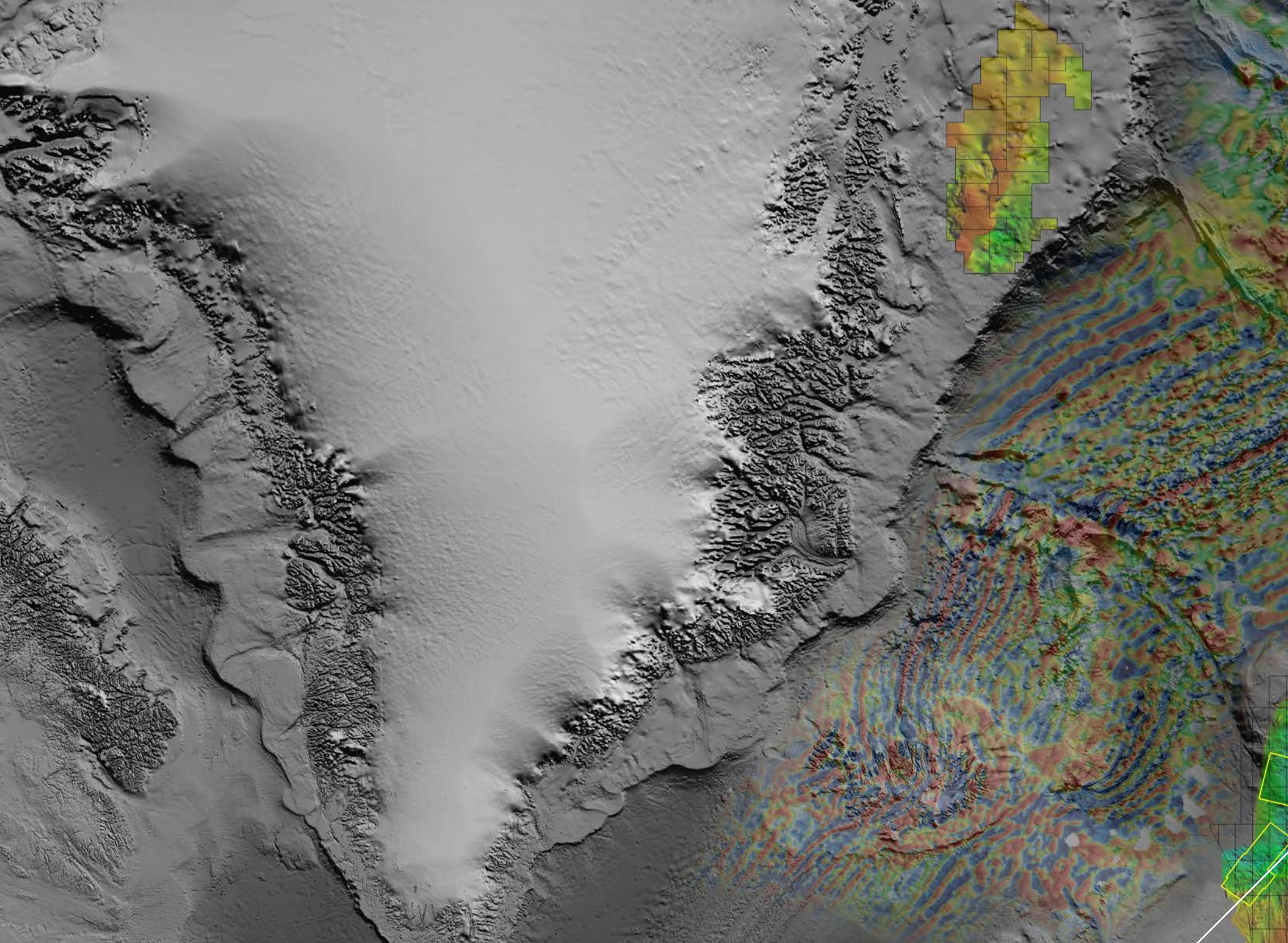


Torstein Sanness  
Director



Kristian Johansen  
Chief Executive Officer









# GROUP FINANCIALS

In this period of weak exploration spending, TGS has continued its' extraordinary focus on cost management. Our financial platform and a highly competent organization position us well to handle both the up and down cycles in the industry.



# Consolidated Statement of Comprehensive Income

(All amounts in USD 1,000s unless noted otherwise)

	Note	2016	2015
<b>Net revenues</b>	15,22	<b>455,991</b>	612,347
Cost of goods sold - proprietary and other		<b>5,759</b>	1,012
Amortization and impairment of the multi-client library	5,15	<b>297,693</b>	507,276
Personnel costs	7	<b>51,670</b>	63,246
Cost of stock options	7,8	<b>751</b>	1,782
Other operating expenses	16	<b>35,039</b>	47,421
Depreciation, amortization and impairment	4,5	<b>12,046</b>	12,840
<b>Total operating expenses</b>		<b>402,956</b>	633,577
<b>Operating profit</b>		<b>53,035</b>	(21,230)
Financial income	23	<b>3,053</b>	6,265
Financial expenses	23	<b>(3,967)</b>	(516)
Net exchange gains/(losses)	23	<b>553</b>	(9,024)
<b>Net financial items</b>		<b>(360)</b>	(3,275)
<b>Profit before taxes</b>		<b>52,675</b>	(24,505)
Taxes	24	<b>25,022</b>	3,842
<b>Net income</b>		<b>27,653</b>	(28,347)
<b>Other comprehensive income:</b>			
<i>Other comprehensive income to be reclassified to profit or loss in subsequent periods</i>			
Exchange differences on translation of foreign operations		<b>114</b>	(924)
<b>Other comprehensive income/(loss), net of tax</b>	24	<b>114</b>	(924)
<b>Total comprehensive income for the period</b>		<b>27,766</b>	(29,272)
Net income attributable to the owners of the parent		<b>28,220</b>	(28,368)
Net income attributable to non-controlling interests		<b>(567)</b>	21
		<b>27,653</b>	(28,347)
Total comprehensive income attributable to the owners of the parent		<b>28,333</b>	(29,293)
Total comprehensive income attributable to non-controlling interests		<b>(567)</b>	21
		<b>27,766</b>	(29,272)
Earnings per share (USD)	9	<b>0.28</b>	(0.28)
Earnings per share, diluted (USD)	9	<b>0.28</b>	(0.28)

# Consolidated Balance Sheet

As of 31 December

(All amounts in USD 1,000s unless noted otherwise)

	Note	2016	2015
<b>Assets</b>			
<b>Non-current assets</b>			
Goodwill	5,6	67,925	67,647
Multi-client library	5	812,399	838,916
Other intangible non-current assets	5,6	9,009	9,260
Deferred tax asset	24	9,565	12,941
Buildings	4	6,759	8,427
Machinery and equipment	4	16,263	21,756
Other non-current assets	14	10,500	25,102
<b>Total non-current assets</b>		<b>932,420</b>	<b>984,049</b>
<b>Current assets</b>			
Accounts receivable	16	201,231	135,384
Accrued revenues	16	119,112	142,263
Other receivables	16	33,073	30,818
Cash and cash equivalents	11	190,739	162,733
<b>Total current assets</b>		<b>544,155</b>	<b>471,198</b>
<b>Total assets</b>		<b>1,476,575</b>	<b>1,455,247</b>



# Consolidated Balance Sheet

As of 31 December

[All amounts in USD 1,000s unless noted otherwise]

	Note	2016	2015
<b>Equity and liabilities</b>			
<b>Equity</b>			
<b>Paid-in capital</b>			
Share capital	10	3,657	3,657
Treasury shares	10	(21)	(26)
Share premium		58,107	58,107
Other paid-in equity		36,964	34,728
<b>Total paid-in capital</b>		<b>98,707</b>	96,466
Other equity		1,070,426	1,101,063
<b>Equity attributable to owners of the parent</b>		<b>1,169,132</b>	1,197,528
Non-controlling interests		(7)	560
<b>Total equity</b>		<b>1,169,124</b>	1,198,088
<b>Liabilities</b>			
<b>Non-current liabilities</b>			
Other non-current liabilities	14	6,057	6,182
Deferred taxes	24	39,284	32,797
<b>Total non-current liabilities</b>		<b>45,341</b>	38,979
<b>Current liabilities</b>			
Accounts payable and debt to partners	17	116,534	97,798
Taxes payable, withheld payroll tax, social security	24	18,066	2,767
Other current liabilities	17	127,510	117,615
<b>Total current liabilities</b>		<b>262,110</b>	218,180
<b>Total liabilities</b>		<b>307,451</b>	257,159
<b>Total equity and liabilities</b>		<b>1,476,575</b>	1,455,247

23 March 2017



Henry H. Hamilton III  
Chairman



Wenche Agerup  
Director



Elisabeth Harstad  
Director



Tor Magne Lønnum  
Director



Kristian Johansen  
Chief Executive Officer



Mark S. Leonard  
Director



Elisabeth Grieg  
Director



Vicki Messer  
Director



Torstein Sanness  
Director

# Consolidated Statement of Changes in Equity

As of 31 December

(All amounts in USD 1,000s unless noted otherwise)

	Attributable to the owners of the parent								
	Share Capital (par value at NOK 0.25)	Treasury Shares	Share Premium	Other Paid-in Capital*	Foreign Currency Translation Reserve	Retained Earnings	Total	Non-controlling Interest	Total Equity
Balance 1 January 2016	3,657	(26)	58,107	34,728	(22,047)	1,123,110	1,197,528	560	1,198,088
Net income	-	-	-	-	-	28,220	28,220	(567)	27,653
Other comprehensive income	-	-	-	-	114	-	114	-	114
Total comprehensive income	-	-	-	-	114	28,220	28,334	(567)	27,766
Paid-in equity through exercise of stock options	-	5	-	-	-	1,793	1,798	-	1,798
Distribution of treasury shares	-	0.4	-	-	-	156	156	-	156
Deferred tax asset related to stock options	-	-	-	-	-	20	20	-	20
Cost of equity-settled long term incentive plans	-	-	-	2,236	-	-	2,236	-	2,236
Dividends	-	-	-	-	-	(60,940)	(60,940)	-	(60,940)
Balance 31 December 2016	3,657	(21)	58,107	36,964	(21,933)	1,092,359	1,169,132	(7)	1,169,124

	Attributable to the owners of the parent								
	Share Capital (par value at NOK 0.25)	Treasury Shares	Share Premium	Other Paid-in Capital*	Foreign Currency Translation Reserve	Retained Earnings	Total	Non-controlling Interest	Total Equity
Balance 1 January 2015	3,702	(76)	58,107	32,915	(21,123)	1,265,136	1,338,662	539	1,339,201
Net income	-	-	-	-	-	(28,368)	(28,368)	21	(28,347)
Other comprehensive income	-	-	-	-	(924)	-	(924)	-	(924)
Total comprehensive income	-	-	-	-	(924)	(28,368)	(29,292)	21	(29,272)
Distribution of treasury shares	-	10	-	-	-	4,435	4,445	-	4,446
Cancellation of treasury shares	(45)	45	-	-	-	-	-	-	-
Purchase of treasury shares	-	(6)	-	-	-	(4,839)	(4,846)	-	(4,844)
Cost of equity-settled long-term incentive plans	-	-	-	1,813	-	-	1,813	-	1,813
Dividends	-	-	-	-	-	(113,254)	(113,254)	-	(113,254)
Balance 31 December 2015	3,657	(26)	58,107	34,728	(22,047)	1,123,110	1,197,528	560	1,198,088

\* Other Paid-in Capital consists of costs related to stock options.



# Consolidated Statement of Cash Flow

(All amounts in USD 1,000s unless noted otherwise)

	Note	2016	2015
<b>Cash flow from operating activities</b>			
Received payments from customers		424,428	763,612
Payments for salaries, pensions, social security tax		(49,549)	(68,708)
Payments of other operational costs		(48,532)	(34,749)
Paid taxes	24	(1,981)	(93,642)
<b>Net cash flow from operating activities <sup>1)</sup></b>		<b>324,366</b>	<b>566,513</b>
<b>Cash flow from investing activities</b>			
Investments in tangible and intangible assets		(8,128)	(7,398)
Investments in multi-client library		(233,297)	(503,612)
Investments through mergers and acquisitions		-	(26,363)
Payments made to acquire debts instruments		-	(5,000)
Interest received		1,429	5,603
<b>Net cash flow from investing activities</b>		<b>(239,996)</b>	<b>(536,770)</b>
<b>Cash flow from financing activities</b>			
Interest paid		(400)	(168)
Dividend payments	10	(59,458)	(112,861)
Purchase of treasury shares		-	(4,844)
Proceeds from share issuances		1,798	4,021
<b>Net cash flow from financing activities</b>		<b>(58,060)</b>	<b>(113,852)</b>
Net change in cash and cash equivalents		26,310	(84,109)
Cash and cash equivalents at the beginning of the period	11	162,733	256,416
Net unrealized currency gains/(losses)		1,698	(9,574)
<b>Cash and cash equivalents at the end of the period</b>	<b>11</b>	<b>190,739</b>	<b>162,733</b>
<b>1) Reconciliation</b>			
Profit before taxes		52,675	(24,505)
Depreciation/amortization/impairment	4,5,6	309,739	520,116
Changes in accounts receivables and accrued revenues		(42,696)	199,654
Net unrealized currency gains/(losses)		(1,576)	8,640
Changes in other receivables		11,892	20,860
Changes in other balance sheet items		(3,687)	(64,610)
Paid taxes	24	(1,981)	(93,642)
<b>Net cash flow from operating activities</b>		<b>324,366</b>	<b>566,513</b>

# Notes to Consolidated Financial Statements

(All amounts in USD 1,000s unless noted otherwise)

## 1. General Accounting Policies

### General Information

TGS-NOPEC Geophysical Company ASA (the Parent Company) is a public limited liability company incorporated in Norway on 21 August 1996. The address of its registered office is Lensmannslia 4, 1386 Asker, Norway. TGS-NOPEC Geophysical Company ASA is listed on the Oslo Stock Exchange ("TGS").

TGS-NOPEC Geophysical Company ASA and its subsidiaries (TGS or the Company) provide multi-client geoscience data to oil and gas exploration and production companies worldwide. In addition to extensive global geophysical and geological data libraries that include multi-client seismic data, magnetic and gravity data, digital well logs, production data and directional surveys, TGS also offers advanced processing and imaging services, interpretation products and data integration solutions.

The consolidated financial statements of TGS were authorized by the Board of Directors on 23 March 2017.

### Basis of Preparation

The consolidated financial statements of TGS have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union (EU) in effect as of 31 December 2016 and consist of the consolidated statement of comprehensive income, the consolidated balance sheet, the consolidated cash flow statement, the consolidated statement of changes in equity and notes to the consolidated financial statements.

The consolidated financial statements have been prepared on a historical cost basis, except financial investments available for sale and financial investments through profit and loss that have been measured at fair value. The financial statements of the subsidiaries have been prepared for the same reporting year as the Parent Company, using consistent accounting policies.

### Principles of Consolidation

#### *Companies Consolidated*

The consolidated financial statements comprise the financial statements of the Parent Company and its subsidiaries as at 31 December 2016. Control is achieved when TGS is exposed, or has rights, to variable returns from its involvement with

the investee and has the ability to affect those returns through its power over the investee.

Specifically, TGS controls an investee if and only if TGS has:

- Power over the investee (i.e. existing rights that give it the current ability to direct the relevant activities of the investee)
- Exposure, or rights, to variable returns from its involvement with the investee, and
- The ability to use its power over the investee to affect its returns

Consolidation of a subsidiary begins when TGS obtains control over the subsidiary and ceases when TGS loses control of the subsidiary. Assets, liabilities, income and expenses of a subsidiary acquired or disposed of during the year are included in the statement of comprehensive income from the date TGS gains control until the date TGS ceases to control the subsidiary.

Profit or loss and each component of other comprehensive income (OCI) are attributed to the equity holders of the Parent Company and to the non-controlling interests, even if this results in the non-controlling interests having a deficit balance. All intra-group assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of TGS are eliminated in full on consolidation.

If TGS loses control over a subsidiary, the Company derecognizes the related assets (including goodwill), liabilities, non-controlling interest and other components of equity while any resultant gain or loss is recognized in profit or loss. Any retained investment is accounted for in accordance with IFRS.

#### *Presentation Currency*

TGS presents its consolidated financial reports in USD. The majority of TGS' revenues and expenses are denominated in USD, and USD is the functional currency for most of the entities in TGS, including the Parent Company. The financial statements of the Parent Company are presented separately in this Annual Report.

For presentation in consolidated accounts, the assets and liabilities of subsidiaries with functional currency other than USD are translated into USD at the rate of exchange prevailing at the reporting date and their statements of profit or loss are translated at exchange rates prevailing at the dates of the transactions.



Exchange rate differences arising from the translation to presentation currency are recognized in OCI.

### ***Foreign Currency***

Transactions in foreign currency are translated to the functional currency using the exchange rates prevailing at the dates of the transactions. Monetary assets and liabilities in non-functional currencies are translated into functional currency spot rate of exchange ruling at the date of the balance sheet. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in non-functional currencies are recognized in the income statement.

### **Significant Accounting Judgments, Estimates and Assumptions**

In the process of applying TGS' accounting principles, management is required to make estimates, judgments and assumptions that affect the amount reported in the consolidated financial statements and accompanying notes. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which will form the basis for making judgments on carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. The key sources of judgment and estimation of uncertainties at the balance sheet date that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

### ***Impairment Evaluation of Multi-client Data Library***

TGS performed impairment reviews and determined the value in use of the multi-client library during 2016. The Company estimated value in use based on discounted estimated future sales forecasts. The underlying estimates that form the basis for the sales forecast depend on variables such as the number of oil and gas exploration and production (E&P) companies operating in the area that would be interested in the data, the overall E&P spending, expectations regarding hydrocarbons in the sector, whether licenses to perform exploration in the sectors exist or will be given in the future, expected farm-ins to licenses, relinquishments, etc. Changes in these estimates may potentially affect the estimated amount of future materially. The future sales forecast are evaluated regularly and impairments are recognized in the period they occur. Due to the continued weakened market conditions during 2016, TGS has put additional focus in reviewing the market when considering the sales forecasting to make sure that the updated expectations were properly reflected in the impairment evaluations.

A 10% reduction in the net present value of estimated future revenues for all multi-client projects as of 31 December 2016 would have resulted in further impairments of USD 1.5 million in 2016.

For details about the book value, amortization and impairment of the multi-client library, see Note 5.

For a detailed description of the accounting policies for the multi-client library see Summary of Significant Accounting Policies below.

### ***Impairment Evaluation of Goodwill***

TGS determines whether goodwill is impaired at least on an annual basis or when there are indicators that the carrying amount may not be recoverable. This requires an estimation of the value in use of the cash-generating units to which the goodwill is allocated. Estimating the value in use amount requires management to make an estimate of the expected future cash flows from the cash-generating unit and also to choose a suitable discount rate in order to calculate the present value of those cash flows. Variables such as estimated future revenues, margins and estimated long-term growth are the key drivers for the basis of the value in use calculations. Future cash flows also depend on general development in E&P spending, the number of market participants and technological developments.

For details about the goodwill and impairment, see Note 6.

### ***Deferred Tax Assets***

Uncertainties exist with respect to the interpretation of complex tax regulations, changes in tax laws, and the amount and timing of future taxable income. Given the wide range of international business relationships and the long-term nature and complexity of existing contractual agreements, differences arising between the actual results and the assumptions made, or future changes to such assumptions, could necessitate future adjustments to tax income and expense already recorded.

Deferred tax assets are recognized for temporary deductible differences and carry forward tax losses to the extent that it is probable that taxable profit will be available against which the losses can be utilized. Management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and level of future taxable profits together with future tax planning strategies.

For details about the deferred tax assets, see Note 24.

### ***Contingent Liabilities***

The preparation of the financial statements has required TGS to make judgment, estimates and assumptions that affect the reported amounts of liabilities and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount in future periods.

On 2 March 2017, Økokrim, the Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime, issued a corporate fine of 85 MNOK (approximately USD 10 million) to TGS for alleged violations of the Norwegian Tax Assessment Act arising from a transaction for the license of seismic data entered into in 2009 with Skeie Energy AS, later known as E&P Holding AS (Skeie). Økokrim initially charged TGS in 2014, claiming TGS contributed to unwarranted tax refunds received by Skeie through the licenses of seismic data. In addition to the claims from Økokrim, the Norwegian Government has claimed compensation from TGS for the amount of refunds (plus penalties and interest) obtained by Skeie, alleging the Company aided and abetted in the refunds. Skeie and two affiliated parties have also made claims of joint responsibility in the event they are found to be responsible.

The Company has rejected the fine issued by Økokrim and has denied any responsibility for the civil claims. A trial on the Økokrim allegations is expected at the end of 2017 or early 2018. Økokrim has advised that it will raise the claim to 90 MNOK in the event that the fine is rejected and the case is brought to court. The civil matters have arisen in relation to the Økokrim charges, and the outcome of these matters will depend in large part on the outcome of the Økokrim matter. Given the early stage of all of these proceedings, it is impracticable to render an accurate assessment of the outcome. However, based on the Company's assessment of the evidence to date, the Company believes the criminal and civil claims are not well-founded, and it intends to challenge the claims vigorously. As a result, the Company does not consider it probable that an outflow of resources embodying economic benefits will be required to settle the obligation and no provisions have been made. See Note 21 for a further description of the criminal and civil matters relating to these matters.

#### ***Provision for Impairment Losses of Accounts Receivables and Other Financial Assets***

TGS has made provisions for impairment losses of specific accounts receivables and other financial assets deemed uncollectible. When assessing the need for provisions, TGS uses all available information about the various outstanding receivables, including the payment history and the credit quality of the actual companies.

For details about the provision of impairment losses of accounts receivables, see Note 16.

#### ***Share-based Payments***

TGS measures the cost of stock options and other share-based payment plans granted to employees by reference to the fair value of the equity instruments at the date at which they are granted (equity-settled transactions) or at the end of each reporting period (cash-settled transactions). Estimating fair value requires an appropriate valuation model to value the share-based instruments. The

values are dependent on the terms and conditions of the granted share-based instruments. This also requires determining the appropriate assumptions in the valuation models including the expected life of the instruments, volatility and dividend yield.

For details about the share-based payments, see Note 8.

### **Summary of Significant Accounting Policies**

#### ***Revenue Recognition***

Revenue is recognized when it is probable that the economic benefits from a transaction will flow to TGS and the revenue can be reliably measured. Revenue is measured at fair value of the consideration received, net of discounts and sales taxes or duty. The following describes the specific principles:

#### ***Work in Progress (WIP)***

Sales in the form of prefunding commitments from customers under binding contracts are recognized as revenue on a percentage of completion (POC) basis, normally measured according to the acquired and processed volume of data in relation to the estimated total size of the project. Sales made prior to commencement of acquisition for each project are recognized on POC basis and presented as pre-funding revenues. Sales after the commencement, but while projects are in progress are also recognized on a POC basis progress and presented as POC late sales revenues. The amount of revenues for in progress projects not yet invoiced, is presented as accrued revenues in the balance sheet.

#### ***Finished Data***

Revenue is recognized for sales of finished data at the time of the transaction; i.e. when the client has gained access to the data under a binding agreement. Sales of finished data are presented as late sales revenues.

#### ***Volume Sales Agreements***

In certain situations TGS grants licenses to the customer for access to a specified number of blocks of multi-client library within an area. These licenses typically enable the customer to select and access the specific blocks over a period of time. Revenue recognition for volume sales agreements is based on a proportion of the total volume sales agreement revenue, measured as the customer gains access to the data.

#### ***Revenue Sharing Arrangements***

TGS shares certain multi-client revenues with other companies (see joint arrangements below) and governments. Revenues are recognized on a net basis in accordance with applicable recognition principles.

#### ***Proprietary Contracts***



Revenue from proprietary contracts for clients is recognized in the same way as work in progress (POC) in accordance with the specific agreement.

#### *Royalty Income*

Royalty income is recognized on an accruals basis in accordance with the substance of the relevant agreements.

#### ***Cost of Goods Sold (COGS) – Proprietary Contracts and Other***

Cost of goods sold consists of direct costs related to proprietary contract work and costs related to delivery of geoscientific data.

#### ***Multi-client Library***

The multi-client library includes completed and in-progress geophysical and geological data to be licensed on a non-exclusive basis to oil companies. The costs directly attributable to data acquisition and processing are capitalized and included in the library value. Costs directly attributable to data acquisition and processing includes mainly vessel costs, payroll and hardware/software costs. Data acquisition costs include mobilization costs incurred when relocating vessels to the survey areas. The library also includes the cost of data purchased from third parties. The library of finished multi-client seismic data and interpretations is presented at cost reduced by accumulated amortization and impairment.

#### *Amortization of Seismic Data*

During the work in progress phase, amortization is based on total cost versus forecasted total revenues of the project. Amortization is recorded in line with how revenues are recognized for each project during this phase.

After a project is completed, a straight-line amortization is applied. The straight-line amortization is assigned over a remaining useful life, which for most marine projects is considered to be 4 years. For most onshore projects, the remaining useful life after completion of a project is considered to be 7 years.

#### *Amortization Policy on Seismic Data Purchased from Third Parties*

When purchasing seismic data from third parties, a straight-line amortization over the remaining useful life is recognized. The straight-line amortization is based on the fair value of the seismic data recognized on the date of the purchase.

#### *Amortization Policy on Well Data Products*

The library of multi-client well logs is presented at cost, reduced by accumulated amortization. Amortization is recorded as a straight-line amortization over seven years.

#### *Impairment Evaluation Multi-client Library*

When there are indicators that the net book value may not be recoverable, the library is tested for impairment either individually per project (seismic and interpretation reports) or at the cash generating unit level (well logs), as appropriate. Any impairment of the multi-client library is recognized immediately and presented as “Amortization and impairment of the multi-client library” in the statement of profit or loss.

For further information about impairment, see “Impairment of Non-Financial Assets” below.

For details about impairments of the multi-client library, see Note 5.

#### ***Joint arrangements***

A joint arrangement is a contractual arrangement whereby the TGS and other parties undertake an economic activity that is subject to joint control, i.e., when the strategic financial and operating policy decisions relating to the activities of the joint arrangement require the unanimous consent of the parties sharing control. Joint arrangements are classified as joint operations or joint ventures, depending on the rights to the assets and obligations for the liabilities of the parties to the arrangements. If the parties to the joint arrangement have rights to the net assets of the arrangement, the arrangement is a joint venture. However, if the parties have rights to the assets and obligations to the liabilities relating to the arrangement, the arrangement is a joint operation. Interests in joint ventures are accounted for using the equity method.

For certain multi-client library projects, TGS invests in the project with other parties and has cooperation agreements whereby revenues will be shared with other companies. These agreements are initiated and agreed as joint operations where both parties have rights to the assets and share in the liabilities. TGS recognizes its share of the investment in multi-client library, its share of revenues from the sale of the multi-client library, related amortization, and expenses. When TGS has a license to market and sell the seismic project, TGS enters into the license contracts with customers and invoices and collects payments from the customer. The related account receivable is presented gross, while the portion due to the partner upon collection from the customer is presented as debt to partners. Similarly, when a partner holds the license and invoices and collects from the customer, TGS recognizes its share of related accounts receivables.

#### ***Other Intangible Assets***

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets in a business combination is its fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and accumulated impairment losses, if any.

Internally generated intangibles, excluding capitalized development costs, are

not capitalized and the related expenditure is reflected in the profit or loss in the period in which the expenditure is incurred.

Intangible assets with finite lives are amortized over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least at the end of each reporting period. The straight-line amortization method is used for most intangible assets as this best reflects the consumption of the assets.

### ***Research and Development Costs***

Research costs are expensed as incurred. Development expenditures on an individual project are recognized as an intangible asset when TGS can demonstrate:

- It is technically feasible to complete the product so that it will be available for use;
- Management intends to complete the product and use it;
- There is an ability to use the software product;
- It can be demonstrated how the product will generate future economic benefits;
- Adequate technical, financial or other resources to complete the development and to use the product are available; and
- The expenditure attributable to the product during its development can be reliably measured.

Following initial recognition of the development expenditure as an asset, the asset is carried at cost less any accumulated amortization and accumulated impairment losses. Amortization of the asset begins when development is complete and the asset is available for use. It is amortized over the period of expected future benefit.

### ***Business Combinations and Goodwill***

Business combinations are accounted for using the acquisition method. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date fair value and the amount of any non-controlling interest in the acquiree. For each business combination, the acquirer measures the non-controlling interest in the acquiree either at fair value or at the proportionate share of the acquiree's identifiable net assets. Acquisition costs incurred are expensed and included in administrative expenses.

When TGS acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the

contractual terms, economic circumstances and pertinent conditions at the acquisition date. This involves recognizing identifiable assets (including previously unrecognized intangible assets) and liabilities (including contingent liabilities but excluding future restructuring) of the purchased business at fair value. This includes the separation of embedded derivatives in host contracts by acquiree.

Any contingent consideration to be transferred by the acquirer will be recognized at fair value at the acquisition date. Subsequent changes to fair value of the contingent consideration, which is deemed to be an asset or liability, will be recognized in accordance with IAS 39 either in profit or loss or as a change to OCI. If the contingent consideration is classified as equity, it will not be remeasured. Subsequent settlement is accounted for within equity. In instances where the contingent consideration does not fall within the scope of IAS 39, it is measured in accordance with the appropriate IFRS.

Goodwill is initially measured at cost, being the excess of the aggregate of the consideration transferred and the amount recognized for non-controlling interest over the net identifiable assets acquired and liabilities assumed. If this consideration is lower than the fair value of the net assets of the subsidiary acquired, the difference is recognized in profit or loss.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill from a business combination is, from the acquisition date, allocated to each of TGS' cash generating units that are expected to benefit from the synergies of the combination, irrespective of whether other assets or liabilities of TGS are assigned to those units. Each unit, or group of units to which the goodwill is allocated, represents the lowest level within TGS at which the goodwill is monitored for internal management purposes.

Should part of an operation carrying goodwill be disposed of, the goodwill which is associated with the disposed operation is then included in book value of the operation when determining the gain or loss on the disposal. The goodwill disposed of in this circumstance is determined measured based on the relative values of the operation disposed of and the portion of the cash generating unit retained.

Goodwill is reviewed for impairment annually or more frequently if events or changes in circumstances indicate that the carrying value may be impaired.

Impairment is determined for goodwill by assessing the recoverable amount of the cash-generating unit (or group of cash-generating units) to which the goodwill relates. Where the recoverable amount of the cash-generating unit (or group of cash-generating units) is less than the book value of the cash-generating unit (group of cash-generating units) to which goodwill has been allocated, an impairment loss is recognized. Impairment losses relating to goodwill cannot be



reversed in future periods.

### ***Tangible Non-Current Assets***

Tangible non-current assets are presented at historical cost less accumulated depreciation and accumulated impairment losses. Purchases which are expected to have a technical and economic life of more than one year are capitalized as tangible non-current assets. Depreciation begins when the assets are available for use. Tangible non-current assets held for sale are stated at the lower of book value and presumed market value and are not subject to depreciation.

### ***Impairment of Non-Financial Assets***

Disclosures relating to impairment of non-financial assets are also provided in the following notes:

- Significant Accounting Judgments, Estimates and Assumptions - Note 1
- Tangible Non-Current Assets - Note 4
- Impairment Testing of Goodwill - Note 6

TGS assesses, at each reporting date, whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, TGS estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs of disposal and its value in use. The recoverable amount is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

In assessing value in use, the estimated future cash flows calculated in USD are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

TGS bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of TGS' CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year.

Impairment losses are recognized in the statement of profit or loss in expense categories consistent with the function of the impaired asset.

For assets excluding goodwill, an assessment is made at each reporting date to determine whether there is an indication that previously recognized impairment

losses no longer exist or have decreased. If such indication exists, TGS estimates the asset's or the CGU's recoverable amount. A previously recognized impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognized. The reversal is limited so that the carrying amount of the asset does not exceed its recoverable amount, or the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in the statement of profit or loss.

For further information about impairment testing of the multi-client library, see "Impairment Evaluation Multi-Client Library" above and Note 5.

### ***Provisions and Contingencies***

Provisions are made when TGS has a current obligation (legal or constructive) as result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

If the effect of the time value of money is material, provisions are discounted using a current pre-tax rate that reflects, where appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

Contingent liabilities are possible obligations as a result of a past event where the existence of the liability depends on the occurrence, or not, of a future event. An existing obligation, in which it is not likely that the entity will have to dispose economic benefits, or where the obligation cannot be measured with sufficient reliability, is also considered a contingent liability. Contingent liabilities are not recognized in the financial statements, but if material, disclosed in the accompanying notes. A contingent asset is not recognized in the financial statement, but disclosed if there is a certain degree of probability that it will be an advantage of TGS.

For a description of contingent liabilities, see Note 21.

### ***Income Taxes***

#### ***Current Income Tax***

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where TGS operates and generates taxable income.

#### ***Deferred Tax***

Deferred tax is provided using the liability method on temporary differences at the balance sheet date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date.

Deferred tax liabilities have been recognized for all taxable temporary differences.

Deferred tax assets are recognized for all deductible temporary differences, the carry forward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilized.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized. Unrecognized deferred tax assets are re-assessed at each reporting date and are recognized to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and deferred tax liabilities are offset, if a legally enforceable right exists to set off current income tax assets against current income tax liabilities and the deferred taxes relate to the same taxable company and the same taxation authority. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the balance sheet date.

Deferred tax relating to items recognized outside profit or loss is recognized outside profit or loss. Deferred tax items are recognized in correlation to the underlying transaction either in OCI or directly in equity.

The Parent Company pays its tax obligation in NOK and the fluctuations between the NOK and the USD impact the financial items. TGS' legal entities that do not have their tax base in USD are exposed to changes in the USD/tax base-currency rates. Effects within the current year are classified as tax expense.

### **Share-based Payments**

Key employees of TGS receive remuneration in the form of share-based payments whereby employees render services as consideration for stock options, Performance Share Units (PSUs) and Restricted Share Units (RSUs).

The cost of equity-settled transactions (stock options, PSUs and the 2015 and 2016 plans of RSUs) is measured by reference to the fair value at the date on which they are granted. The fair value is determined by an external value using an appropriate pricing model.

The cost of equity-settled transactions is recognized, together with a

corresponding increase in equity, over the period in which the performance and/or service conditions are fulfilled, ending on the date on which the relevant employees become fully entitled to the award (the vesting date). The cumulative expense recognized for equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired and TGS' best estimate of the number of equity instruments that will ultimately vest. The statement of profit or loss expense or credit for a period represents the movement in cumulative expense recognized at the beginning and end of that period. No expense is recognized for awards that do not ultimately vest. The dilutive effect of outstanding options is reflected as additional share dilution in the computation of diluted earnings per share (further details are given in Note 9).

In some tax jurisdictions, TGS receives a tax deduction in respect of remuneration in the form of stock options to employees. The tax deduction is not received until the stock options are exercised and is based on the intrinsic value of the award at the date of exercise. In accordance with IAS 12, the tax relief must be allocated between profit or loss and equity so that the amount of the tax deduction exceeding the cumulative cost of stock options expensed by the Company is recognized directly to equity.

The RSUs granted in 2014 are cash settled share-based payments. The fair value of the RSUs are measured at the end of each reporting period and are accrued over the period until the employees have earned an unconditional right to receive them. These fair values are expensed over the period until the vesting date with recognition of a corresponding liability. The ultimate cost of such a cash-settled transaction will be the actual cash paid by TGS, which will be the fair value at settlement date. The fair values of the RSUs are recognized as personnel costs.

### **Financial Investments and Other Financial Instruments**

TGS classifies financial investments in the following categories: financial assets at fair value through profit or loss, loans and receivables and available-for-sale financial assets. The classification depends on characteristics of the instruments and the purpose for which the investments were acquired. Management determines the classification at initial recognition. When financial assets or financial liabilities are recognized initially, they are measured at fair value plus, for all financial investments other than those at fair value through profit or loss, directly attributable transaction costs. The purchases and sales of financial assets or financial liabilities are recognized at the date of trade.

TGS does not have any hedge arrangements which qualify for hedge accounting.

### **Financial Assets at Fair Value Through Profit or Loss**

Financial assets at fair value through profit or loss include financial assets held for trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets at fair value through profit or loss are



carried in the statement of financial position at fair value with net changes in fair value presented as finance costs (negative net changes in fair value) or finance income (positive net changes in fair value) in the statement of profit or loss.

#### *Loans and Receivables*

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. After initial measurement, loans and receivables are subsequently carried at amortized cost using the effective interest rate method (EIR), less impairment. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR.

The losses arising from impairment are recognized in the statement of profit or loss in finance costs for loans and in other operating expenses for receivables. This category generally applies to trade and other receivables. For more information on loan and receivables, refer to Note 14 and 16.

#### *Available-for-Sale Financial Assets*

Available-for-sale financial assets are those non-derivative financial assets that are designated as available-for-sale or are not classified in any other category. After initial measurement, the available-for-sale financial assets held are measured at fair value with unrealized gains or losses being recognized as OCI in the available-for-sale reserve, until the investment is derecognized or considered impaired at which time the cumulative loss is recognized in the income statement in finance cost and removed from the available-for-sale reserve. The investment is determined to be impaired when a negative development is considered significant or prolonged.

The fair value of financial investments that are actively traded in organized financial markets is determined by reference to quoted market bid prices at the close of business on the balance sheet date. For investments where there is no active market, fair value is determined applying commonly used valuation techniques.

#### *Derecognition of Financial Assets and Liabilities*

A financial asset is derecognized when:

- The rights to receive cash flows from the asset have expired, or
- TGS has transferred its rights to receive cash flows from the asset and either (a) has transferred substantially all the risks and rewards of the asset, or (b) has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

A financial liability is derecognized when the obligation under the liability is discharged, cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification

is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in the income statement.

#### *Impairment of Financial Assets*

TGS assesses, at each reporting date, whether there is any objective evidence that a financial asset or a group of financial assets is impaired. A financial asset or a group of financial assets is deemed to be impaired if, and only if, there is objective evidence of impairment as a result of one or more events that has occurred after the initial recognition of the asset (an incurred "loss event") and that loss event has an impact on the estimated future cash flows of the financial asset or TGS of financial assets that can be reliably estimated. Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganization and when observable data indicate that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

#### *Pensions*

TGS operates defined-contribution plans in Norway, UK, USA (401k) and Australia where the Company covers the superannuation. Contributions are expensed to the income statement as they become payable.

#### *Leases – TGS as lessee*

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases. The evaluation is based on the substance of the transaction at the inception date of whether the fulfillment of the arrangement is dependent on the use of a specific asset or assets or the arrangement conveys a right to use the asset.

Finance leases are recorded as assets and liabilities, and lease payments are apportioned between the finance charges and reduction of the lease liability so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are recognized in the income statement.

Operating lease payments are recognized as an expense in the income statement on a straight line basis over the lease term.

#### *Cash and Cash Equivalents*

Cash and cash equivalents in the balance sheet comprise cash in bank accounts and on hand and short-term deposits with an original maturity of three months or less.

#### *Accounts Receivable and Other Receivables*

Receivables are measured at cost less any amounts expected to be uncollectible. Sales with deferred payments due to be settled more than twelve months or later are presented as non-current receivables.

### ***Treasury Shares***

TGS' equity instruments that are reacquired (treasury shares) are recognized at cost and deducted from equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of TGS' own equity instruments. Any difference between the carrying amount and the consideration, if reissued, is recognized in the share premium reserve.

### ***Dividends***

A dividend approved by TGS' shareholders is recognized as a liability in TGS' financial statements. A corresponding amount is recognized directly in equity.

### ***Cash Flow Statement***

The cash flow statement is compiled using the direct method.

### ***Changes in Accounting Policy and Disclosures***

TGS has adopted the following new and amended standards that are effective.

- **IAS 16 Property, Plant and Equipment and IAS 38 Intangible Assets**

The amendments to these standards clarify that the use of revenue-based methods to calculate the depreciation of an asset is not appropriate because revenue generated by an activity that includes the use of an asset generally reflects factors other than the consumption of the economic benefits embodied in the asset. The amendments also clarify that revenue is generally presumed to be an inappropriate basis for measuring the consumption of the economic benefits embodied in an intangible asset. This presumption, however, can be rebutted in certain limited circumstances. TGS has considered the impact of the amendment, and the effect of the amendment has not been disclosed because estimating it is impracticable. TGS has implemented the following prospective changes to amortization of the multi-client library from 1 January 2016:

During the work in progress (WIP) phase, amortization will continue to be based on total cost versus forecasted total revenues of the project. After a project is completed, a straight-line amortization is applied. The straight-line amortization is assigned over a remaining useful life, which for most marine projects is considered to be 4 years. For most onshore projects, the remaining useful life after completion of a project is considered to be 7 years.

### ***New Standards and Interpretations Issued, but not Yet Effective***

The standards and interpretations that are issued, but not yet effective, up to the date of the issuance of TGS' financial statements are disclosed below. TGS intends to adopt these standards, if applicable, when they become effective.

- **IFRS 9 Financial Instruments**

In July 2014 the IASB issued the final version of IFRS 9. IFRS 9 will replace IAS 39 Financial Instruments: Recognition and Measurement and previous versions of IFRS 9. The standard introduces new requirements for classification and measurement, impairment, and hedge accounting. IFRS 9 is effective for annual periods beginning on or after 1 January 2018, with early application permitted. Retrospective application is required, but comparative information is not compulsory. The amendments are not expected to impact TGS' financial position or performance.

- **IFRS 15 Revenue from Contracts with Customers**

The IASB has issued a new revenue recognition standard, IFRS 15. The standard replaces existing IFRS revenue requirements. The core principle of IFRS 15 is that revenue is recognized to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard applies to all revenue contracts and provides a model for the recognition and measurement of sales of some non-financial assets (e.g., disposals of property, plant and equipment). The standard is effective for annual periods beginning on or after January 1, 2018:

TGS expects to implement IFRS 15 from 1 January 2018. TGS has started the analysis of possible effects from implementing the standard on the Company's consolidated financial statements. For late sales and proprietary sales no material effects are expected following the implementation of IFRS 15. Pre-funding revenue on in progress multi-client surveys are currently being recognized as the services are performed. TGS is evaluating whether the pre-funding revenue can continue to be recognized over time under IFRS 15, or whether revenue recognition of revenue from multi-client surveys should be recognized at point(s) in time when seismic data is delivered to the customer, which depending on the contract will result in a portion of pre-funding revenue being recognized at several different points in time during the survey or (all) pre-funding revenue being recognized upon the completion of the contract. TGS has not yet concluded the analysis.

- **IFRS 16 Leases**

IFRS 16 Leases replaces existing IFRS leases requirements, IAS 17 Leases. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract, ie the customer ('lessee') and the supplier ('lessor'). The new leases standard requires lessees to recognize assets and liabilities for most leases, which is a significant change from current requirements. For lessor, IFRS 16 substantially carries forward the accounting requirements in IAS 17. Accordingly, a lessor continues to classify its leases as operating leases or finance leases, and to account for



those two types of leases differently. TGS is currently assessing the impact of IFRS 16 which is effective from 1 January 2019 and is considering if current agreements are considered lease agreements and determining if any agreements are non-cancellable. Reference is also made to note 19 which describes the Company's operating leases during 2016.

There are no other IFRSs or IFRIC interpretations that are not yet effective that would be expected to have a material impact on TGS.

## 2. Business Combinations

No significant business combinations, either individually or collectively, took place in 2016 or in 2015.

## 3. Segment Information

TGS' reporting structure, as reported to the executive management, is broken down into the geographic areas forming the operating segments, North and South America (NSA), Europe and Russia (EUR) and Africa, Middle-East and Asia/Pacific (AMEAP).

TGS' onshore seismic projects in North America are reported under the business segment NSA. This is due to the executive management structure and common economic characteristics like a similar core client base, common sales resources, and long-term rights to market and sell data in North America.

In addition to the operating segments, TGS has segments that do not individually meet the quantitative thresholds to produce reportable segments. The segments which are aggregated and form "Other segments/Corporate costs" include GPS Well Logs, GPS Interpretations, Global Services, Imaging, G&A and Corporate.

Management monitors the operating results of its business units separately for the purpose of making decisions about resource allocation and performance assessment. Segment performance is evaluated based on operating profit or

2016	North & South America	Europe & Russia	Africa, Middle East & Asia/ Pacific	Other segments/Corporate costs	Consolidated
Net operating revenues	267,007	109,168	25,939	53,878	455,991
<b>Net external revenues</b>	<b>267,007</b>	<b>109,168</b>	<b>25,939</b>	<b>53,878</b>	<b>455,991</b>
Costs of goods sold-proprietary & other	(10)	5,677	53	38	5,759
Amortization and impairment of multi-client library	171,754	60,658	39,844	25,438	297,693
Operational costs	12,531	3,506	6,020	65,402	87,458
Depreciation, amortization and impairment	643	158	154	11,091	12,046
<b>Operating profit/(loss)</b>	<b>82,090</b>	<b>39,170</b>	<b>(20,133)</b>	<b>(48,092)</b>	<b>53,035</b>

Impairments of multi-client library totaled USD 11.0 million for 2016.

2015	North & South America	Europe & Russia	Africa, Middle East & Asia/ Pacific	Other segments/Corporate costs	Consolidated
Net operating revenues	295,388	125,179	112,866	78,914	612,347
<b>Net external revenues</b>	<b>295,388</b>	<b>125,179</b>	<b>112,866</b>	<b>78,914</b>	<b>612,347</b>
Costs of goods sold-proprietary & other	855	-	20	136	1,012
Amortization and impairment of multi-client library	247,237	69,462	166,340	24,239	507,276
Operational costs	8,800	5,186	14,956	83,511	112,452
Depreciation, amortization and impairment	501	44	168	12,128	12,840
<b>Operating profit/(loss)</b>	<b>37,995</b>	<b>50,487</b>	<b>(68,616)</b>	<b>(41,098)</b>	<b>(21,230)</b>

Impairments of multi-client library totaled USD 176.1 million for 2015.

loss and is measured consistently with operating profit or loss in the consolidated financial statements. However, group financing (including finance costs and finance income) and income taxes are managed on a group basis and are not allocated to the operating segments.

Transactions between operating segments are on an arm's length basis in a manner similar to transactions with third parties. No inter-segment sales between the reportable segments have taken place during 2016 or 2015. Employee bonuses and cost related to share options are recognized within "Corporate costs".

A reconciliation of Operating profit/(loss) to Profit/(loss) before taxes is provided as follows:

	2016	2015
Operating profit for reportable segments	101,127	19,867
Operating profit for other segments/corporate costs	(48,092)	(41,098)
<b>Total segments</b>	<b>53,035</b>	<b>(21,230)</b>
Financial income	3,053	6,265
Financial expenses	(3,967)	(516)
Exchange gains/losses	553	(9,024)
<b>Profit/(loss) before taxes</b>	<b>52,675</b>	<b>(24,505)</b>

Total assets are not a part of the information regularly provided to executive management. TGS does not report a measure of liabilities for the reportable segments.

As the operating segments reported are broken down to geographic areas, there is no further breakdown of revenues to the customer's country of domicile.

Net revenues from one customer was above 10% of total revenues and amounted to USD 52.9 million in 2016, arising from sales in all the geographic areas (NSA, EUR and AMEAP). In 2015, net revenues from one customer exceeded 10% of total revenues and amounted to USD 109.7 million, arising from sales in all geographic areas (NSA, EUR and AMEAP).

Analysis of external revenues:

	2016	2015
2D seismic	182,260	165,267
3D seismic	230,662	386,110
Well logs and integrated products	43,070	60,970
<b>Total net revenues</b>	<b>455,991</b>	<b>612,347</b>
	2016	2015
Prefunding	105,198	256,658
Late sales	333,353	333,936
Proprietary	17,437	21,752
<b>Total net revenues</b>	<b>455,991</b>	<b>612,347</b>



## 4. Tangible Non-Current Assets

### 2016

Acquisition Cost and Depreciation:	Machinery and Equipment	Buildings <sup>2)</sup>	Total
Cost as of 1 January 2016	140,653	12,947	153,600
Additions	7,723	11	7,734
Disposals <sup>1)</sup>	(33,816)	(5,833)	(39,649)
Cost as of 31 December 2016	114,560	7,125	121,685
Accumulated depreciation as of 1 January 2016	118,897	4,520	123,417
Depreciation for the year	7,371	1,617	8,988
Accumulated amortization/depreciation on disposals	(33,296)	(5,771)	(39,067)
Capitalized to the multi-client library	5,325	-	5,325
Accumulated depreciation as of 31 December 2016	98,297	366	98,663
Net book value as of 31 December 2016	16,263	6,759	23,022
Useful life	2 to 7 years	3 to 12 years	

<sup>1)</sup> Losses on disposals during the year were recognized by USD 0.6 million <sup>2)</sup> The category mainly consists of leasehold improvements

### 2015

Acquisition Cost and Depreciation:	Machinery and Equipment	Buildings <sup>2)</sup>	Total
Cost as of 1 January 2015	139,161	12,703	151,864
Reclassification	31	(31)	-
Additions	5,064	612	5,676
Disposals <sup>1)</sup>	(3,603)	(337)	(3,940)
Cost as of 31 December 2015	140,653	12,947	153,600
Accumulated depreciation as of 1 January 2015	105,553	3,135	108,688
Depreciation for the year	8,094	1,462	9,556
Accumulated amortization/depreciation on disposals <sup>1)</sup>	(3,253)	(216)	(3,469)
Capitalized to the multi-client library	8,503	139	8,642
Accumulated depreciation as of 31 December 2015	118,897	4,520	123,417
Net book value as of 31 December 2015	21,756	8,427	30,183
Useful life	2 to 7 years	3 to 12 years	

<sup>1)</sup> No gains or losses on disposals were recognized during the year <sup>2)</sup> The category mainly consists of leasehold improvements

## 5. Intangible Assets

### 2016

Acquisition Cost and Depreciation:	Goodwill <sup>1)</sup>	Multi-client Library	Other Intangible Assets	Total
Cost as of 1 January 2016	118,252	3,880,884	84,986	4,084,122
Acquisition of assets from third-parties	286	166	-	452
Additions <sup>2)</sup>	-	271,010	3,278	274,288
Cost as of 31 December 2016	118,538	4,152,060	88,264	4,358,862
Accumulated depreciation and impairment as of 1 January 2016	50,606	3,041,968	75,726	3,168,300
Amortization for the year	-	286,692	-	286,692
Depreciation for the year	-	-	3,058	3,058
Impairment for the year	9	11,001	-	11,001
Capitalized to the multi-client library	-	-	471	471
Accumulated depreciation and impairment as of 31 December 2016	50,615	3,339,661	79,255	3,469,531
Net book value as of 31 December 2016	67,925	812,399	9,009	889,331
Useful life		4 to 7 years	3 to 7 years	

<sup>1)</sup> Accumulated depreciation relates to previous GAAPs prior to 2005 <sup>2)</sup> Internally developed additions to the multi-client library represents USD 70.8 million

### 2015

Acquisition Cost and Depreciation:	Goodwill <sup>2)</sup>	Multi-client Library	Other Intangible Assets	Total
Cost as of 1 January 2015	117,966	3,352,824	124,361	3,595,151
Acquisition of assets from third-parties	286	26,407	-	26,693
Additions <sup>3)</sup>	-	501,653	3,625	505,278
Disposals <sup>1)</sup>	-	-	[43,000]	[43,000]
Cost as of 31 December 2015	118,252	3,880,884	84,986	4,084,122
Accumulated depreciation and impairment as of 1 January 2015	50,606	2,534,692	115,012	2,700,310
Amortization for the year	-	331,213	-	331,213
Depreciation for the year	-	-	3,284	3,284
Impairment for the year	-	176,063	-	176,063
Accumulated amortization/depreciation on disposals <sup>1)</sup>	-	-	[43,000]	[43,000]
Capitalized to the multi-client library	-	-	430	430
Accumulated depreciation and impairment as of 31 December 2015	50,606	3,041,968	75,726	3,168,300
Net book value as of 31 December 2015	67,647	838,916	9,260	915,822
Useful life			3 to 7 years	

<sup>1)</sup> Gain on disposal during the year was USD 0.8 million <sup>2)</sup> Accumulated depreciation relates to previous GAAPs prior to 2005

<sup>3)</sup> Internally developed additions to the multi-client library represents USD 42.2 million



Due to the continued weakened market conditions in 2016 and the uncertainty in the market, TGS has carefully analyzed the underlying assumptions and uncertainties when performing the impairment tests. An impairment of the multi-client library of USD 11.0 million was recognized in 2016, compared to USD 176.1 million in 2015. The net present values of estimated future revenues for the respective multi-client projects were discounted by using a 12.5% (pre-tax) discount rate.

See the Summary of Significant Accounting Policies for the amortization policies of the multi-client library and for an explanation of the relevant accounting judgments, estimates and assumptions.

For a description of the impairment evaluation of goodwill and other intangible assets, see Note 6.

## 6. Impairment Testing of Goodwill and Other Intangible Assets

The table below shows goodwill by cash generating unit.

Specification of goodwill:	Imaging	GPS Well Logs	GPS Interpretation	Arcis	Other	Total
NBV as of 1 January 2016	27,928	12,505	7,558	18,581	1,076	67,647
Additions	-	286	-	-	-	286
Impairment	-	-	-	-	(9)	(9)
NBV as of 31 December 2016	27,928	12,791	7,558	18,581	1,067	67,925

In accordance with IFRS, TGS tests goodwill annually for impairment, or more frequently if there are indications that goodwill might be impaired. The test is performed at year-end.

Goodwill acquired through business combinations has been allocated to individual cash generating units (CGU) as referred to in the table above. GPS Well Logs, GPS Interpretations and Imaging form operating segments which are included in "Other segments/Corporate costs", while Arcis is part of "North & South America" in Note 3.

Goodwill for all the CGUs has been tested for impairment. Based on the impairment testing performed, no significant impairments have been recognized during 2016 (2015: USD 0 million).

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. The pre-tax rate is calculated based on the local tax rates in the relevant tax jurisdictions. TGS bases its impairment calculation on detailed budgets and forecast calculations, which are prepared separately for each of TGS' CGUs to which the individual assets are allocated. These budgets and forecast calculations generally cover a period of five years. For longer periods, a long-term growth rate is calculated and applied to project future cash flows after the fifth year.

### GPS Well Logs

The Geological Products & Services (GPS) GPS Well Logs CGU offers the industry's largest collection of digital well logs. The well data library includes US production data, directional surveys and a custom well file database. The CGU does also offer data integration services.

Following the final allocation of the purchase price of the outstanding shares of Digital Petrodata LLC in 2015, an additional goodwill of USD 0.3 million has been recognized to GPS Well Logs in 2016.

The value in use of GPS Well Logs has been determined based on revenue and cash flow projections from financial estimates prepared by management of the business unit. The approved budget has been used for 2017. The value in use calculations has not assumed any growth in 2018. For the subsequent three years, an expected growth rate of 2% has been used, which is lower than the actual historical growth and reflects the uncertainty in today's market.

A terminal value in 2021 of the business unit was determined by discounting the projected cash flow in 2021 assuming a nominal growth of 2% limited to twenty years. The applied growth is lower than the historical growth and reflects the current market uncertainty. The terminal value and the cash flows in the five year projection period were discounted using a 14% (pre-tax) discount rate.

The impairment calculations are most sensitive to the changes in the forecasted

growth rates, which are mainly influenced by future E&P spending and demand for TGS' products. In addition the impairment calculations are sensitive to the discount rate.

Management does not see any other reasonable changes in the key assumptions that would cause the value in use to be lower than its carrying value.

### Imaging

The Imaging CGU processes both 2D and 3D seismic data, with relevant products and services. In addition, research and development professionals are continually developing new technology and workflows for seismic imaging, as well as enhancing existing ones.

The value in use of the division has been determined based on revenue and cash flow projections from financial estimates prepared by management of the business unit. The approved budget has been used for 2017. The value in use calculations have assumed 5% growth in 2018 and in 2019. For the subsequent two years, an expected growth rate of 2% has been used, which is lower than the historical growth and reflects the current market uncertainty.

A terminal value in 2021 of the business unit was determined by discounting the projected cash flow in 2021 assuming a nominal growth of 2%. The terminal value and the cash flows in the five year projection period were discounted using a 14% (pre-tax) discount rate.

The impairment calculations are sensitive to the changes in the forecasted growth rates, which are mainly influenced by future E&P spending and demand for TGS' products. In addition the impairment calculations are sensitive to the discount rate.

Management does not see any other reasonable changes in the key assumptions that would cause the value in use to be lower than its carrying value.

### GPS Interpretation

The Geological Products & Services (GPS) Interpretations CGU offers interpretive studies and services to help energy companies find hydrocarbons.

The recoverable amount of GPS Interpretations has been determined based on additional sales of the multi-client library deriving from the interpretation work carried out by GPS Interpretations. The additional sales are estimated to be in the range of USD 2-3 million annually for the next five years

A terminal value in 2021 of the business unit was determined by discounting the projected cash flow in 2021 assuming a nominal growth of 2%. The terminal value and the cash flows in the five year projection period were discounted using a 11% (pre-tax) discount rate.

Management does not see any reasonable changes in the key assumptions that would cause the value in use to be lower than its carrying value.

### Arcis

The Arcis CGU comprises a land seismic business in Canada.

The value in use of Arcis has been determined based on revenue and cash flow projections from financial estimates prepared by management of the business unit. The approved budget has been used for 2017. The value in use calculations has not assumed any growth in 2018. For the subsequent three years, a growth rate of 2% has been used which is viewed as conservative based on current market expectations.

A terminal value in 2021 of the business unit was determined by discounting the projected cash flow in 2021 assuming a nominal growth of 2%. The terminal value and the cash flows in the five year projection period were discounted using a 12% (pre-tax) discount rate.

The impairment calculations are sensitive to the changes in the forecasted growth rates which are mainly influenced by future E&P spending and demand for TGS' products. In addition the impairment calculations are sensitive to the discount rate.

Management does not see any other reasonable changes in the key assumptions that would cause the value in use to be lower than its carrying value.



## 7. Personnel costs / Number of Employees / Remuneration to Executive Management, Board of Directors and Auditors

	2016	2015
Payroll	67,133	83,360
Social security costs	5,286	6,940
Pension costs	3,184	4,621
Other employee related costs	6,452	11,449
Salaries capitalized to developed software	(1,366)	(1,465)
Salaries capitalized to multi-client library	(29,019)	(41,659)
Personnel costs	51,670	63,246
Cost of stock options (see Note 8)	751	1,782
Personnel costs and cost of stock options	52,421	65,028

The number of employees per 31 December 2016 was 614 versus 747 per 31 December 2015. No loans to employees are outstanding as of 31 December 2016 or 31 December 2015.

In 2016, TGS provided a Short Term Incentive bonus plan that is funded by allocating 13.25% of operating profit among all full-time employees. This annual bonus plan was in place in 2016, and a similar plan is in place for 2017. Employees are eligible to participate in the bonus plan following a six month trial period. The bonus is payable quarterly and the amount paid is directly proportional to the actual operating profit of TGS. An individual employee's relative share of the bonus is based on level of responsibility, individual contribution, performance versus previous year goals and benchmark data. All bonuses earned in 2016 have been paid or accrued as of 31 December 2016. More information on the Short Term Incentive is provided in the company's Declaration on Executive Compensation.

The following table provides the stock, stock options, and warrants held by executive management:

Executive Management	No. of Shares Held 31/12/2016	No. of Options Held 31/12/2016	No. of Options Granted in 2016	No. of Options Exercised in 2016	PSUs awarded in 2016	Total balance of free-standing warrants related to PSUs/RSUs	WAEP <sup>1)</sup> (in NOK)
Kristian Johansen (CEO)	1,500	51,500	-	-	68,000	88,000	-
Sven B Larsen (CFO)	600	-	-	-	32,000	52,000	-
John Adamick (SVP Geological Products and Services)	36,000	42,000	-	14,400	26,000	38,000	113.80
Knut Agersborg (VP Global Services)	2,100	42,000	-	-	23,000	35,000	-
Will Ashby (VP HR and Communication)	-	6,500	-	-	23,000	24,800	-
Katja Akantieva (SVP Onshore)	-	10,100	-	-	26,000	38,000	-
Zhiming Li (SVP Data Processing and Research & Development)	105,694	42,000	-	14,000	26,000	38,000	113.80
Tana Pool (VP General Counsel)	-	-	-	-	23,000	35,000	-
Fredrik Amundsen (SVP Europe & Asia Pacific)	-	10,100	-	-	26,000	28,500	-

<sup>1)</sup> WAEP: Weighted average exercise prices on options exercised

The tables below show total expensed compensation to executive management:

### Executive Management 2016

Executive Management	Salary	Bonuses	Other Benefits <sup>1)</sup>	Payments from long-term incentive plans	Total Remunerations
Kristian Johansen (CEO from 11 March 2016)	477	93	1	-	570
Sven B Larsen	328	25	18	-	372
John A. Adamick	247	25	3	30	306
Knut Agersborg	174	10	19	-	203
Katja Akantieva	288	20	5	-	312
Zhiming Li	336	28	4	30	397
Tana Pool	291	16	10	-	317
Will Ashby (Executive from April 2016)	218	20	-	-	238
Fredrik Amundsen (Executive from April 2016)	177	36	16	-	228
Stein Ove Isaksen (Executive until April 2016)	247	-	18	-	265
Robert Hobbs (CEO until 11 March 2016)	174	-	630	53	856
Genie Erneta (Resigned in June 2016)	134	-	184	15	333

<sup>1)</sup> Termination benefits are included in "Other Benefits" for Robert Hobbs and Genie Erneta.

### Executive Management 2015

Executive Management	Salary	Bonuses	Other Benefits	Payments from long-term incentive plans	Total Remunerations
Robert Hobbs	506	593	19	163	1,280
Kristian Johansen <sup>1)</sup>	435	187	153	94	870
Sven B Larsen (CFO from 1 September 2015)	167	-	7	-	174
John A. Adamick	235	188	17	-	440
Knut Agersborg	172	73	21	157	424
Genevieve Erneta	207	64	17	-	288
Katja Akantieva (Executive from 17 February 2015) <sup>1)</sup>	212	68	74	-	354
Stein Ove Isaksen	236	107	20	113	477
Zhiming Li	308	206	19	128	662
Tana Pool	287	95	19	-	401

<sup>1)</sup> Other benefits include compensation for relocation expenses.



TGS operates a Long Term Incentive plan with performance metrics measured over a three year period. In 2016, a limited number of performance share units (PSUs) were issued to the executive managers under this plan. The plan and status versus performance metrics is further described in the Declaration on Executive Remuneration. Each of the PSUs represent the right to receive the maximum of one share, and the 2016 plan is equity settled

The maximum amount payable to the CEO in case of termination of employment without cause or for good reason is one times the amount of his highest annual base salary in effect during the three years that immediately precede the date of termination spread over an ensuing one year period and conditional upon his continued compliance with restrictive covenants.

The maximum amount payable to the CFO in case of termination for any reason other than redundancy, gross misconduct or statutory retirement is one times the amount of his highest annual base salary in effect during the three years that immediately precede the date of termination spread over an ensuing one year period and conditional upon his continued compliance with restrictive covenants.

The amount payable in the case of termination associated with a "change of control" event is one times the highest gross annual compensation received during the three years immediately preceding the "change of control" event, paid as a lump sum.

No other members of the executive management team have employment agreements providing termination benefits.

Robert Hobbs retired as a CEO in March 2016. Mr. Hobbs' termination benefits totalled USD 2.09 million, of which USD 1.34 million will be paid during the years 2017-2019.

The following set forth the compensation paid to the Board of Directors:

## Board of Directors 2016

	Director's Fee <sup>1)</sup>	Value of Shares Received <sup>2)</sup>	Total Remunerations
Hank Hamilton (Chairman of the Board)	210	-	210
Elisabeth Harstad	62	-	62
Mark Leonard	35	21	56
Vicki Messer	35	21	56
Tor Magne Lønnum	35	21	56
Wenche Agerup	35	21	56
Elisabeth Grieg	35	21	56
Torstein Sanness (Director from May 2016)	18	21	38

## Board of Directors 2015

	Director's Fee <sup>1)</sup>	Value of Shares Received <sup>2)</sup>	Total Remunerations
Hank Hamilton (Chairman of the Board)	220	-	220
Elisabeth Harstad	79	-	79
Mark Leonard	37	30	67
Vicki Messer	37	30	67
Tor Magne Lønnum	18	30	48
Wenche Agerup (Director from May 2015)	18	30	48
Elisabeth Grieg (Director from September 2015) <sup>3)</sup>	4	15	19
Bengt Lie Hansen (Director until May 2015)	18	-	18
Colette Lewiner (Director until May 2015)	37	-	37
Jørgen C. Arentz Rostrup (Director from May 2015 until September 2015) <sup>3)</sup>	15	12	26

<sup>1)</sup> The tables include Director's fees paid during the year. Directors receive fees on a bi-annual basis as decided by the AGM. Deviations in individual fees are related to the timing of the bi-annual payments.

<sup>2)</sup> In May 2016, each of the Directors, other than the Chairman received 1,650 restricted shares in TGS. One of the Directors was not permitted by her employer to own shares in other companies and will receive cash in lieu of restricted shares in an amount equal to the amount for which the other Directors will be able to sell their restricted shares for at the closing share price on the first day that a sale is permitted.

<sup>3)</sup> Jørgen C. Arentz Rostrup was elected as a Director by the AGM in May 2015. After accepting a job opportunity outside the European Economic Area (EEA), which would cause the Board to no longer fulfil the resident requirements set out in the Norwegian regulation, Mr Rostrup resigned from his position on the Board. An extraordinary general meeting was held in September 2015, and Elisabeth Grieg was elected to the Board of Directors in replacement of Mr. Rostrup.

	No. of Restricted Shares Received during 2016	No. of Shares Held 31/12/2016
Hank Hamilton (Chairman of the Board )	-	1,352,400
Elisabeth Harstad (Director)	-	-
Mark Leonard (Director)	1,650	18,850
Vicki Messer (Director)	1,650	9,750
Tor Magne Lønnum (Director)	1,650	6,550
Wenche Agerup (Director)	1,650	3,300
Elisabeth Grieg (Director)	1,650	2,645
Torstein Sanness (Director)	1,650	1,650

Compensation to the members of the Nomination Committee <sup>1)</sup>	2016	2015
Tor Himberg-Larsen (Chairman)	25	24
Christina Stray	14	14
Jarle Sjø (Member until May 2016)	11	14
Herman Kleeven (Member from May 2016)	-	-

<sup>1)</sup> The table shows compensation paid during the year.

Auditor's fee	2016	2015
Statutory audit	444	599
Other attestation services	-	2
Tax advisory services	20	16
Other services outside the audit scope	-	16
<b>Total fees</b>	<b>464</b>	<b>633</b>

All amounts are exclusive of VAT.

## 8. Long Term Incentive Plans

In 2014, 2015 and 2016, TGS issued performance-based incentive awards which are tied to long-term share performance. Prior to 2014 TGS issued stock options as long-term incentives.

When stock options are exercised, TGS issues new shares or transfers treasury shares. Options granted under the 2012 plan are secured by treasury shares. Options granted under the 2013 plan are secured by free-standing warrants.

In 2014 a limited amount of restricted share units (RSUs) were issued to key

employees other than the executive management. The 2014 RSU plan is a cash-settled plan measured at the end of each reporting period. These RSUs will vest and pay out three years after grant. The cash value of each RSU will not exceed two times the fair market value of a share on the last trading day prior to the date of grant which was NOK 184.90.

In 2015 and 2016, a limited number of performance share units (PSUs) were issued to executives, while a limited amount of restricted share units (RSUs) were issued to key employees other than the executive management. Each of the PSUs and RSUs represent the right to receive the maximum of one share, and the awards are equity settled. The PSUs and the RSUs will vest three years after grant.

At any time prior to date where the actual shares are delivered to the holder, the Board of Directors may determine that the 2015 RSU and PSU holders are eligible for an additional discretionary cash bonus.

The actual number of shares to be received by holders of the 2016 PSUs are dependent on three performance metrics which are measured for the period 1 January 2016 through 31 December 2018 (2015 plan: 1 January 2015 through 31 December 2017);

- Multi-client market share
- Return on average capital employed
- Health, social and environmental metric

The performance metrics are described in more detail in TGS' Declaration on Executive Remuneration. If all the performance metrics are fully earned, the payout percentage will be at 100% which is equal to a total of 273,000 PSUs (2015 plan: 100,000 PSUs remaining at 31 December 2016). The fair value of the PSUs granted in 2016 is measured based on the market value of the shares at the end of each reporting period including the net present value of expected dividends during the vesting period. The fair value does reflect the expected result of the performance metrics.

The holders of the RSUs are eligible to receive one share per RSU on the vesting date, and the fair value of the RSUs granted in 2016 is measured based on the market value of the shares at the end of each reporting period, including the net present value of expected dividends during the vesting period. A total of 143,000 RSUs were granted in 2016. (2015 plan: 124,000 RSUs)

The 2015 PSUs and RSUs does not compensate for dividends during the vesting period, and the fair values are reduced by net present value of expected dividends during the vesting period.

The expense recognized for employee services during the year is shown in the following table:

	2016	2015
Expense arising from equity-settled share-based payment plans	1,975	2,202
Expense arising from cash-settled share-based payment plans	902	752

TGS' shares are traded in NOK at the Oslo Stock Exchange. TGS' functional currency is USD and the share-based payment plans will expose TGS for currency risk in relation to the amount of costs booked with fluctuations between NOK and USD.

The strike price of the outstanding stock options is equal to the market price of a share of common stock at market close the day prior to grant. The contractual life of an option is five years and there are no cash settlement alternatives.

The fair value of stock options granted is estimated at the date of the grant using the Black & Scholes model, taking into account the vesting pattern of each option. Fair value of the stock options have been determined by a level 3-technique from the fair value hierarchy, see also note 13.

The following table illustrates the number (No.) and weighted average prices (WAEP) of, and movements in, stock options, RSUs and PSUs during the year:

	2016		2015	
	No.	WAEP (NOK)	No.	WAEP (NOK)
Outstanding at 1 January	1,455,024	132.08	1,789,749	146.93
Granted during the year	416,000	0.25	288,000	0.00
Adjusted quantity due to performance criteria	(182,550)		(45,100)	
Forfeited during the year	(205,473)	108.30	(204,250)	150.50
Exercised during the year	(130,200)	113.80	(373,375)	107.23
Expired during the year	-		-	
Outstanding at 31 December	1,352,801	114.71	1,455,024	132.08
Exercisable at 31 December	644,250		384,200	

The weighted average remaining contractual life for the long-term incentive plans outstanding on 31 December 2016 is 1.32 years (2015: 1.89 years).

The weighted average fair value at 31 December 2016 of the PSUs and RSUs granted during 2016 was NOK 139.25. The weighted average fair value of the PSUs and RSUs granted during 2015 was NOK 135.98.

The range of strike prices for options at the end of the year was NOK 174.40 - NOK 181.90 (2015: NOK 113.80 - NOK 181.90).

The following table lists the input to the Black & Scholes model used for calculation of the share options granted in 2013:

	2013
<i>Expected volatility</i>	
For options vested after 3 year	0.41
For options vested after 4 year	0.48
<i>Expected risk-free interest rate</i>	
For options vested after 3 year	1.75%
For options vested after 4 year	1.90%
Expected life of options beyond vesting period (years)	1.00
Expected annual turnover of employees	1.00%
Dividend yield	0.00%
Model used	Black & Scholes

The expected life of the options is based on historical data and management's assessment. This is not necessarily indicative of exercise patterns that may occur. The expected volatility reflects the assumptions that the historical volatility is indicative of future trends, which may also deviate from the actual outcome.

The option plans are equity-settled and the fair values are measured at grant date.

The fair values of the PSUs and the RSUs are measured at every reporting date, and per 31 December 2016, the liabilities arising from the plans amounted to USD 1.8 million (2015: USD 1.2 million).



### Outstanding Stock Options as of 31 December 2016:

No. of Options	Exercise dates	Holders	Price/ conditions	Granted
418,500	See below <sup>1)</sup>	Key employees	NOK 174.40 Secured by treasury shares. Options expiring on 5 June 2017	9 August 2012
451,500	See below <sup>2)</sup>	Key employees	NOK 181.90 Warrants expiring on 4 June 2018	8 August 2013
<b>870,000</b>				

### Outstanding PSUs and RSUs as of 31 December 2016:

No. of PSUs/RSUs	Exercise dates	Holders	Price/ conditions	Granted
88,171	See below <sup>3)</sup>	Key employees	Fair market value (FMV) of a share capped at two times the FMV when granted (NOK 184.90)	12 August 2014
106,280	See below <sup>4)</sup>	Key employees	Fair market value (FMV) of a share reduced for expected dividends	5 August 2015
100,000	See below <sup>5)</sup>	Executive management	Fair market value (FMV) of a share reduced for expected dividends, adjusted for performance criteria	5 August 2015
143,000	See below <sup>6)</sup>	Key employees	Fair market value (FMV) of a share including expected dividends	5 August 2016
270,000	See below <sup>7)</sup>	Executive management	Fair market value (FMV) of a share including expected dividends, adjusted for performance criteria	5 August 2016
<b>707,451</b>				

<sup>1)</sup> The holders may request shares in exchange for the stock options as follows: Up to 50% beginning 9 August 2015 and 100% beginning 9 August 2016 less previously exercised.

<sup>2)</sup> The holders may request shares in exchange for the stock options as follows: Up to 50% beginning 8 August 2016 and 100% beginning 8 August 2017 less previously exercised.

<sup>3)</sup> The holders will receive a cash settlement based on the share price on 12 August 2017.

<sup>4)</sup> The holders will receive one share per unit on 5 August 2018.

<sup>5)</sup> The holders will receive maximum one share per unit on 5 August 2018.

<sup>6)</sup> The holders will receive one share per unit on 5 August 2019.

<sup>7)</sup> The holders will receive maximum one share per unit on 5 August 2019.

All stock options, PSUs and RSUs become immediately exercisable should a change of control occur as defined in the plan documents. The Company, at its sole discretion, may permit terminated employees to exercise vested options and/or exchange warrants if an active exercise period is in progress at the time employment is terminated or, provided the employment was not terminated for cause, during the first exercise period that begins after the termination date. The Board has allowed for extended periods for exercise in special circumstances.

## 9. Earnings per Share

Basic earnings per share amounts are calculated by dividing net profit for the year attributable to ordinary equity holders of TGS by the weighted average number of ordinary shares outstanding (net of treasury shares) during the year.

Diluted earnings per share amounts are calculated by dividing the net profit attributable to ordinary equity holders of TGS by the weighted average number of ordinary shares outstanding during the year plus the weighted average number of ordinary shares that would be issued on the conversion of all the dilutive potential ordinary shares (stock options) into ordinary shares.

The following reflects the income and share data used in the basic and diluted earnings per share computations:

	2016	2015
Net profit attributable to ordinary equity holders of the Parent	28,220	(28,368)
Weighted average number of ordinary shares (excluding treasury shares) for basic earnings per share	101,556	101,340
Effect of dilution:		
Share options, RSUs and PSUs	398	881
Weighted average number of ordinary shares (excluding treasury shares) adjusted for effect of dilution	101,954	102,221
Basic earnings per share	0.28	(0.28)
Diluted earnings per share	0.28	(0.28)

On 16 February 2017, a total of 318,925 stock options were exercised. There have been no other transactions involving ordinary shares or potential ordinary shares between the reporting date and the date of completion of these financial statements.

## 10. Equity and Shareholders Authorizations

### Ordinary Shares Issued and Fully Paid

	Number of shares	USD
1 January 2015	103,184,288	3,702
Cancelled 1,048,298 treasury shares held, 23 June 2015	(1,048,298)	(45)
31 December 2015	102,135,990	3,657
31 December 2016	102,135,990	3,657

## Treasury Shares

TGS, from time to time, buys back shares under authorizations given by the shareholders. The shares may be held in treasury, used as payment in M&A transactions, used in relation to exercise of employees' stock options, or eventually cancelled. As of 31 December 2016 TGS held 533,500 treasury shares, 0.5% of the total shares issued [2015: 673,600 shares, 0.7%].

The following table shows the movement of treasury shareholdings:

	Number of shares	USD
1 January 2015	1,843,512	76
Treasury shares used to cover option exercises and distributed to Board members (Note 7 and 8)	(292,850)	(10)
Treasury shares distributed as final payment to former owners of Volant Solutions	(8,764)	(1)
Cancellation of treasury shares in 2015	(1,048,298)	(45)
Shares bought back in 2015	180,000	6
31 December 2015	673,600	26
Treasury shares used to cover exercises and distributed to Board members (Note 7 and 8)	(140,100)	(5)
31 December 2016	533,500	21

## Shareholders' Authorization to the Board to Increase Share Capital in the Company and to Issue Convertible Loans

By resolution of the Annual General Meeting held 10 May 2016, the Board is authorized to, on behalf of the Company, increase share capital of the Company with up to NOK 2,553,399.75 through one or more issuances of new shares or bonus issues. The subscription price and other subscription terms will be determined by the Board. The capital increase may be paid in cash, by set-off or by other contributions in kind. The authorization includes the right to incur special obligations on behalf of the Company, cf. Section 10-2 of the Norwegian Public Limited Liability Companies Act. The shareholders' pre-emptive rights pursuant to Sections 10-4, cf. Section 10-5 of the Norwegian Public Limited Liability Companies Act, to subscribe for any new shares may be deviated from by the Board. The authorization shall encompass share capital increases in connection with mergers, cf. section 13-5 of the Norwegian Public Limited Liability Companies Act. This authorization shall be valid until the Annual General Meeting in 2017, but no later than until 30 June 2017.

By resolution of the Annual General Meeting held 10 May 2016, the Board is also granted the authorization to issue loans for a total amount of up to NOK 2,250,000,000 with the right to require shares to be issued (convertible loans).

The share capital may be increased by up to NOK 2,553,399.75, provided that the combined number of shares that are issued pursuant to this authorization and the authorization to increase the share capital shall not exceed 10% of the Company's current share capital. The subscription price and other subscription terms will be determined by the Board. The shareholders' pre-emptive rights pursuant to section 11-4 of the Norwegian Public Limited Companies Act cf. sections 10-4 and 10-5, may be deviated from by the Board. The authorization is valid until the annual general meeting in 2017, but no later than 30 June 2017.

The Company did not increase the share capital or issue any convertible loans between 10 May 2016 and 31 December 2016.

## Shareholders' Authorization to the Board to Buy Back Shares in the Company

By resolution of the Annual General Meeting held 10 May 2016, the Board is authorized to, on behalf of the Company, acquire the Company's own shares for an aggregate par value of NOK 2,553,399.75, provided that the total amount of own shares at no time exceed 10% of the Company's share capital. The limitations shall be adjusted in the event of share consolidation, share splits, and similar transactions. The lowest price to be paid per share shall be NOK 0.25 and the highest price to be paid per share shall be the price as quoted on the stock exchange at the time of acquisition plus 5%. The lowest price is equal to the current nominal



value and shall be adjusted in the event of share consolidation, share splits, and similar transactions. Acquisition and sale of the Company's own shares can take place in the manner which the Board of Directors considers to be in the Company's best interest. The authorization can be used one or several times. This authorization shall be valid until the Annual General Meeting in 2016, however no longer than until 30 June 2017.

The Company did not acquire any shares for treasury between 10 May 2016 and 31 December 2016.

### Shareholders' Authorization to the Board to Distribute Dividends

The Annual General Meeting held 10 May 2016 authorized the Board of Directors to distribute quarterly dividends on the basis of the 2015 financial statements. The Board shall, when using the authorization, pass its decision in accordance with the Company's approved dividend policy. The authorization shall be valid until the Company's annual general meeting in 2017, but no later than 30 June 2017.

The authorization has been used for the following quarterly dividends:

- Subject to the renewal of the authorization, the Board of Directors resolved on 21 April 2016 to pay a quarterly dividend of the NOK equivalent of USD 0.15 per share (NOK 1.23) with payments in June 2016.
- On 3 August 2016, the Board of Directors resolved to pay a quarterly dividend of the NOK equivalent of USD 0.15 per share (NOK 1.26).
- On 27 October 2016, the Board of Directors resolved to pay a quarterly dividend of the NOK equivalent of USD 0.15 per share (NOK 1.23) to the shareholders.
- On 1 February 2017, the Board of Directors resolved to pay a quarterly dividend of the NOK equivalent of USD 0.15 per share (NOK 1.23) to the shareholders.

### The 20 Largest Shareholders as of 31 December 2016 as Registered with VPS:

	Name	Country		Shares	%
1	FOLKETRYGDFONDET	NORWAY		7,859,559	7.7%
2	THE BANK OF NEW YORK MELLON N.V.	BELGIUM	NOM	7,787,430	7.7%
3	STATE STREET BANK AND TRUST COMP	U.S.A.	NOM	4,512,102	4.4%
4	THE NORTHERN TRUST COMP, LONDON BR	GREAT BRITAIN	NOM	4,130,537	4.1%
5	STATE STREET BANK AND TRUST COMP	U.S.A.	NOM	3,857,588	3.8%
6	RBC INVESTOR SERVICES TRUST	GREAT BRITAIN	NOM	2,766,877	2.7%
7	STATE STREET BANK AND TRUST COMP	U.S.A.	NOM	2,399,079	2.4%
8	STATE STREET BANK AND TRUST COMP	U.S.A.	NOM	2,304,077	2.3%
9	SWEDBANK ROBUR SMABOLAGSFOND	GREAT BRITAIN		2,036,378	2.0%
10	THE BANK OF NEW YORK MELLON	U.S.A.	NOM	1,978,834	1.9%
11	SANTANDER SECURITIES SERVICES, S.A	SPAIN	NOM	1,905,183	1.9%
12	PERITO AKSJE NORGE	NORWAY		1,576,233	1.6%
13	HSBC TRINKAUS & BURKHARDT AG	GERMANY	NOM	1,486,506	1.5%
14	DEUTSCHE BANK AG	GREAT BRITAIN	NOM	1,418,437	1.4%
15	CLEARSTREAM BANKING S.A.	LUXEMBOURG	NOM	1,418,234	1.4%
16	MORGAN STANLEY & CO. LLC	U.S.A.	NOM	1,387,461	1.4%
17	HAMILTON, HENRY HAYWOOD	U.S.A.		1,352,400	1.3%
18	JPMORGAN CHASE BANK, N.A., LONDON	GREAT BRITAIN	NOM	1,189,953	1.2%
19	STATE STREET BANK AND TRUST COMP	U.S.A.	NOM	1,103,416	1.1%
20	JPMORGAN CHASE BANK, N.A., LONDON	GREAT BRITAIN	NOM	1,079,536	1.1%
<b>20 largest shareholders</b>				<b>53,549,820</b>	<b>52.7%</b>
<b>Total number of shares, par value of NOK 0.25</b>				<b>101,602,490</b>	<b>100.0%</b>

Norwegian shareholders held 21,399,225 (21.1%) of TGS' outstanding shares (excluding treasury shares) at 31 December 2016. Shares held in treasury at 31 December 2016 were 533,500

## 11. Cash and Cash Equivalents

Cash and cash equivalents include demand deposits and high liquid instruments purchased with maturities of three months or less.

Cash and cash equivalent	2016	2015
Bank deposits	190,416	162,479
Restricted cash deposits	323	254
Total cash bank deposits	190,739	162,733

The bank deposits are mainly denominated in USD and NOK. Restricted cash deposits are for employee tax withholdings.

## 12. Related Parties

### Terms and Conditions of Transactions with Related Parties

No material transactions took place during 2016 or 2015 with related parties. See Note 7 for further information of the remuneration to the Board of Directors and to the executive management.

See Note 20 for further information about the subsidiaries. Internal transactions are eliminated in the consolidated financial statements and do not represent transactions with related parties.

## 13. Financial Risk Management Objectives and Policies

TGS has various financial assets such as accounts receivables, cash and financial investments available for sale, which arise directly from its operations. These are mainly held in USD, which is the functional currency to most of TGS' entities. TGS' principal financial liabilities comprise of trade payables and other current liabilities. TGS does not hold any currency or interest rate swaps.

It is, and has been, TGS' policy that no trading in derivatives shall be undertaken. The main risks arising from the financial risk management are currency risk, liquidity risk and credit risk.

The Board of Directors reviews and agrees policies for managing each of these risks which are summarized below.

### Currency Risk

Major portions of TGS' revenues and costs are in US dollars. Due to this, TGS' operational exposure to exchange rate fluctuation is low. However, as the Parent Company pays taxes in Norwegian kroner to Norwegian Tax Authorities and dividends to shareholders in Norwegian kroner, fluctuations between the NOK and the USD impact currency exchange gains or losses on the tax expense and financial items of the consolidated accounts. For deferred tax assets calculated in NOK, a change of 10% on the NOK/USD currency exchange rate could have an impact on net income of approximately USD 0.4 million (2015: USD 3.1 million) with a corresponding effect to profit or loss.

### Liquidity Risk

Liquidity risk arises from a lack of correlation between cash flow from operations and financial commitments. Per the balance sheet date, TGS held current assets of USD 544.2 million, of which cash and cash equivalents represent USD 190.7 million and other current assets represent USD 353.5 million. In comparison current liabilities amounted to USD 262.1 million. TGS had USD 75.0 million in undrawn credit facilities. As of 31 December 2016, TGS considers the liquidity risk to be low.

The table shows a maturity analysis for the different financial items:

2016	0-6 months	6-12 months	> 1 year	Total
Accounts payable and debt to partners	116,118	416	-	116,534
Other non-current liabilities	-	-	6,057	6,057
<b>Total</b>	<b>116,118</b>	<b>416</b>	<b>6,057</b>	<b>122,591</b>
2015	0-6 months	6-12 months	> 1 year	Total
Accounts payable and debt to partners	94,330	3,468	-	97,798
Other non-current liabilities	-	-	6,182	6,182
<b>Total</b>	<b>94,330</b>	<b>3,468</b>	<b>6,182</b>	<b>103,980</b>

### Credit Risk

All placements of excess cash are either bank deposits or in financial instruments that at minimum carry an "investment grade" rating. TGS' clients are oil and gas companies. TGS is exposed to credit risk through sales and uses best efforts to manage this risk. The maximum exposure to credit risk at the reporting date is the carrying value of each class of financial assets disclosed in the table below and the carrying value of the accounts receivables and other short-term receivables disclosed in note 16.

TGS evaluates the concentration of risk with respect to trade receivables as low due to the company's credit rating policies and as the clients are mainly large oil and gas

companies considered to be financially sound.

TGS from time to time accepts extended payment terms on parts of firm commitments from clients. To the extent these terms do not carry an interest compensation to be paid by clients, the revenues recognized by TGS are discounted to reflect this element. TGS may also seek extra security from the clients in certain cases, such as pledges, overriding royalty interest agreements (ORRIs) or carried interests in an exploration license held by the client or a conversion right to equity.

At 31 December 2016, none of the outstanding accounts receivables were secured by ORRIs (2015: USD 0 million).

For details of the accounts receivables including aging, please see note 16.

For details on other financial assets, please see note 14 .

### Capital Management

The goals for TGS' capital management of funds held are to:

1. Protect and preserve investment principal
2. Provide liquidity
3. Return a market rate of return or better

As per 31 December 2016, total equity represented 79% of total assets (2015: 82%) and TGS had no interest bearing debt.

It is the ambition of TGS to pay a cash dividend that is in line with its long-term underlying cash flow. When deciding the dividend amount, the TGS Board of Directors will consider expected cash flow, investment plans, financing requirements and a level of financial flexibility that is appropriate for the TGS business model.

From 2016, TGS has started paying quarterly dividends in accordance with the resolution made by the Annual General Meeting on 6 May 2015. The Annual General Meeting held 10 May 2016 renewed the Board of Directors' authorization to distribute quarterly dividends.

The aim will be to keep a stable quarterly dividend through the year, but the actual level paid will be subject to continuous evaluation of the underlying development of the company and the market.

On 1 February 2017, the Board of Directors resolved to pay a quarterly dividend of USD 0.15 (NOK 1.23) per share. The dividend was paid to the shareholders on 23 February 2017.

### Fair Value of Financial Instruments

Set out below is a comparison by class of the book value and fair value of the

financial instruments that are carried in the financial statements.

The fair value of the financial assets and liabilities are included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The following methods and assumptions were used to estimate the fair values:

- Cash and cash equivalents, accounts receivables and other short term receivables approximate their carrying amounts largely due to the short-term maturities of these instruments
- Fair value of other financial non-current assets is evaluated by TGS based on parameters such as interest rates and the individual creditworthiness of the counterparty
- Fair value of other financial liabilities is estimated by discounting future cash flows using rates currently available for debt on similar terms, credit risk and remaining maturities

### Fair Value Hierarchy

TGS uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique:

- Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities
- Level 2: Other techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly
- Level 3: Techniques which use inputs which have a significant effect on the recorded fair value that are not based on observable market data

Other non-current assets comprise account receivables with extended payment terms and loans. Any revenue share associated with these receivables is presented as "Other non-current liabilities". Fair values of the two loans (see note 14) and the receivables with extended payment terms have been determined by using a level 3-technique. The fair values are considered to be equal to net book values as the discount rate applied is consistent with the current interest rate.



Financial Instruments by Category

2016	Note	Carrying Amount	Fair Value	Cash and Cash Equivalents	Loans and Receivables	Assets/Liabilities at Fair Value Through the Profit and Loss	Available for Sale	Other Financial Liabilities
<b>Financial Assets</b>								
Other non-current assets	14	10,500	10,500	-	10,500	-	-	-
<b>Total</b>		<b>10,500</b>	<b>10,500</b>	<b>-</b>	<b>10,500</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Financial Liabilities</b>								
Other non-current liabilities	14	6,057	6,057	-	-	-	-	6,057
<b>Total</b>		<b>6,057</b>	<b>6,057</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6,057</b>

Financial Instruments by Category

2015	Note	Carrying Amount	Fair Value	Cash and Cash Equivalents	Loans and Receivables	Assets/Liabilities at Fair Value Through the Profit and Loss	Available for Sale	Other Financial Liabilities
<b>Financial Assets</b>								
Other non-current assets	14	25,102	25,102	-	25,102	-	-	-
<b>Total</b>		<b>25,102</b>	<b>25,102</b>	<b>-</b>	<b>25,102</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Financial Liabilities</b>								
Other non-current liabilities	14	6,182	6,182	-	-	-	-	6,182
<b>Total</b>		<b>6,182</b>	<b>6,182</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6,182</b>

## 14. Other Non-current Assets and Liabilities

Other non-current assets comprise account receivables with extended payment terms and loans. Any revenue share associated with these receivables is presented as "Other non-current liabilities".

None of the non-current receivables are due as per 31 December 2016.

Other non-current liabilities are due in 2018 (USD 3.8 million) and in 2019 (USD 0.8 million).

TGS has interest bearing loans to E&P Holding AS and Skeie Energy AS. The two loans with a total value of gross USD 42.1 million (net to TGS of USD 29.4 million) are recognized at USD 0 million as of 31 December 2016, net of provision for impairment. One of the loans has been written off as uncollectible during 2016, see table below.

### Other Non-current Assets

	2016	2015
Other non-current receivables	10,500	25,102
Interest bearing loans	42,128	42,128
- Provision for impairment of interest bearing loans	(21,100)	(42,128)
Interest bearing loans written off during the year as uncollectible	(21,028)	-
<b>Total other non-current assets</b>	<b>10,500</b>	<b>25,102</b>

### Non-current Liabilities

As per 31 December 2016, TGS has recognized other non-current liabilities of USD 6.1 million which primarily represent revenue share liabilities related to the receivables presented as "Other non-current receivables" and non-current restructuring liabilities.

## 15. Joint Operations

As part of its multi-client business, TGS invests in some of the multi-client projects as joint operations. Projects considered as joint operations are typically seismic projects organized between two parties where a vessel owning company provides the vessel used to acquire the seismic, while TGS provides the data processing services. Both parties have rights to the assets and liabilities relating to these arrangements.

TGS has not established any material legal entities together with other companies with the purpose of acquiring a seismic project.

The table below provides TGS' share of revenues, amortization, impairment and net book value of the multi-client library at year-end for projects considered as joint operations:

	2016	2015
Gross revenues (projects invoiced by TGS)	222,177	268,643
Revenue share (projects invoiced by TGS)	(99,628)	(113,057)
Net revenues (projects invoiced by TGS)	122,549	155,586
Net revenues (projects invoiced by partner)	15,886	34,179
Net revenues joint operations	138,435	189,765
Amortization	68,053	89,982
Impairment	529	10,031
Net book value of multi-client library (joint operations) at 31 December (recognized by TGS)	215,899	206,785

## 16. Accounts Receivables and Other Current Receivables

Accounts receivables are stated in the balance sheet at net realizable value.

The amount of revenues for in progress projects not yet invoiced, is presented as accrued revenues in the balance sheet.

Other short-term receivables consist primarily of prepayments made for multi-client projects during the seismic data acquisition phase.

For certain multi-client library projects, TGS has cooperation agreements whereby revenues are shared with other companies and or governments. In such situations accounts receivables are presented gross for projects where TGS issues the licence agreement and is responsible for invoicing, while the related partner share is presented within "Accounts payable and debt to partners". See note 22 for a breakdown of gross revenues and revenue share and note 15 for gross revenues and revenue share from projects considered as joint operations.

In cases where extended payment terms have been agreed, the implied interest is reflected in the stated amount

	2016	2015
Accounts receivables	204,912	143,033
- Provision for impairment of accounts receivables	(3,681)	(7,649)
Accounts receivables - net	201,231	135,384
Accrued revenues	119,112	142,263
Other current receivables	33,073	30,818
<b>Total</b>	<b>353,416</b>	<b>308,465</b>

The aging of the accounts receivables (nominal amounts) is as follows:

	Total	Not due	< 30 days	30 - 60 days	60 - 90 days	Over 90 days
2016	324,024	259,200	31,438	12,634	6,113	14,639
	Total	Not due	< 30 days	30 - 60 days	60 - 90 days	Over 90 days
2015	285,296	243,652	16,026	7,643	486	17,489

Provisions for accounts receivables are based on an individual assessment. Receivables with impairment provisions are all within the aging group "Over 90 days".

Movements on TGS' provision for impairment of accounts receivables are as follows:

	2016	2015
At 1 January	7,649	3,562
Provision for receivables impairment	2,546	5,891
Receivables written off during the year as uncollectible	(6,514)	(1,804)
Amount collected	-	-
<b>At 31 December</b>	<b>3,681</b>	<b>7,649</b>

The provision for impaired receivables has been included in "Other operating expense" in the statement of comprehensive income. Amounts charged to the allowance account are generally written off when there is no expectation of recovering additional cash.

For a description of credit risk, see Note 13.

## 17. Accounts Payables and Other Current Liabilities

	2016	2015
Accounts payable and debt to partners	116,534	97,798
Other current liabilities	127,510	117,615
<b>Total accounts payable and other payables</b>	<b>244,044</b>	<b>215,413</b>

Accounts payables are non-interest bearing and are normally settled on 30-day terms.

Other current liabilities consist of accrued expenses and deferred revenues.



## 18. Bank Overdraft Facility and Guarantees

### 3 Year Term Secured Revolving Credit Facility:

In January 2016, TGS entered into an amended and restated revolving credit facility of USD 75.0 million. The terms for Eurodollar borrowings range from Libor +1.75% to Libor +2.25%, depending on TGS' Leverage Ratio, multiplied by the Statutory Reserve Rate, as such terms are defined in the revolving credit facility. For unused commitments, TGS will pay a facility fee between 0.20% and 0.30% per annum, depending on the company's Leverage Ratio. TGS has the right to prepay Eurodollars borrowings with a 3 day notice. With respect to USD 10 million of the USD 75 million commitment, TGS must maintain a cash deposit of USD 10 million to access this portion of the commitment. The amended and restated revolving credit facility supersedes TGS' prior revolving credit facility which had a limit of USD 50.0 million. Per 31 December 2016 TGS had not drawn on the facility.

The facility is secured by a lien on the assets of TGS-NOPEC Geophysical Company (US), A2D Technologies Inc. and Volant Solution Inc. and is guaranteed by TGS-NOPEC Geophysical Company ASA and certain wholly owned subsidiaries.

### Demand Revolving Credit Facility (Canada):

In 2016, TGS terminated the Revolving Credit Facility in Canada. The facility had a limit of CAD 2.0 million which was equivalent to USD 1.4 million at 31 December 2015. Per 31 December 2015, TGS had not drawn on the facility.

### Guarantees

Per 31 December 2016, two bank guarantees have been issued on behalf of TGS of a total of USD 0.9 million related to seismic programs (2015: USD 0.8 million).

Under section 479A of the UK Companies Act 2006; one of TGS' subsidiaries, TGS Geophysical Company (UK) Limited (Registration number: 05731700), has availed exemption for audit of their statutory financial statements pursuant to guarantees issued by TGS to indemnify the subsidiary of any losses towards third parties that may arise in the financial year ended 31 December 2016 in such subsidiary. TGS can make an annual election to support such guarantee for each financial year.

## 19. Commitments and Contingencies

### Operating Leases

As at the end of 2016, TGS has entered into commitments for two 3D vessels, two source vessels and one 2D vessel. All of these commitments will expire in 2017, and the amount committed, included contractual lease agreements, totaled USD 50 million (2015: USD 199 million).

In addition TGS has entered into commercial leases on certain office premises and for office equipment and hardware. The leases for premises expire between 1-10 years and have renewal options. There are no restrictions placed upon TGS by entering into these leases.

Operating leases of USD 10.0 million were recognized as expenses in 2016 (2015: USD 11.9 million).

Future minimum payments for operating leases (excluding vessels) at 31 December are as follows:

	2016	2015
Within one year	16,491	19,270
After one year but not more than five years	47,133	30,988
More than five years	18,637	23,661
	<b>82,261</b>	<b>73,919</b>

## 20. Subsidiaries

As of 31 December 2016, TGS consists of:

Company Name	Country of Incorporation	Shareholding and voting power
TGS-NOPEC Geophysical Company ASA	Norway	Parent Company
TGS AP Investments AS	Norway	100%
Maglight AS	Norway	100%
TGS Contracting AS	Norway	100%
Marine Exploration Partners AS	Norway	100%
Aceca Norge AS	Norway	100%
TGS-NOPEC Geophysical Company , Ltd.	UK	100%
TGS Geophysical Investments, Ltd.	UK	100%
Aceca Ltd.	UK	100%
TGS Geophysical Company (UK) Ltd	UK	100%
Magsurvey, Ltd.	UK	100%
TGS-NOPEC Geophysical Company	USA	100%
A2D Technologies, Inc.	USA	100%
Parallel Data Systems, Inc.	USA	100%
Volant Solutions Inc.	USA	100%
Digital Petrodata LLC	USA	100%
TGS Alaska Company	USA	100%
TGS Mexico Contracting LLC	USA	100%
Calibre Seismic Company	USA	50%
TGS do Brasil Ltda	Brasil	100%
TGS-NOPEC Geophysical Company PTY, Ltd.	Australia	100%
TGS-NOPEC Geophysical Company PTE, Ltd.	Singapore	100%
TGS Canada Ltd.	Canada	100%
Arcis Seismic Solutions Corp.	Canada	100%
Arcis International Ltd.	Cyprus	100%
MxP Marine Seismic Services Ltd.	Cyprus	100%
TGS-NOPEC Geophysical Company Moscow, Ltd.	Russia	100%
NOPEC Geophysical Company S. de R.L. de C.V.	Mexico	100%
TGS-Petrodata Offshore Services Ltd.	Nigeria	49%

## 21. Contingent Liabilities

### Økokrim Charges and Related Civil Matters

On 6 May 2014, TGS was notified that Økokrim, the Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime, charged TGS for violations of the Norwegian Tax Assessment Act and the Norwegian Securities Trading Act related to a transaction entered into in May 2009 with Skeie Energy AS, later known as E&P Holding AS (Skeie). The charge claims that TGS contributed to unwarranted tax refunds received by Skeie under the Norwegian Petroleum Tax Act through licenses of seismic data to Skeie, which included licenses to existing TGS multi-client data primarily in the North Sea and the Barents Sea and prefunding of a large 3D survey in the Hoop area of the Barents Sea. The surveys licensed by Skeie have since been licensed to multiple customers and are located in a very prospective area. Skeie paid for the licenses partially in cash, with the remaining amount of USD 42.1 million (net to TGS of USD 29.4 million) payable at the end of 2010. Due to Skeie's failed attempt to raise new capital, the loan was not repaid at the maturity date, and the loan was restructured into two loans from Skeie and an affiliated company during 2011. TGS has actively pursued collection of the loans, but despite these efforts, the loans were not repaid and the Company has written off as uncollectible one of the loans and has taken a reserve for the full amount of the other loan.

On 2 March 2017, Økokrim issued a corporate fine of NOK 85 million (approximately USD 10 million) against TGS based on the alleged violations of the Norwegian Tax Assessment Act. Økokrim dismissed the charges against TGS for market manipulation in violation of the Securities Trading Act due to insufficient evidence. Økokrim has advised that it will raise the fine to 90 MNOK in the event that the fine is rejected and the case is brought to court. The Company has rejected the fine, and a trial regarding the alleged violations is expected to occur in late 2017 or early 2018. Based upon the Company's assessment of the evidence in the case to date, the Company believes the claims by Økokrim lack merit and a trial will confirm that TGS acted diligently in connection with the transactions with Skeie and no wrongdoing by the Company occurred. Given the early stage of the trial process, it is impracticable to render an accurate assessment of the outcome. However, based upon the Company's rejection of the fine and its assessment of the case at this point, it does not consider it probable that an outflow of resources embodying economic benefits will be required to settle the obligation and no provisions have been made.

TGS has also been notified of potential claims of joint responsibility from Skeie and two affiliated parties, all of which are predicated on whether the parties

making the claims are ultimately held responsible for unwarranted tax refunds and suffer damages that can be attributed to TGS. In October 2016, Skeie Technology, one of the Skeie affiliates and a guarantor of certain of Skeie's obligations, filed a writ of summons against TGS and certain other parties, seeking a declaratory judgment of joint liability for losses that, through its parent company guarantee, may be suffered by Skeie Technology as a result of the acquisition of seismic data by Skeie from TGS in 2009. The court in this case, which was in its very early stages, has stayed the proceedings pending the resolution of the Økokrim matter. No specific damages have been asserted in the writ.

In May 2016, TGS received a notice of a claim for compensation from the Norwegian Government for the Government's alleged tax losses arising from tax benefits received by Skeie under the Petroleum Tax Act in connection with the sale of seismic data to Skeie. The Government alleges that TGS aided and abetted Skeie in attaining undue tax advantages. At the request of the Government, TGS granted the Government a three-year extension of the statute of limitations with respect to legal action on the claim of compensation. The Government has made similar claims against other parties involved with Skeie, including Skeie Technology as a guarantor. The amount claimed by the Government represents the amount of the unwarranted tax refunds received by Skeie plus interest (at the time of the notice, a total of approximately NOK 326 million).

The above civil matters have arisen in relation to the transactions that form the basis for the Økokrim charges, and the outcome of these matters will depend in large part on the outcome of the Økokrim matter. Given the early stage of these proceedings, it is impracticable to render an accurate assessment of the outcome. However, based upon the Company's belief that the Økokrim allegations lack merit, and the trial will confirm that TGS did nothing wrong, the Company also believes these claims of liability are not well-founded, and it intends to challenge the claims vigorously. As a result, the Company does not consider it probable that an outflow of resources embodying economic benefits will be required to settle the obligation and no provisions have been made.



## 22. Gross and Net Revenues

TGS shares certain multi-client revenue with other companies (joint operations – see note 15) and the governments in certain countries. Operating revenue is presented net of portion shared. The table below provides the breakdown of gross revenue for 2015 and 2016.

	2016	2015
Gross revenues from sales	571,642	726,038
Revenue sharing	(115,651)	(113,691)
<b>Net revenues</b>	<b>455,991</b>	<b>612,347</b>

Revenue sharing does also include amounts not considered to be classified as joint operations as reported in Note 15.

## 23. Financial Items

	2016	2015
Interest income	3,029	5,603
Exchange gains	3,677	262
Other financial income	25	662
<b>Total financial income</b>	<b>6,731</b>	<b>6,527</b>
Interest expense	(992)	(168)
Exchange loss	(3,124)	(9,286)
Other financial expenses	(2,974)	(348)
<b>Total financial expenses</b>	<b>(7,090)</b>	<b>(9,802)</b>
<b>Net financial items</b>	<b>(360)</b>	<b>(3,275)</b>

## 24. Tax Expense and Deferred Tax

	2016	2015
<b>Profit before taxes</b>		
Norway	35,560	(73,945)
Outside Norway	17,115	49,440
<b>Total profit before taxes</b>	<b>52,675</b>	<b>(24,505)</b>
<b>Current taxes</b>		
Norway	-	1,318
Outside Norway	14,344	5,634
<b>Total current taxes</b>	<b>14,344</b>	<b>6,952</b>
<b>Changes in deferred taxes</b>		
Norway	14,548	(14,439)
Outside Norway	(3,871)	11,328
<b>Total changes in deferred taxes</b>	<b>10,678</b>	<b>(3,110)</b>
<b>Income tax expense reported in the income statement</b>	<b>25,022</b>	<b>3,842</b>
<b>Tax expense related to other comprehensive income</b>	<b>2016</b>	<b>2015</b>
Tax expense - other comprehensive income	-	-
	<b>2016</b>	<b>2015</b>
Profit before taxes:	52,675	(24,505)
Expected income taxes according to corporate income tax rate in Norway	13,169	(6,595)
Tax rates outside Norway different from 25%/27%	2,624	5,915
Adjustment in respect of current income tax of previous year	1,201	342
Deferred tax asset related to stock options	(136)	504
Change in deferred tax asset not recognized	(163)	1,055
Non-taxable income	(2,177)	(6,143)
Different tax rates of subsidiaries operating in other jurisdictions	1,050	-
Withholding taxes expensed	2,922	-
Tax effect on exchange gain/(loss) on dividend	-	632
Non-deductible expenses	3,164	519
Currency effects	3,369	7,614
<b>Income tax expense</b>	<b>25,022</b>	<b>3,842</b>
<b>Effective tax rate in %</b>	<b>48%</b>	<b>-16%</b>

## Comments on Selected Line Items in the Preceding Table

### *Tax Rates Different from the Norwegian Tax Rate*

The tax rates for subsidiaries outside Norway are on average higher than the Norwegian 25% (2015: 27%) tax rate. The most significant effects relate to the US subsidiaries, which have a tax rate of 35%.

### *Deferred Tax Asset Related to Stock Options*

In some tax jurisdictions, TGS receives a tax deduction in respect of remuneration in the form of stock options. TGS recognizes an expense for employee services in accordance with IFRS 2 which is based on the fair value of the award at the date of the grant. The tax deduction is not received until the stock options are exercised and is based on the intrinsic value of the award at the date of exercise. In accordance with IAS 12, the tax relief must be allocated between profit or loss and equity so that the amount of the tax deduction exceeding the cumulative cost of stock options expensed by TGS is recognized directly to equity.

### *Deferred Tax Asset Not Recognized*

Deferred tax assets are not recognized for carry forward of unused tax losses when TGS cannot demonstrate that it is probable that taxable profit will be available against which the deductible temporary differences can be utilized.

TGS has unused tax losses and deductible temporary differences of USD 22.0 million (2015: 23.6 million) where no deferred tax assets were recognized in the balance sheet, all outside Norway

### *Non-deductible expenses*

Non-deductible expenses consists of various types of expenses, such as effects of return to accrual adjustments and payments of various local taxes, which are not deductible for tax purposes in the tax jurisdictions where TGS operates.

### *Currency Effects*

TGS' units that do not have their tax base in USD are exposed to changes in the USD/tax base-currency rates. Effects within the current year are classified as tax expense.

## Tax Effect of Temporary Differences and Tax Loss Carry-forwards as of 31 December

	2016	2015
<i>Differences that give rise to a deferred asset or a deferred tax liability:</i>		
Multi-client library/well logs	36,140	23,438
Fixed assets	(27,068)	(25,444)
Revenues on seismic projects in the work in progress phase	(73,009)	(46,848)
Goodwill and intangibles	(3,433)	(2,475)
Accruals	10,248	3,580
Interest deductions carried forward	1,025	199
Accounts receivable	(1,961)	8,595
Tax losses carried forward	25,884	16,835
Deferred revenue	603	495
Stock options	295	141
Withholding taxes carried forward	1,354	1,371
Other	204	257
<b>Total net deferred tax liability</b>	<b>(29,718)</b>	<b>(19,856)</b>
Of which:		
<b>Deferred tax asset</b>	<b>9,565</b>	<b>12,941</b>
<b>Deferred tax liability</b>	<b>39,284</b>	<b>32,797</b>
<i>Change in net deferred tax liability</i>	<i>2016</i>	<i>2015</i>
As of 1 January	19,856	20,760
Recognized in profit or loss	10,678	(3,110)
Withholding taxes recognized as deferred tax assets	(17)	1,371
Currency effects	(799)	835
<b>As of 31 December</b>	<b>29,718</b>	<b>19,856</b>

## Comments on Selected Line Items in the Preceding Table

### *Recognition of Deferred Tax Assets on Tax Losses Carried Forward*

Deferred tax assets are capitalized to the extent it is probable that TGS will have taxable profits and the carry forward tax losses can be utilized. Deferred tax losses on carry forward tax losses are recognized for Norway (USD 21.4 million), United Kingdom (USD 4.0 million) and Australia (USD 0.6 million).

### *Interest Deductions Carried Forward - Recognized as Deferred Tax Assets*

Interest deductions carried forward and recognized as deferred tax assets relate to Norway. USD 0.2 million has to be utilized no later than 2020, and the remaining part will have to be utilized no later than 2021.

### *Withholding Taxes Carried Forward - Recognized as Deferred Tax Assets*

Withholding taxes carried forward and recognized as deferred tax assets relate to Norway. USD 0.5 million has to be utilized no later than 2018, and the remaining part of the balance will have to be utilized no later than years 2019-2021.

### *Temporary Differences Group's subsidiaries*

No deferred tax has been recognized in respect of temporary differences related to unremitted earnings of the Group's subsidiaries where remittance is not contemplated and where the timing of distribution is within the control of the Group.

## 25. Events After the Balance Sheet Date

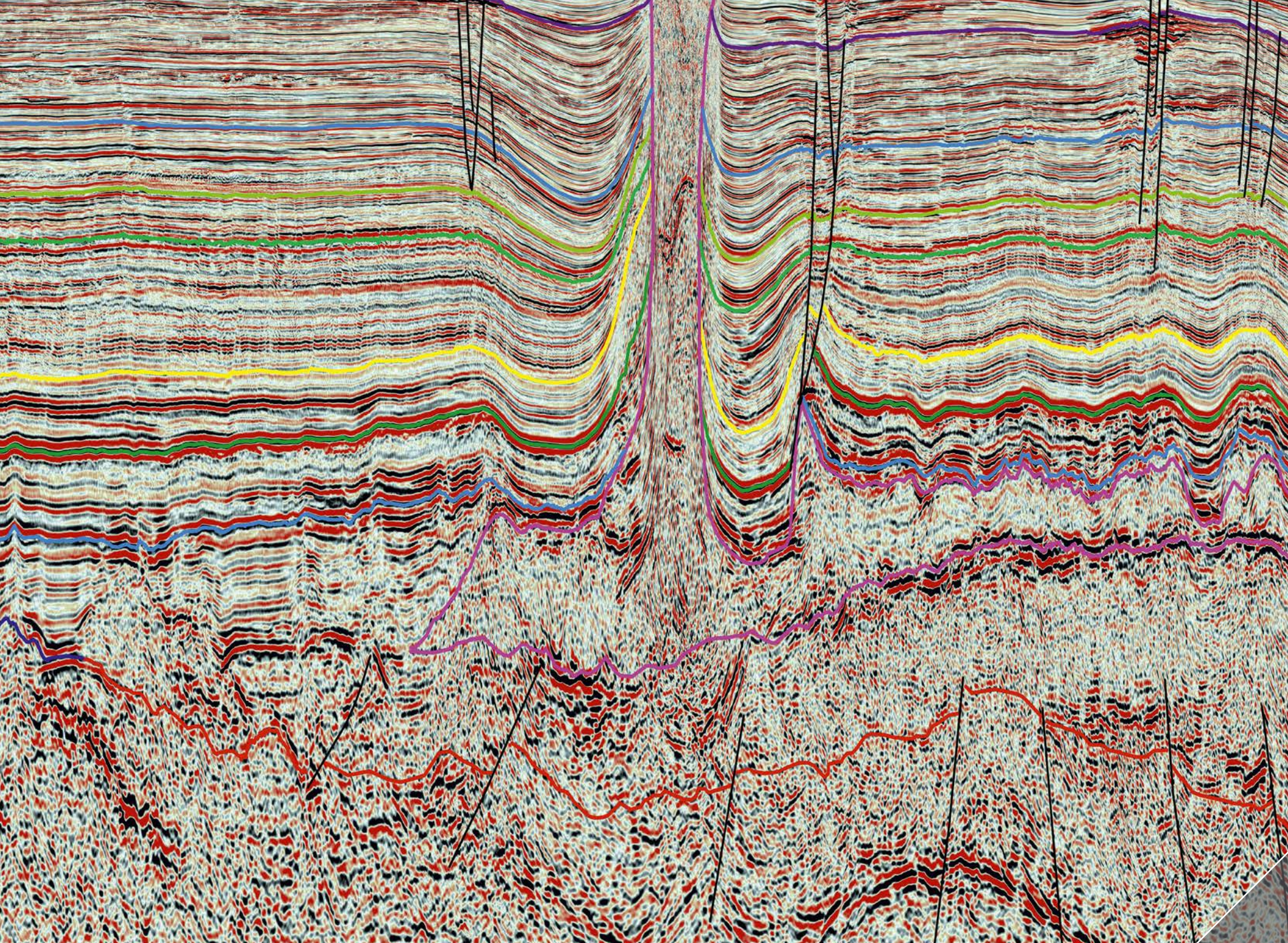
On 17 January 2017, certain subsidiaries of the Company, together with certain subsidiaries of Petroleum Geo-Services ASA (PGS), concluded the joint acquisition of a majority of the multi-client library of Dolphin UK Ltd. The total acquisition price paid by the TGS entities for the 50% interest acquired amounted to USD 6.2 million, USD 3.7 million of which was paid in cash at closing, with the balance payable in January 2021 under a promissory note guaranteed by the Company. In addition, the TGS and PGS entities agreed to pay a share of revenues received from licenses of the library in excess of a specified threshold, if any, during a four-year period after the closing.

On 1 February 2017, the Board of Directors resolved to pay a quarterly dividend of the NOK equivalent of USD 0.15 per shares (NOK 1.23) to the shareholders. The dividend payments were made on 23 February 2017.

On 2 March 2017, Økokrim issued a corporate fine of NOK 85 million (approximately USD 10 million) against TGS based on the alleged violations of the Norwegian Tax Assessment Act. See Note 21 for further details.

To the best of the management's and the directors' knowledge, no other significant subsequent events not described in this Annual Report have occurred since 31 December 2016 that would impact the financial statements as presented for 2016.









# ALTERNATIVE PERFORMANCE MEASURES

Despite the significant drop in exploration spending, TGS managed to grow net cash flow before dividends by 198% from 2015 to a level of USD 86 million.



# Alternative Performance Measures

## Definitions – Alternative Performance Measures

The European Securities and Markets Authority (ESMA) has published guidelines on Alternative Performance Measures which came into force in 2016.

TGS' financial information is prepared in accordance with IFRS. In addition, TGS provides alternative performance measures to enhance the understanding of TGS' performance. The alternative performance measures presented by TGS may be determined or calculated differently by other companies.

## EBIT (Operating Profit)

Earnings before interest and tax is an important measure for TGS as it provides an indication of the profitability of the operating activities.

The EBIT margin presented is defined as EBIT (Operating Profit) divided by net revenues.

## Prefunding Percentage

The prefunding percentage is calculated by dividing the multi-client prefunding revenues by the operational investments in the multi-client library, excluding investments related to projects where payments to the vendors are contingent on sales. The prefunding percentage is considered as an important measure as it indicates how the Company's financial risk is reduced on multi-client investments.

## EBITDA

EBITDA means Earnings before interest, taxes, amortization, depreciation and impairments. TGS uses EBITDA because it is useful when evaluating operating profitability as it excludes amortization, depreciation and impairments related to investments that occurred in the past. Also, the measure is useful when comparing the Company's performance to other companies.

(All amounts in USD 1,000s)

	2016	2015
Net Income	27,653	(28,347)
Taxes	25,022	3,842
Net financial items	360	3,275
Depreciation, amortization and impairment	12,046	12,840
Amortization and impairment of multi-client library	297,693	507,276
<b>EBITDA</b>	<b>362,774</b>	<b>498,886</b>

## Return on average capital employed

Return on average capital employed (ROACE) shows the profitability compared to the capital that is employed by TGS, and it is calculated as operating profit divided by the average of the opening and closing capital employed for a period of time.

Capital employed is calculated as equity plus net interest bearing debt. Net interest bearing debt is defined as interest bearing debt minus cash and cash equivalents. TGS uses the ROACE measure as it provides useful information about the performance under evaluation.

(All amounts in USD 1,000s)

	31 December 2016	31 December 2015
Equity	1,169,124	1,198,088
Interest bearing debt	-	-
Cash	190,739	162,733
Net interest bearing debt	(190,739)	(162,733)
<b>Capital employed</b>	<b>978,385</b>	<b>1,035,355</b>
<b>Average capital employed</b>	<b>1,006,870</b>	<b>988,514</b>
Operating profit	53,035	(21,230)
<b>ROACE</b>	<b>5%</b>	<b>-2%</b>



### Free cash flow (after multi-client investments)

Free cash flow (after multi-client investments) when used by TGS means cash flow from operational activities minus cash investments in multi-client projects. TGS uses this measure as it represents the cash that the Company is able to generate after investing the cash required to maintain or expand the multi-client library.

(All amounts in USD 1,000s)

	2016	2015
Cash flow from operational activities	324,366	566,513
Investments in multi-client library	(233,297)	(503,612)
<b>Free cash flow (after multi-client investments)</b>	<b>91,069</b>	<b>62,901</b>

### Multi-client net revenues/average net book value ratio

The ratio is defined as the net revenues from multi-client revenues divided by the average of the opening and closing balance of the multi-client library.

(All amounts in USD 1,000s)

	2016	2015
Multi-client net revenues	438,555	590,593
Opening balance multi-client library	838,915	818,132
Closing balance multi-client library	812,399	838,915
Average net book value	825,657	828,524
<b>Multi-client net revenues/average net book value ratio</b>	<b>0.53</b>	<b>0.71</b>

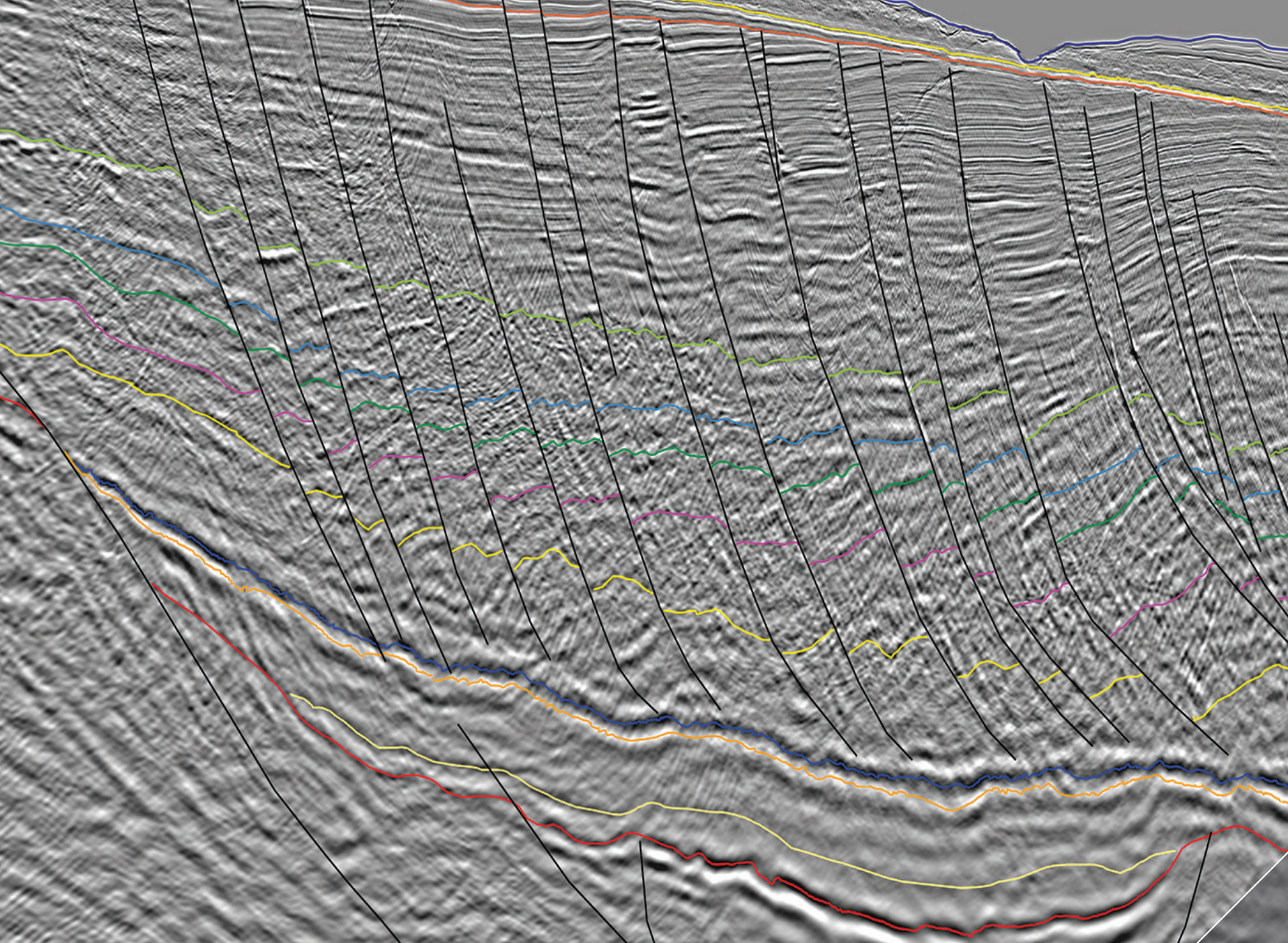
### Backlog

Backlog is defined as the total value of future revenue from signed customer contracts.

### Yield

Yield is defined as the dividend per share divided by the share price at the time of the dividend announcement. The 2016 dividend yield is annualized based on the weighted yield at the time of announcement of quarterly dividends.









# PARENT COMPANY FINANCIALS

TGS continues to generate multi-client revenues from a well-balanced mix of products across a geographically diverse portfolio, including 2D seismic, 3D seismic and a range of geological products.



# Income Statement

Parent Company

(All amounts in USD 1,000s)

	Note	2016	2015
Net revenues	17	222,122	313,963
<b>Net revenues</b>		<b>222,122</b>	<b>313,963</b>
Cost of goods sold - proprietary and other		5,675	99
Amortization and impairment of the multi-client library	3	181,548	330,732
Personnel costs	4	7,199	8,666
Cost of stock options	4	80	216
Other operating expenses	13, 18	30,716	51,961
Depreciation, amortization and impairment	2, 3	635	748
<b>Total operating expenses</b>		<b>225,853</b>	<b>392,421</b>
<b>Operating profit/(loss)</b>		<b>(3,731)</b>	<b>(78,458)</b>
Interest income	15	568	2,178
Financial Income	15	23,851	862
Exchange gains/losses	15	1,674	(488)
Interest expenses	15	(4,164)	(2,803)
Financial expenses	15	(13,287)	(143)
<b>Net financial items</b>		<b>8,643</b>	<b>(394)</b>
<b>Profit/(loss) before taxes</b>		<b>4,911</b>	<b>(78,852)</b>
Tax expense	16	2,740	(15,279)
<b>Net income/(loss)</b>		<b>2,171</b>	<b>(63,572)</b>
Profit/(loss) for the year is proposed allocated as follows:			
To/from other equity	6	2,171	(63,572)
<b>Total allocated</b>		<b>2,171</b>	<b>(63,572)</b>

# Balance Sheet

Parent Company

As of 31 December.

(All amounts in USD 1,000s)

	Note	2016	2015
<b>Assets</b>			
<b>Non-current assets</b>			
<b>Intangible non-current assets</b>			
Goodwill	3	-	-
Multi-client library	3	514,057	584,630
Deferred tax asset	16	5,321	8,077
<b>Total intangible non-current assets</b>		<b>519,377</b>	<b>592,707</b>
<b>Tangible non-current assets</b>			
Machinery and equipment	2	1,466	2,079
<b>Total tangible non-current assets</b>		<b>1,466</b>	<b>2,079</b>
<b>Financial non-current assets</b>			
Investments in subsidiaries	7	128,969	141,792
Other non-current assets	19	7,690	11,767
<b>Total financial non-current assets</b>		<b>136,659</b>	<b>153,559</b>
<b>Total non-current assets</b>		<b>657,503</b>	<b>748,345</b>
<b>Current assets</b>			
<b>Receivables</b>			
Accounts receivable	9	186,591	192,915
Current receivables group companies	10	118,924	27,626
Other receivables	9	5,012	10,221
<b>Total receivables</b>		<b>310,527</b>	<b>230,762</b>
Cash and cash equivalents	8	50,859	45,323
<b>Total current assets</b>		<b>361,386</b>	<b>276,086</b>
<b>Total assets</b>		<b>1,018,889</b>	<b>1,024,431</b>

# Balance Sheet

Parent Company

As of 31 December.

[All amounts in USD 1,000s]

	Note	2016	2015
<b>Equity and Liabilities</b>			
<b>Equity</b>			
<b>Paid-in capital</b>			
Share capital	5, 6	3,656	3,656
Treasury shares held	5, 6	(19)	(24)
Share premium	6	58,107	58,107
Other paid-in capital	6	6,011	5,361
<b>Total paid-in capital</b>		<b>67,756</b>	<b>67,100</b>
<b>Retained earnings</b>			
Other equity	6	154,098	210,940
<b>Total retained earnings</b>		<b>154,098</b>	<b>210,940</b>
<b>Total equity</b>		<b>221,854</b>	<b>278,040</b>
<b>Liabilities</b>			
<b>Non-current liabilities</b>			
Other non-current liabilities	19	2,483	2,652
Deferred tax	16	-	-
<b>Total non-current liabilities</b>		<b>2,483</b>	<b>2,652</b>
<b>Current liabilities</b>			
Accounts payable and debt to partners		60,130	46,782
Current liabilities group companies	10	635,069	637,202
Taxes payable	16	-	-
Social security, VAT and other duties		493	435
Provisions for dividends	6	15,240	15,219
Other current liabilities	11	83,619	44,100
<b>Total current liabilities</b>		<b>794,552</b>	<b>743,738</b>
<b>Total liabilities</b>		<b>797,034</b>	<b>746,391</b>
<b>Total equity and liabilities</b>		<b>1,018,889</b>	<b>1,024,431</b>

23 March 2017



Henry H. Hamilton III  
Chairman



Wenche Agerup  
Director



Elisabeth Harstad  
Director



Tor Magne Lønnum  
Director



Kristian Johansen  
Chief Executive Officer



Mark S. Leonard  
Director



Elisabeth Grieg  
Director



Vicki Messer  
Director



Torstein Sanness  
Director



# Cash Flow

(All amounts in USD 1,000s)

Parent Company

	Note	2016	2015
<b>Cash flow from operating activities</b>			
Profit/(loss before taxes)	16	4,911	(78,852)
Depreciation/amortization/impairment	2, 3	182,183	331,480
Impairment shares in subsidiaries and receivables	7, 10	(33,260)	3,393
Unrealized currency gain/(loss)		(1,698)	9,697
Changes in accounts receivables and accrued revenue		56,496	185,760
Changes in other receivables		10,216	9,245
Changes in other balance sheet items		(94,498)	9,010
Received taxes		405	(56,571)
<b>Net cash flow from operating activities</b>		<b>124,755</b>	<b>413,161</b>
<b>Cash flow from investing activities</b>			
Investment in tangible assets	2	(22)	(334)
Investments in multi-client library	3	(59,640)	(298,154)
Investments in subsidiaries	7	-	(45,684)
Interest received	15	568	2,178
<b>Net cash flow from investing activities</b>		<b>(59,094)</b>	<b>(341,993)</b>
<b>Cash flow from financing activities</b>			
Interest paid	15	(4,164)	(2,803)
Dividend payments	6	(59,458)	(112,861)
Purchase of treasury shares	6	-	(4,844)
Proceeds from share offerings	6	1,798	4,021
<b>Net cash flow from financing activities</b>		<b>(61,823)</b>	<b>(116,487)</b>
<b>Net change in cash and cash equivalents</b>		<b>3,837</b>	<b>(45,319)</b>
Cash and cash equivalents at the beginning of the period	8	45,323	100,216
Exchange rate effects		1,698	(9,574)
<b>Cash and cash equivalents at the end of the period</b>		<b>50,859</b>	<b>45,323</b>

# Notes to Parent Company Financials

[All amounts in USD 1,000s unless noted otherwise.]

## 1. General Accounting Policies

### General Information

TGS-NOPEC Geophysical Company ASA (TGS or the Company) is a public limited company incorporated in Norway on 21 August 1996. The address of its registered office is Lensmannsli 4, 1386 Asker, Norway. The Company is listed on the Oslo Stock Exchange ("TGS").

The Company's financial statements were authorized by the Board of Directors on 23 March 2017.

TGS has been granted exemption from the Norwegian Tax Authority to publish its Annual Report in English only.

### Reporting Currency

The Parent Company, TGS-NOPEC Geophysical Company ASA, reports its financial results in USD, which is the Company's functional currency.

### General Accounting Policies

The financial statements are prepared in accordance with the Norwegian Accounting Act and generally accepted accounting principles in Norway. The notes are an integral part of the financial statements.

### Significant Accounting Judgments, Estimates and Assumptions

In the process of applying the Company's accounting principles, management is required to make estimates, judgments and assumptions that affect the amount reported in the financial statements and accompanying notes. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which will form the basis for making judgments on carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. The key sources of judgment and estimation of uncertainty at the balance sheet date that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

### *Impairment Evaluation of Multi-client Data Libraries*

TGS performed impairment reviews and determined the value in use of the multi-client library during 2016. The Company estimated value in use based on discounted estimated future sales forecasts. The underlying estimates that form the basis for the sales forecast depend on variables such as the number of oil and gas exploration and production (E&P) companies operating in the area that would be interested in the data, the overall E&P spending, expectations regarding hydrocarbons in the sector, whether licenses to perform exploration in the sectors exist or will be given in the future, expected farm-ins to licenses, relinquishments, etc. Changes in these estimates may potentially affect the estimated amount of future materially. The revenue estimates are evaluated regularly and impairments are recognized in the period they occur. Due to the continued challenging market conditions during 2016, TGS has had high focus on evaluating the market situation when considering the sales forecasting to make sure that the updated expectations were properly reflected in the impairment evaluations.

For details about the book value, amortization and impairment of the multi-client library, see Note 3.

### *Provision for Impairment of Losses of Accounts Receivables*

The Company has made provisions for impairment losses of specific accounts receivables deemed uncollectible. When assessing the need for provisions, the Company uses all available information about the various outstanding receivables, including the payment history and the credit quality of the actual companies.

### *Share-based Payments*

The Company measures the cost of stock options and other share-based payment plans granted to employees by reference to the fair value of the equity instruments at the date at which they are granted (equity-settled transactions) or at the end of each reporting period (cash-settled transactions) in accordance with NRS 15A (IFRS 2). Estimating fair value requires appropriate valuation

model to value the share-based instruments. The values are dependent on the terms and conditions of the granted share-based instruments. This also requires determining the appropriate assumptions in the valuation models including the expected life of the instruments, volatility and dividend yield.

## **Summary of Significant Accounting Policies**

### **Revenue Recognition**

Revenue is recognized when it is probable that the economic benefits from a transaction will flow to the Company and the revenue can be reliably measured. Revenue is measured at fair value of the consideration received, net of discounts and sales taxes or duty. The following describes the specific principles:

#### **Work in Progress (WIP)**

Sales in the form of prefunding commitments from customers under binding contracts are recognized as revenue on a percentage of completion (POC) basis normally measured according to the acquired and processed volume of data in relation to the estimated total size of the project. Sales made prior to commencement of acquisition for each project are recognized on a POC basis and presented as pre-funding revenues. Sales after the commencement, but while projects are in progress are also recognized on a POC basis progress and presented as POC late sales revenues. The amount of revenues for in progress projects not yet invoiced, is presented as accrued revenues in the balance sheet.

#### **Finished Data**

Revenue is recognized for sales of finished data at the time of the transaction; i.e. when the client has gained access to the data under a binding agreement.

#### **Volume Sales Agreements**

In certain situations TGS grants licenses to the customer for access to a specified number of blocks of multi-client library within an area. These licenses typically enable the customer to select and access the specific blocks over a period of time. Revenue recognition for volume sales agreements is based on a proportion of the total volume sales agreement revenue, measured as the customer gains access to the data.

#### **Revenue Sharing Arrangements**

TGS shares certain multi-client revenues with other companies and governments. Revenues are recognized on a net basis in accordance with applicable recognition principles.

#### **Proprietary Contracts**

Revenue from proprietary contracts for clients is recognized in the same way as work in progress (POC) in accordance with the specific agreement.

### **Interest Income**

Interest income is recognized as interest accrues. Interest income is included in the financial items in the income statement.

### **Royalty Income**

Royalty income is recognized on an accruals basis in accordance with the substance of the relevant agreements.

### **Cost of Goods Sold (COGS) – Proprietary Contracts and Other**

Cost of goods sold includes only direct cost related to proprietary contract work, and costs related to delivery of geoscientific data.

### **Multi-client Library**

The multi-client library includes completed and in-progress geophysical data to be licensed on a non-exclusive basis to oil and gas exploration and production companies. The costs directly attributable to data acquisition and processing are capitalized and included in the inventory value. Costs directly attributable to data acquisition and processing includes mainly vessel costs, payroll and hardware/software costs. Directly attributable costs do also include mobilization costs when relocating a vessel to the survey area. The library also includes the cost of data purchased from third parties. The library of finished multi-client seismic data and interpretations is presented at cost reduced by accumulated amortization.

### **Amortization of Seismic Data**

TGS has changed its amortization policy for seismic data in 2016. The change has been made due to an amendment of the relevant IFRSs. These amendments have also been implemented in the Parent company financials. The following amortization policy for the multi-client library has been implemented prospectively from 1 January 2016.

- During the work in progress phase, amortization is based on total cost versus forecasted total revenues of the project. Amortization is recorded in line with how revenues are recognized for each project during this phase
- After a project is completed, a straight-line amortization is applied. The straight-line amortization is assigned over a remaining useful life, which for most marine projects is considered to be 4 years. For most onshore projects, the remaining useful life after completion of a project is considered to be 7 years

The effect of the amendment has not been disclosed because estimating it is impracticable.



### ***Impairment Test Multi-client Library***

When there are indicators that the net book value may not be recoverable, the library is tested for impairment individually per project. Any impairment of the multi-client library is recognized immediately and presented as "Amortization and impairment of the multi-client library" in the statement of profit or loss.

TGS assesses, at each reporting date, whether there is an indication that a project may be impaired. If any indication exists, TGS estimates the project's recoverable amount. A project's recoverable amount is the higher of a project's fair value less costs of disposal and its value in use. When the carrying amount of a project exceeds its recoverable amount, the project is considered impaired and is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the project.

### ***Goodwill***

Goodwill is depreciated over ten years. In addition goodwill is reviewed for impairment, annually or more frequently if events or changes in circumstances indicate that the carrying value may be impaired.

### ***Tangible Non-current Assets and Principles of Depreciation***

Tangible non-current assets are presented at historical cost less accumulated depreciation and impairment charges. If an indication of impairment exists, an impairment test is performed. If the fair value of a tangible non-current asset is lower than book value, the asset will be written down to the higher of fair value less cost to sell and value in use. Depreciation is determined in light of the asset's economic life. Purchases which are expected to have a technical and economic life of more than one year are capitalized as tangible non-current assets. Depreciation begins when the assets are available for use.

### ***Exchange Rate Adjustments***

Transactions in foreign currency are translated at the rate applicable on the transaction date. Monetary assets, receivables and liabilities are translated at the exchange rate on the balance sheet date. Changes to exchange rates are recognized in the income statement as they occur during the accounting period.

### ***Research and Development Costs***

Research costs are expensed as incurred. Development expenditures on an individual project are recognized as an intangible asset when the Company can demonstrate:

- It is technically feasible to complete the product so that it will be available for use;

- Management intends to complete the product and use it;
- There is an ability to use the software product;
- It can be demonstrated how the product will generate future economic benefits;
- Adequate technical, financial or other resources to complete the development and to use the product are available; and
- The expenditure attributable to the product during its development can be reliably measured.

Following initial recognition of the development expenditure as an asset, the asset is carried at cost less any accumulated amortization and accumulated impairment losses. Amortization of the asset begins when development is complete and the asset is available for use. It is amortized over the period of expected future benefit.

### ***Provisions***

Provisions are made when the Company has a current obligation (legal or constructive) as result of a past event, it is probable that the Company will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

If the effect of the time value of money is material, provisions are discounted using a pre-tax rate that reflects, where appropriate, the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

Contingent liabilities are possible obligations as a result of a past event where the existence of the liability depends on the occurrence, or not, of a future event. An existing obligation, in which it is not likely that the entity will have to dispose economic benefits, or where the obligation cannot be measured with sufficient reliability, is also considered a contingent liability. Contingent liabilities are not recognized in the financial statements, but if material, disclosed in the accompanying notes. A contingent asset is not recognized in the financial statement, but disclosed if there is a certain degree of probability that it will be an advantage of the Company.

### ***Income Taxes***

#### ***Current Income Tax***

Current income tax assets and liabilities for the current and prior periods are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date.

### **Deferred Tax**

Deferred tax is provided using the liability method on temporary differences at the balance sheet date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes.

Deferred tax liabilities have been recognized for all taxable temporary differences.

Deferred tax assets are recognized for all deductible temporary differences, the carry forward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences, and the carry forward of unused tax credits and unused tax losses can be utilized.

Deferred tax assets and deferred tax liabilities are offset, if a legally enforceable right exists to set off current tax assets against current income tax liabilities and the deferred taxes relate to the same taxable company and the same taxation authority. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the year when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the balance sheet date.

The Company pays its tax obligation in Norwegian Kroner (NOK), and the fluctuations between the NOK and the USD impact the financial items. Exchange rate fluctuations related to the basis for current year income tax expense are classified as tax expense.

### **Share-based Payments**

Key employees of the Company receive remuneration in the form of share-based payment, whereby employees render services as consideration for stock options and, Performance Share Units (PSUs) and Restricted Share Units (RSUs).

The cost of equity-settled transactions (stock options, PSUs and the 2015 and 2016 plans of RSUs) is measured by reference to the fair value at the date on which they are granted. The fair value is determined by an external value using an appropriate pricing model.

The cost of equity-settled transactions is recognized, together with a corresponding increase in equity, over the period in which the performance and/or service conditions are fulfilled, ending on the date on which the relevant employees become fully entitled to the award (the vesting date). The cumulative expense recognized for equity-settled transactions at each reporting date until the vesting date reflects the extent to which the vesting period has expired and the Company's best estimate of the number of equity instruments that will ultimately vest. The income statement expense or credit for a period represents the movement in cumulative expense recognized at the beginning and end of that period.

No expense is recognized for awards that do not ultimately vest.

The RSUs granted in 2014 are cash settled share-based payments. The fair value of the RSUs are measured at the end of each reporting period and are distributed over the period until the employees have earned an unconditional right to receive them. These fair values are expensed over the period until the vesting date with recognition of a corresponding liability. The ultimate cost of such a cash-settled transaction will be the actual cash paid by the Company, which will be the fair value at settlement date. The fair values of the vested part of the RSUs are recognized as personnel costs.

### **Pensions**

The Company operates defined-contribution plans in Norway. Contributions are expensed to the income statement as they become payable.

### **Leases – TGS as Lessee**

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases. The evaluation is based on the substance of the transaction at the inception date of whether the fulfillment of the arrangement is dependent on the use of a specific asset or assets or the arrangement conveys a right to use the asset.

Finance leases are recorded as assets and liabilities, and lease payments are apportioned between the finance charges and reduction of the lease liability so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are recognized in the income statement.

Operating lease payments are recognized as an expense in the income statement on a straight-line basis over the lease term.

### **Cash and Cash Equivalents**

Cash and cash equivalents in the balance sheet comprise cash in bank accounts and on hand and short-term deposits with an original maturity of three months or less.

### **Accounts Receivable and Other Receivables**

Receivables are measured at cost less any amounts expected to be uncollectible. Sales with deferred payments due to be settled more than twelve months or later are presented as non-current receivables.

### **Investments in Subsidiaries and Associated Companies**

Investments in subsidiaries and investments in associates are valued at cost in the Company's financial statements. The investment is valued as cost of the shares in the subsidiary, less any impairment losses. An impairment loss is recognized if the impairment is not considered temporary, in accordance with the generally accepted accounting principles. Impairment losses are reversed if the reason for the impairment loss disappears in a later period.

Dividends, group contributions and other distributions from subsidiaries are recognized in the same year as they are recognized in the financial statement of the provider. If dividends/group contribution exceed withheld profits after the acquisition date, the excess amount represents repayment of invested capital, and the distribution will be deducted from the recorded value of the acquisition in the balance sheet for the Parent Company.

#### **Dividends**

The dividends are recognized as a liability in the financial statements when proposed by the Board of Directors.

#### **Financial Instruments**

Financial instruments are valued at the lower of historical cost and market value.

Loans are recognized at the amount received, net of transactions costs. The loans are thereafter recognized at amortized costs using the effective interest rate method.

#### **Treasury Shares**

TGS' equity instruments that are reacquired (treasury shares) are recognized at cost and deducted from equity. No gain or loss is recognized in profit or loss on the purchase, sale, issue or cancellation of TGS' own equity instruments. Any difference between the carrying amount and the consideration, if reissued, is recognized in the share premium.

#### **Cash Flow Statement**

The cash flow statement is compiled using the indirect method.

## **2. Tangible Non-Current Assets**

### **2016**

Acquisition cost and depreciation:	Machinery and Equipment
<b>Cost as of 1 January 2016</b>	<b>4,812</b>
Additions	22
Disposals <sup>1)</sup>	-
<b>Cost as of 31 December 2016</b>	<b>4,834</b>
<b>Accumulated depreciation as of 1 January 2016</b>	<b>2,732</b>
Depreciation for the year	635
Accumulated depreciation on disposals <sup>1)</sup>	-
<b>Accumulated depreciation as of 31 December 2016</b>	<b>3,368</b>
<b>Net book value as of 31 December 2016</b>	<b>1,466</b>
Straight-line depreciation percentage	14% - 33.3%
Useful life	3 - 7 years

<sup>1)</sup> Profit on disposals during the year was USD 0.

### **2015**

Acquisition cost and depreciation:	Machinery and Equipment
<b>Cost as of 1 January 2015</b>	<b>4,531</b>
Additions	334
Disposals <sup>1)</sup>	(53)
<b>Cost as of 31 December 2015</b>	<b>4,812</b>
<b>Accumulated depreciation as of 1 January 2015</b>	<b>2,038</b>
Depreciation for the year	748
Accumulated depreciation on disposals <sup>1)</sup>	(53)
<b>Accumulated depreciation as of 31 December 2015</b>	<b>2,732</b>
<b>Net book value as of 31 December 2015</b>	<b>2,079</b>
Straight-line depreciation percentage	14% - 33.3%
Useful life	3 - 7 years

<sup>1)</sup> Profit on disposals during the year was USD 0.



### 3. Intangible Non-Current Assets

#### 2016

Acquisition cost and depreciation:	Goodwill	Multi-client Library <sup>1)</sup>	Total
<b>Cost as of 1 January 2016</b>	<b>3,073</b>	<b>2,968,806</b>	<b>2,971,879</b>
Additions	-	110,975	110,975
Disposals	-	-	-
<b>Cost as of 31 December 2016</b>	<b>3,073</b>	<b>3,079,781</b>	<b>3,082,854</b>
<b>Accumulated amortization as of 1 January 2016</b>	<b>3,073</b>	<b>2,384,176</b>	<b>2,387,250</b>
Amortization for the year	-	181,548	181,548
Accumulated amortization on disposals	-	-	-
<b>Accumulated amortization as of 31 December 2016</b>	<b>3,073</b>	<b>2,565,724</b>	<b>2,568,797</b>
<b>Net book value as of 31 December 2016</b>	<b>-</b>	<b>514,057</b>	<b>514,057</b>
Straight-line amortization percentage	10%		
Useful life	10 years <sup>2)</sup>	4 to 7 years	

<sup>1)</sup> Multi-client Library: See the "General Accounting Policies", for the policies on amortization of this asset.

<sup>2)</sup> Goodwill paid for in acquisitions of companies is amortized over the first ten years after the date of the acquisition.

#### 2015

Acquisition cost and depreciation:	Goodwill	Multi-client Library <sup>1)</sup>	Total
<b>Cost as of 1 January 2015</b>	<b>3,073</b>	<b>2,674,213</b>	<b>2,677,287</b>
Additions	-	294,593	294,593
Disposals	-	-	-
<b>Cost as of 31 December 2015</b>	<b>3,073</b>	<b>2,968,806</b>	<b>2,971,879</b>
<b>Accumulated amortization as of 1 January 2015</b>	<b>3,073</b>	<b>2,053,444</b>	<b>2,056,518</b>
Amortization for the year	-	330,732	330,732
Accumulated amortization on disposals	-	-	-
<b>Accumulated amortization as of 31 December 2015</b>	<b>3,073</b>	<b>2,384,176</b>	<b>2,387,250</b>
<b>Net book value as of 31 December 2015</b>	<b>-</b>	<b>584,630</b>	<b>584,630</b>
Straight-line amortization percentage	10%		
Useful life	10 years <sup>2)</sup>	max 5 years	

<sup>1)</sup> Multi-client Library: See the "General Accounting Policies", for the policies on amortization of this asset.

<sup>2)</sup> Goodwill paid for in acquisitions of companies is amortized over the first ten years after the date of the acquisition.

## 4. Personnel Costs/Number of Employees/Benefits/Pensions

	2016	2015
Payroll	5,915	7,326
Social security costs	860	972
Pension costs	257	322
Other employee related costs	168	137
Salaries capitalized	-	[92]
<b>Personnel costs</b>	<b>7,199</b>	<b>8,666</b>
Cost of stock options	80	216
<b>Payroll and cost of stock options</b>	<b>7,279</b>	<b>8,882</b>
Number of employees at 31 December	43	47
Average number of employees	40	50

As of 31 December 2016, the Company had 43 employees: 23 male employees and 20 female employees.

The Company operates defined contribution plans in Norway. The plans fulfill the requirements of the Norwegian law.

Auditor Fees	2016	2015
Statutory audit	231	195
Other attestation services	0	2
Tax advisory services	7	6
Other services outside the audit scope	0	11
<b>Total fees</b>	<b>238</b>	<b>214</b>

All amounts are exclusive VAT.

Information about remuneration of the Board of Directors and the executive management is included in Note 7 to the consolidated financial statements.

For information about share-based payment plans, see Note 8 to the consolidated financial statements.

## 5. Share Capital and Shareholder Information

The share capital of TGS-NOPEC Geophysical Company ASA as of 31 December 2016 was NOK 25,533,997.50 consisting of 102,135,990 ordinary shares at NOK 0.25 per share. The Company's shares have equal voting rights.

For information of treasury shares, shareholders' authorization and the 20 largest shareholders, see Note 10 to the consolidated financial statements.

## 6. Equity Reconciliation

Equity Reconciliation	Share Capital	Treasury shares	Share premium	Other Reserves	Retained Earnings	Total Equity
<b>Balance 1 January 2016</b>	<b>3,656</b>	<b>(24)</b>	<b>58,107</b>	<b>5,361</b>	<b>210,940</b>	<b>278,040</b>
Treasury shares distributed	-	5	-	-	1,949	1,954
Cost of stock options, RSU/PSU	-	-	-	650	-	650
Quarterly dividends resolved and paid	-	-	-	-	(45,721)	(45,721)
Provisions for quarterly dividends (USD 0.15 per share)*	-	-	-	-	(15,240)	(15,240)
Profit/(loss) for the year	-	-	-	-	2,171	2,171
<b>Balance 31 December 2016</b>	<b>3,656</b>	<b>(19)</b>	<b>58,107</b>	<b>6,011</b>	<b>154,098</b>	<b>221,854</b>
<b>Balance 1 January 2015</b>	<b>3,702</b>	<b>(75)</b>	<b>58,107</b>	<b>5,145</b>	<b>290,015</b>	<b>356,893</b>
Purchase of treasury shares	-	(7)	-	-	(4,838)	(4,844)
Treasury shares distributed	-	13	-	-	4,433	4,446
Treasury shares cancelled	(45)	45	-	-	-	-
Cost of stock options	-	-	-	216	-	216
Variance of provisions for dividends and paid dividends	-	-	-	-	122	122
Provisions for quarterly dividends (USD 0.15 per share)*	-	-	-	-	(15,219)	(15,219)
Profit/(loss) for the year	-	-	-	-	(63,572)	(63,572)
<b>Balance 31 December 2015</b>	<b>3,656</b>	<b>(24)</b>	<b>58,107</b>	<b>5,361</b>	<b>210,940</b>	<b>278,040</b>

\*) The Annual General Meeting held 10 May 2016 authorized the Board of Directors to distribute quarterly dividends on the basis of the 2015 statements. The authorization shall be valid until the Company's next Annual General Meeting.

On 1 February 2017, the Board of Directors resolved to pay quarterly dividend of the NOK equivalent of USD 0.15 per shares (NOK 1.23) to the shareholders.

On 16 February 2017, a total of 318,925 stock options were exercised. A total of 285,875 were secured by treasury shares, while 33,050 were secured by warrants. The share capital increase of NOK 8,262.50 was registered on 20 February 2017



## 7. Investments in Subsidiaries

As of 31 December 2016, the Parent Company had the following investments in subsidiaries:

Included in the Balance Sheet as:	Registered Office	Share Capital of Company	Number of Shares	Book Value	Net Income	Total Equity	Shareholder and Voting Power
Maglight AS	Asker, Norway	NOK 100,000	100,000	180	(5)	(138)	100%
TGS AP Investments AS	Asker, Norway	NOK 200,000	1,000	35,214	31,058	38,051	100%
Marine Exploration Partners AS	Asker, Norway	NOK 800,000	800,000	-	(7)	711	100%
TGS Contracting AS	Asker, Norway	NOK 100,000	1,000	147	2	(32)	100%
TGS-NOPEC Geophysical Company	Houston, U.S.A.	USD 1,000	1,000	1,483	6,870	735,641	100%
TGS-NOPEC Geophysical Company (UK) Ltd.	Bedford, UK	GBP 50,100	50,100	956	(2,381)	713	100%
Aceca Ltd.	Surbiton, UK	GBP 50,762	507,620	1,200	134	(12,803)	100%
TGS Geophysical Investments Ltd.	Surbiton, UK	USD 100,000	100,000	-	-	-	100%
TGS Geophysical Company (UK) Ltd.	Surbiton, UK	GBP 166,035.34	16,603,534	-	3,197	(6,914)	100%
TGS-NOPEC Geophysical Company Pty Ltd	Perth, Australia	AUD 1	1	0	(9,935)	8,455	100%
TGS-NOPEC Geophysical Company Pte Ltd	Singapore	SGD 0	0	-	(121)	227	100%
TGS do Brasil Ltda.	Rio de Janeiro, Brazil	BRL 43,400,200	39,060,180	17,318	(4,217)	(6,833)	90%
Arcis Seismic Solutions Corp.	Calgary, Canada	CAD 73,945	100,000	72,471	12,682	30,560	100%
TGS-NOPEC Geophysical Company Moscow Ltd	Moscow, Russia	RUB 300,000	1	-	5	(3,005)	100%
Nopec Geophysical Company, S. de R.L. de C.V.	Mexico City, Mexico	MXN 1,000	1	-	-	-	90%
MxP Marine Seismic Services Ltd	Limassol, Cyprus	USD 133,278	25,000	-	4	2,021	100%
Balance sheet value				128,969			

The Parent company has direct or indirect 100% voting rights in all subsidiaries.

In 2016 the shares in Aceca Ltd has been impaired by USD 12.8 million as other financial expenses, see note 15

## 8. Restrictions on Bank Accounts

As of 31 December 2016, USD 0.3 million of cash and cash equivalents are restricted to meet the liability arising from payroll taxes withheld. (2015: USD 0.3 million).

## 9. Accounts Receivable and Other Receivables

Accounts receivable, included accrued revenues, is stated in the balance sheet at net realizable value and totaled USD 186.6 million as of 31 December 2016 (2015: USD 192.9 million). The Company has made a bad debt provision of USD 2.5 million in 2016 (2015: USD 7.5 million). The Company expects to collect the receivables recognized as of 31 December 2016. Realized losses on trade receivables in 2016 amounted to USD 27.5 million (2015: USD 1.9 million). Prepayments to suppliers and other short-term receivables totaled USD 5.0 million as of 31 December 2016 (2015: USD 10.2 million).

## 10. Current Receivables and Liabilities Group Companies

Company	2016		2015	
	Receivables	Liabilities	Receivables	Liabilities
Maglight AS	-	14	-	14
TGS AP Investments AS	93,065	-	73	-
Aceca Norge AS	-	4,103	-	4,777
TGS-NOPEC Geophysical Company	-	630,952	-	632,293
A2D Technologies Inc.	65	-	-	118
TGS Geophysical Company (UK) Ltd.	14,787	-	12,972	-
TGS-NOPEC Geophysical Company PTY Ltd	1,784	-	5,933	-
TGS-NOPEC Geophysical Company Pte	5	-	10	-
Arcis Seismic Solutions Corp.	9,029	-	8,452	-
TGS do Brasil Ltda.	189	-	186	-
<b>Total</b>	<b>118,924</b>	<b>635,069</b>	<b>27,626</b>	<b>637,202</b>

The Company has entered into an intercompany credit revolving facility with TGS-NOPEC Geophysical Company (USA) which matures at 31 December 2018. Per the agreement, the lender may require the borrower to repay all or any portion of the outstanding facility within 30 days. Accordingly, the facility has been classified as a current liabilities, but the timing of the repayment is controlled by the Company. The interest is equal to the monthly short-term Applicable US Federal Rate.

Realized losses on intercompany receivables in 2016 amounted to USD 0 million (2015: USD 0.6 million)

## 11. Other Current Liabilities

	2016	2015
Deferred revenues	3,465	2,616
Accrued project costs	74,491	33,276
Other accrued expenses	5,663	8,208
<b>Total other current liabilities</b>	<b>83,619</b>	<b>44,100</b>

## 12. Guarantees

As of 31 December 2016, one bank guarantee has been issued on behalf of the Company of USD 0.2 million for one country's authorities related to seismic work program.

The Company has, together with other TGS companies, guaranteed for a 3 year term secured revolving credit facility of USD 75.0 million which has been guaranteed by the Company together with other TGS companies.

Under section 479A of the UK Companies Act 2006; one of TGS' subsidiaries, TGS Geophysical Company (UK) Limited (Registration number: 05731700), has availed exemption for audit of their statutory financial statements pursuant to guarantees issued by TGS to indemnify the subsidiary of any losses towards third parties that may arise in the financial year ended 31 December 2016 in such subsidiary. TGS can make an annual election to support such guarantee for each financial year.

## 13. Commitments and Contingencies

### Operating Leases - Company as Lessee

As at the end of 2016, the Company has entered into commitments for two 3D vessels and two source vessels. All of these commitments will expire in 2017, and the amount committed, included contractual lease agreements totaled USD 46 million.

The Company has an operating lease commitment relating to premises. The commitment expires 31 January 2022 with no termination before expiry date.

Rental expense for operating leases was USD 0.5 million for the year ended 31 December 2016 (2015: USD 0.5 million). Future minimum payments for operating leases as of 31 December 2016 are as follows:

	2016	2015
Within one year	477	443
After one year but not more than five years	1,909	1,746
More than five years	40	482
<b>Total other current liabilities</b>	<b>2,426</b>	<b>2,671</b>

The Company does not have any financial leases.

## 14. Related Parties

No material transactions took place during 2016 with related parties, other than operating business transactions between the companies in the TGS Group. All companies within TGS are 100% owned, directly or indirectly by the Company, except for Calibre Seismic Company which is owned 50% by one of the subsidiaries. Business transactions between the entities of TGS were performed at arm's length principles. The main business transactions can be aggregated as follows:

	2016	2015
Data processing costs	21,724	41,072
Brokerage fees	13,286	27,479
Management fees	11,134	15,980

For information about intercompany interest income and expense, see Note 15.

The Company has no liabilities in the form of mortgages, other collateral or guarantees in favour of entities within the TGS Group.

For a specification of intercompany receivables and liabilities, see Note 10.

## 15. Financial Items

Financial income/expense:	2016	2015
Interest income	88	1,837
Interest income subsidiaries	480	342
Exchange gain	1,674	6,892
Other financial income	23,851	733
<b>Total financial income</b>	<b>26,093</b>	<b>9,803</b>
Interest expense	(28)	(71)
Interest expense subsidiaries	(4,135)	(2,732)
Exchange loss	0	(7,380)
Other financial expenses	(13,287)	(14)
<b>Total financial expense</b>	<b>(17,451)</b>	<b>(10,197)</b>
<b>Net financial items</b>	<b>8,643</b>	<b>(394)</b>

Other financial income in 2016 does mainly consist of dividends from the subsidiaries Aceca Ltd and TGS NOPEC Geophysical Company (UK) Ltd



## 16. Tax Expense

Current tax:	2016	2015
Profit/(loss) before taxes	4,911	(78,852)
Permanent differences <sup>1)</sup>	(9,925)	407
Changes in temporary differences	(45,145)	18,330
Tax loss carried forward	34,240	40,195
Currency exchange effects on base for current tax	15,918	19,919
<b>Basis for current tax</b>	<b>-</b>	<b>-</b>
<b>Total tax expense for the year:</b>		
Deferred tax - changes	2,521	(11,832)
Taxes payable	-	-
Adjustment in respect of current income tax of previous year	219	(3,447)
Tax outside Norway	-	-
<b>Total tax expense for the year</b>	<b>2,740</b>	<b>(15,279)</b>
<b>Effective average tax rate</b>	<b>56%</b>	<b>19%</b>
<b>Taxes payable</b>	<b>2016</b>	<b>2015</b>
Taxes payable on current year profit	-	-
<b>Total taxes payable</b>	<b>-</b>	<b>-</b>
<b>Specification of basis for deferred taxes:</b>		
<b>Temporary differences:</b>	<b>2016</b>	<b>2015</b>
Multi-client library	(76,085)	(94,198)
Revenues on seismic projects in the work in progress phase	151,535	153,234
Accounts receivable	(4,168)	(9,348)
Accruals	(11,914)	(35,313)
Interest deduction carried forward	(4,269)	(756)
Tax loss carried forward	(70,772)	(39,440)
Other	(852)	(1,003)
<b>Total</b>	<b>(16,525)</b>	<b>(26,824)</b>

Deferred tax liability/(asset) based on temporary differences	(3,966)	(6,706)
Withholding taxes carried forward	(1,355)	(1,371)
<b>Deferred tax liability/(asset) recognized</b>	<b>(5,321)</b>	<b>(8,077)</b>
<b>Explanation of total tax expense versus nominal tax rate on pre-tax profit:</b>	<b>2016</b>	<b>2015</b>
Tax calculated using nominal tax rate on pre-tax profit	1,228	(21,290)
Effect of permanent differences <sup>1)</sup>	(2,481)	110
Effect of change in tax rate <sup>2)</sup>	165	536
Exchange gain/loss reported as tax expense	3,828	5,364
<b>Total tax expense recorded in income statement</b>	<b>2,740</b>	<b>(15,279)</b>

<sup>1)</sup> Permanent differences related to non-tax deductible items. In 2016 the main items relates to write-down of shares in subsidiaries of USD 12.8 million and dividend from subsidiaries of - USD 22.8 million.

<sup>2)</sup> From the income year 2017, the nominal tax rate on ordinary income has been reduced to 24%. The basis for deferred taxes per 31 December 2016 was calculated with the new tax rate.

## 17. Gross and Net Revenues

TGS shares certain multi-client revenue with other companies and the government in certain countries. Operating revenue is presented net of portion shared. The table below provides the breakdown of gross revenue for 2015 and 2016.

	2016	2015
Gross revenues from sales	281,779	387,287
Revenue sharing	(59,658)	(73,324)
<b>Net revenues</b>	<b>222,122</b>	<b>313,963</b>

## 18. Financial Risk Management

### Currency Risk

Functional currency for the Company is USD. Major portions of the Company's revenues and costs are in US dollars, except for personnel and administrative costs. Due to this, the Company's operational exposure to exchange fluctuations is low. However, as the Company pays taxes in Norwegian kroner to Norwegian Tax Authorities and dividends to shareholders in Norwegian kroner, fluctuations between the NOK and the USD impact currency exchange gains or losses on tax expense and financial items.

### Liquidity Risk

Liquidity risk arises from lack of correlation between cash flow from operations and financial commitments. Management considers the liquidity risk as low. As of balance sheet date, the Company held current assets of USD 361.4 million, of which cash and cash equivalents represents USD 50.9 million, and current liabilities of USD 794.6 million, of which debt to subsidiaries represents USD 635.1 million. As of 31 December 2016, TGS considers the liquidity risk to be low.

### Credit Risk

All placements of excess cash are either bank deposits or in financial instruments that at minimum carry an "investment grade" rating. The Company's clients are oil and gas companies. The Company is exposed to credit risk through sales and use best efforts to manage this risk. As of 31 December 2016, the Company made a provision of USD 2.5 million against

certain accounts receivables. The maximum exposure to credit risk at the reporting date is the carrying value of the financial assets, the carrying value of the accounts receivables and other short-term receivables. TGS evaluates the concentration of risk with respect to trade receivables as low due to the Company's credit rating policies and as the clients are mainly large oil and gas companies considered to be financially sound.

The Company from time to time accepts extended payment terms on parts of firm commitments from clients. To the extent these terms do not carry an interest compensation to be paid by clients, the revenues recognized by the Company are discounted to reflect this element.

## 19. Other Non-current Assets and Liabilities

Other non-current assets comprise account receivables with extended payment terms and loans. Any revenue share associated with these receivables is presented as "Other non-current liabilities".

None of the non-current receivables are due as per 31 December 2016.

TGS has interest bearing loans to E&P Holding AS and Skeie Energy AS. The two loans with a total value of gross USD 42.1 million (net to TGS of USD 29.4 million) are recognized at USD 0 million as of 31 December 2015 (31 December 2014: USD 0 million). One of the loans has been written off as uncollectible during 2016.

## 20. Contingent Liabilities

### Økokrim Charges and Related Civil Matters

On 6 May 2014, TGS was notified that Økokrim, the Norwegian National Authority for Investigation and Prosecution of Economic and Environmental Crime, charged TGS for violations of the Norwegian Tax Assessment Act and the Norwegian Securities Trading Act related to a transaction entered into in May 2009 with Skeie Energy AS, later known as E&P Holding AS (Skeie). The charge claims that TGS contributed to unwarranted tax refunds received by Skeie under the Norwegian Petroleum Tax Act through licenses of seismic data to Skeie, which included licenses to existing TGS multi-client data primarily in the North Sea and the Barents Sea and prefunding of a large 3D survey in the Hoop area of the Barents Sea. The surveys licensed by Skeie have since been licensed to multiple customers and are located in a very prospective area. Skeie paid for the licenses partially in cash, with the remaining amount of USD 42.1 million (net to TGS of USD 29.4 million) payable at the end of 2010. Due to Skeie's failed attempt to raise new capital,

the loan was not repaid at the maturity date, and the loan was restructured into two loans from Skeie and an affiliated company during 2011. TGS has actively pursued collection of the loans, but despite these efforts, the loans were not repaid and the Company has written off as uncollectible one of the loans and has taken a reserve for the full amount of the other loan.

On 2 March 2017, Økokrim issued a corporate fine of NOK 85 million (approximately USD 10 million) against TGS based on the alleged violations of the Norwegian Tax Assessment Act. Økokrim dismissed the charges against TGS for market manipulation in violation of the Securities Trading Act due to insufficient evidence. Økokrim has advised that it will raise the fine to 90 MNOK in the event that the fine is rejected and the case is brought to court. The Company has rejected the fine, and a trial regarding the alleged violations is expected to occur in late 2017 or early 2018. Based upon the Company's assessment of the evidence in the case to date, the Company believes the claims by Økokrim lack merit and a trial will confirm that TGS acted diligently in connection with the transactions with Skeie and no wrongdoing by the Company occurred. Given the early stage of the trial process, it is impracticable to render an accurate assessment of the outcome. However, based upon the Company's rejection of the fine and its assessment of the case at this point, it does not consider it probable that an outflow of resources embodying economic benefits will be required to settle the obligation and no provisions have been made.

TGS has also been notified of potential claims of joint responsibility from Skeie and two affiliated parties, all of which are predicated on whether the parties making the claims are ultimately held responsible for unwarranted tax refunds and suffer damages that can be attributed to TGS. In October 2016, Skeie Technology, one of the Skeie affiliates and a guarantor of certain of Skeie's obligations, filed a writ of summons against TGS and certain other parties, seeking a declaratory judgment of joint liability for losses that, through its parent company guarantee, may be suffered by Skeie Technology as a result of the acquisition of seismic data by Skeie from TGS in 2009. The court in this case, which was in its very early stages, has stayed the proceedings pending the resolution of the Økokrim matter. No specific damages have been asserted in the writ.

In May 2016, TGS received a notice of a claim for compensation from the Norwegian Government for the Government's alleged tax losses arising from tax benefits received by Skeie under the Petroleum Tax Act in connection with the sale of seismic data to Skeie. The Government alleges that TGS aided and abetted Skeie in attaining undue tax advantages. At the request

of the Government, TGS granted the Government a three-year extension of the statute of limitations with respect to legal action on the claim of compensation. The Government has made similar claims against other parties involved with Skeie, including Skeie Technology as a guarantor. The amount claimed by the Government represents the amount of the unwarranted tax refunds received by Skeie plus interest (at the time of the notice, a total of approximately NOK 326 million).

The above civil matters have arisen in relation to the transactions that form the basis for the Økokrim charges, and the outcome of these matters will depend in large part on the outcome of the Økokrim matter. Given the early stage of these proceedings, it is impracticable to render an accurate assessment of the outcome. However, based upon the Company's belief that the Økokrim allegations lack merit, and the trial will confirm that TGS did nothing wrong, the Company also believes these claims of liability are not well-founded, and it intends to challenge the claims vigorously. As a result, the Company does not consider it probable that an outflow of resources embodying economic benefits will be required to settle the obligation and no provisions have been made.

## 21. Events after the Balance Sheet Date

On 1 February 2017, the Board of Directors resolved to pay a quarterly dividend of the NOK equivalent of USD 0.15 per shares (NOK 1.23) to the shareholders. The dividend payments were made on 23 February 2017. For further information about the dividend provision, see Note 6.

On 2 March 2017, Økokrim issued a corporate fine of NOK 85 million (approximately USD 10 million) against TGS based on the alleged violations of the Norwegian Tax Assessment Act. See Note 20 for further details.

To the best of the management's and the directors' knowledge, no other significant subsequent events not described in this Annual Report have occurred since 31 December 2016 that would impact the financial statements as presented for 2016.



## INDEPENDENT AUDITOR'S REPORT

To the Annual Shareholders' Meeting of TGS-NOPEC Geophysical Company ASA

### Report on the audit of the financial statements

#### Opinion

We have audited the financial statements of TGS-NOPEC Geophysical Company ASA comprising the financial statements of the parent company and the Group. The financial statements of the parent company comprise the balance sheet as at 31 December 2016, the income statement and statement of cash flows for the year then ended and notes to the financial statements, including a summary of significant accounting policies.

The consolidated financial statements comprise the balance sheet as at 31 December 2016, the statement of comprehensive income, statements of changes in equity and cash flow for the year then ended and notes to the financial statements, including a summary of significant accounting policies.

In our opinion,

- ▶ the financial statements are prepared in accordance with the law and regulations;
- ▶ the financial statements present fairly, in all material respects, the financial position of the parent company as at 31 December 2016, and of its financial performance and its cash flows for the year then ended in accordance with the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway;
- ▶ the consolidated financial statements present fairly, in all material respects the financial position of the Group as at 31 December 2016 and of its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the EU.

#### Basis for opinion

We conducted our audit in accordance with laws, regulations, and auditing standards and practices generally accepted in Norway, including International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the financial statements* section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in Norway, and we have fulfilled our ethical responsibilities as required by law and regulations. We have also complied with our other ethical obligations in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the financial statements* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement

of the financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the financial statements.

#### Impairment evaluation of multi-client data libraries

Multi-client library accounts for approximately 55 % and 53% of total assets of the Group and the parent company respectively. The Company performed an impairment evaluation and determined the value in use. The Company estimated value in use based on estimated future sales forecasts. These forecasts are based on next year's budget and assumptions about future market demand and spending on exploration and production by oil companies, including licensing activities, farm-ins and explorations. These forecasts require considerable insight and judgment from management about the future market conditions. Impairment evaluation of multi-client data libraries was a key audit matter based on the current market conditions and the significant judgement involved. In 2016 impairment losses of USD 11.0 million were recorded in the consolidated financial statement and USD 7.9 million in the parent company financial statements.

We performed test of controls and test of supporting documentation related to the budgets and sales forecasts. We evaluated management's assessment of impairment indicators and management's estimates related to sales forecast. As part of our procedures, we discussed the assumptions with management including senior sales personnel and controllers. Our audit procedures also included analyses and evaluation of historical accuracy of prior year's forecasts, the current market situation and expectations about oil prices, licensing rounds, farm-ins and exploration activities. Furthermore, we evaluated the valuation methodology, amortisation policy and the discount rate applied in the value in use model. We also tested the mathematical accuracy of the value in use calculation and performed a sensitivity analysis on the critical assumptions. We used a valuation specialist to assist us in evaluating the discount rate applied. We also assessed the Company's disclosures regarding those assumptions and the impairment losses of multi-client data libraries recorded.

We refer to note 5 of the consolidated financial statements and note 3 in the parent company financial statements.

#### Revenue recognition

The Company recognises revenues when it is probable that the economic benefits from a transaction will flow to the Company and can be reasonably measured. Prefunding agreements are recognized based on percentage of completion and requires judgement in terms of measuring progress based on costs incurred compared to total cost. Revenues from sale of finished data are recognized when the customer has gained access to the data under a binding agreement. In certain situations, the Company enters into agreements with deferred payments, which requires judgement in terms of timing of revenue recognition. Revenue recognition was a key audit matter due to the inherent risk of being recognised in the wrong period.

We tested controls related to revenue recognition including among others controls related to credit risk evaluation and providing access to finished data. For the prefunding arrangements we agreed a sample of revenues to contracts and progress reporting from the vessels and data processing. We also agreed a sample of cost incurred to vessel contracts and internal allocations of data processing and considered the estimated cost to complete. For the sales of finished data we also tested a sample of revenue transactions recognised before and after year-end against contracts, invoices and proof of delivery. For customers with deferred payment terms we considered the credit worthiness of the company and past payment history.

We refer to note 1 of the financial statements for the Company's accounting policies

#### Other information

Other information consists of the information included in the Company's annual report other than the financial statements and our auditor's report thereon. The Board of Directors and Chief Executive Director (management) is responsible for the other information. Our opinion on the financial statements does not cover the other information, and we do not express any form of assurance conclusion thereon.

Independent auditor's report TGS-NOPEC Geophysical Company ASA

In connection with our audit of the financial statements, our responsibility is to read the other information, and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

#### Responsibilities of management for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway for the financial statements of the parent company and International Financial Reporting Standards as adopted by the EU for the financial statements of the Group, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting, unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

#### Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with law, regulations and generally accepted auditing principles in Norway, including ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- ▶ identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- ▶ obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- ▶ evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- ▶ conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- ▶ evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Independent auditor's report TGS-NOPEC Geophysical Company ASA

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- ▶ obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

#### Report on other legal and regulatory requirements

##### Opinion on the Board of Directors' report and the reports on corporate governance and corporate social responsibility

Based on our audit of the financial statements as described above, it is our opinion that the information presented in the Board of Directors' report and the reports on corporate governance and corporate social responsibility concerning the financial statements and the going concern assumption is consistent with the financial statements and complies with the law and regulations.

##### Opinion on registration and documentation

Based on our audit of the financial statements as described above, and control procedures we have considered necessary in accordance with the International Standard on Assurance Engagements (ISAE) 3000, «Assurance Engagements Other than Audits or Reviews of Historical Financial Information», it is our opinion that management has fulfilled its duty to ensure that the Company's accounting information is properly recorded and documented as required by law and bookkeeping standards and practices accepted in Norway.

Oslo, 23 March 2017  
ERNST & YOUNG AS



Nina Rafen  
State Authorised Public Accountant (Norway)

Independent auditor's report TGS-NOPEC Geophysical Company ASA

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A lighthouse with a red band stands on a rocky island in the middle of a vast, calm ocean. The sky is overcast with grey clouds. A white diagonal line runs from the top left towards the bottom right, passing behind the text.

# CORPORATE GOVERNANCE

TGS actively promotes a culture designed to build confidence and trust among its stakeholders. Key elements of this culture include open and honest communication, a well-developed system of controls and policies and a compliance program.

# Report on Corporate Governance

## 1. Implementation and Reporting on Corporate Governance

TGS-NOPEC Geophysical Company ASA (TGS or the Company) actively promotes a culture designed to build confidence and trust among its stakeholders. Key elements of this culture include open and honest communication, a well-developed system of controls and policies and a compliance program. It is the opinion of the Board of Directors that TGS in general complies with the Norwegian Code of Practice of Corporate Governance published 30 October 2014. The Code of Practice covers 15 topics. Further details of how TGS operates in accordance with each of these topics, including any deviations, is further explained in this Report on Corporate Governance. The Code of Practice may be found at [www.nues.no](http://www.nues.no). In accordance with the Norwegian Accounting Act section 3-3b, TGS is required to give an annual account of the principles and practices related to corporate governance in the Board of Directors' report or a document referred to in the Board's report. TGS refers to this document in the Board of Directors' Report included elsewhere in this Annual Report.

The Company emphasizes independence and integrity in all matters between its Board of Directors, management and shareholders. These same principles of independence and integrity also apply in business relations with all interest groups, including customers, suppliers and other business partners. As guidelines for its Board members and employees, TGS has developed a **Statement of Values** and a **Code of Conduct**, both available at: <http://www.tgs.com/about-tgs>. TGS has also developed and implemented a compliance program that is managed by a full-time Board-appointed compliance officer. The compliance officer provides quarterly and annual reports to the Board.

TGS believes that corporate social responsibility is a fully compatible and integrated part of conducting business successfully. TGS' long-standing **Statement of Values** recognizes that the Company is responsible to a number of stakeholder groups, and describes the principles to which the Company adheres. A more detailed description of TGS' Corporate Social Responsibility Policy is included as a separate section in the Annual Report and on TGS' website: [www.tgs.com](http://www.tgs.com).

### Code of Conduct

In addition to TGS' **Statement of Values** and policies on health, safety, environment and human resources, the Company has developed a **Code of Conduct** that further defines expectations on ethical behavior. Each employee and director is required to read and acknowledge his or her understanding of its contents on an annual basis. The Code requires employees to report any known or suspected ethical irregularities and ensures that no retaliation will be levied against employees who file reports. TGS conducts an active compliance program designed to continually inform and educate employees on ethical issues. The Company employs a full time Board-appointed compliance officer who reports quarterly on progress of compliance activities and objectives.

### Comprehensive Approach

The leadership of TGS actively promotes a culture designed to build confidence and trust among its stakeholders. Good corporate governance together with the values, policies and control systems described in this report provide a comprehensive approach to corporate social responsibility in TGS.

## 2. Business

The business objective of TGS-NOPEC Geophysical Company ASA is defined in the Company's Articles of Association, which state that the principal business of the Company is in the provision, procurement and sale of seismic and geophysical data. The Company's Articles of Association are published in the Investor Relations Section on the TGS website at [tgs.com](http://tgs.com). TGS' operations are described in the Board of Directors Report and the Annual Report for 2016 and on [www.tgs.com](http://www.tgs.com).

TGS pursues a long-term strategy of generating value for its shareholders. The Company constantly strives to understand and exceed customer expectations in delivering a quality product on time. The commitment to quality must be apparent in every product and service that is sold. Service to customers, whether internal or external, must be professional, accurate, timely and friendly. TGS is dedicated to making a profit and delivering a solid return to its shareholders. Growth is fundamental to the success of the Company.



### 3. Equity and Dividends

#### Equity

As of 31 December 2016, total equity amounted to USD 1,169.1 million including a share capital of USD 3.7 million. This corresponds to an equity ratio of 79%, which the Board considers to be satisfactory. The adequacy of the Company's capital is monitored closely with respect to the Company's objectives, strategy and risk profile.

#### Dividend Policy

Because of the highly cyclical nature of the oil services industry, TGS' Board of Directors remains confident that the Company's unique business model and strong balance sheet and cash position are essential to its financial health, risk management and future growth. With this in mind, the Board continues to carefully evaluate investment opportunities for growth.

It is the ambition of TGS to pay a cash dividend that is in line with its long-term underlying cash flow. When deciding the dividend amount, the TGS Board of Directors considers expected cash flow, investment plans, financing requirements and a level of financial flexibility that is appropriate for the TGS business model. In addition to paying a cash dividend, TGS may also buy back its own shares as part of its plan to distribute capital to shareholders.

Beginning in 2016, TGS has paid quarterly dividends in accordance with the resolution made by the Annual General Meeting on 6 May 2015. The Annual General Meeting held 10 May 2016 renewed the Board of Directors' authorization to distribute quarterly dividends. The aim will be to keep a stable quarterly dividend in US dollars through the year, but the actual level paid will be subject to continuous evaluation of the underlying development of the company and the market.

The ex-dividend date will normally be seven days after the announcement of the dividend in connection with the release of quarterly financial statements, with the payment date 14 days after the ex-dividend date.

At its quarterly meeting on 1 February 2017, the Board of Directors resolved to distribute a quarterly dividend of USD 0.15 per share (equivalent to NOK 1.23 per share) of outstanding common stock from the Company's 2015 earnings. The quarterly dividends were paid on 23 February 2017.

#### Board Authorizations

The Board of Directors' authorizations to increase share capital are limited to specified purposes. Authorizations to increase share capital and to undertake share buybacks are granted for a period no longer than until the next AGM, but not later than 30 June of the following year.

Following the AGM held on 10 May 2016, the Board received the following shareholder authorizations:

- To increase the Company's share capital by up to NOK 2,553,399.75 through one or more issuances of new shares or bonus issues. The subscription price and other subscription terms will be determined by the Board. The shareholders' pre-emptive rights pursuant to Sections 10-4, cf. Section 10-5 of the Norwegian Public Limited Liability Companies Act, to subscribe for any new shares may be deviated from by the Board
- To issue loans for a total amount of up to NOK 2,250,000,000 with the right to require shares to be issued (convertible loans). The share capital may be increased by up to NOK 2,553,399.75, provided that the combined number of shares that are issued pursuant to this authorization and the authorization to increase the share capital shall not exceed 10% of the Company's current share capital. The subscription price and other subscription terms will be determined by the Board. The shareholders' pre-emptive rights pursuant to section 11-4 of the Norwegian Public Limited Companies Act cf. sections 10-4 and 10-5, may be deviated from by the Board
- To acquire, on behalf of the Company, the Company's own shares for an aggregate par value of NOK 2,553,399.75, provided that the total amount of its own shares at no time exceeds 10% of the Company's share capital. The lowest price to be paid per share shall be NOK 0.25 and the highest price to be paid per share shall be the price as quoted on the stock exchange at the time of the acquisition plus 5%. Acquisition and sale of the Company's own shares can take place in the manner which the Board of Directors considers to be in the Company's best interest, but not through subscription of new shares

The authorizations are valid until the AGM in 2017, but not later than 30 June 2017.

In the AGM held on 10 May 2016, the Board was also authorized to distribute quarterly dividends on the basis of the 2015 financial statements. The authorization shall be valid until the Company's next Annual General Meeting, but not later than 30 June 2017.

For further information on these shareholder authorizations, please refer to Note 10 to the Consolidated Financial Statements.



## 4. Equal Treatment of Shareholders and Transactions with Related Parties

### Equal Treatment

The Articles of Association do not impose any restrictions on voting rights, and all shares have equal rights. The Company has only one class of shares and each share gives the right to one vote at the AGM. The Board of Directors emphasizes, to the extent possible, disclosing and describing the topics of the agenda and the proposed resolutions in the call for the assembly to allow the shareholders adequate time to prepare for the meeting.

### Transactions in Treasury Shares

TGS' transactions in its own shares are carried out at market price. TGS, from time to time, buys back shares under authorizations given by the shareholders. The shares may be held in treasury, used as payment in merger and acquisition transactions, used in relation to the exercise of employees' stock options, or eventually cancelled. The Company held 533,500 treasury shares on 31 December 2016.

There have been no share capital increases in the Company in recent years except for shares issued in connection with the Company's stock option program. Should the Board wish to propose that the AGM depart from the preemptive right of existing shareholders relating to capital increase, such a proposal will be justified by the common interest of the Company and the shareholders, and the reasons for the proposal will be presented in the notice of the AGM as well as publicly disclosed in a separate stock exchange announcement.

### Transactions with Related Parties

There are no shareholder agreements between any of the Company's shareholders. None of the Board members represent companies that are significant customers or suppliers of TGS. There were no material transactions taking place with related parties in 2016, but any transaction with close associates is required to be conducted on market terms. Information about transactions with related parties is also disclosed in Note 12 to the Consolidated Financial Statements. The Board has guidelines (under the Code of Conduct) to ensure that senior executives inform their manager and/or the Board if they have a material interest, directly or indirectly, in any agreement entered into by the Company.

## 5. Freely Negotiable Shares

### Freely Negotiable Shares

All TGS shares carry equal rights and are freely negotiable. No special limitations on transactions are described in TGS' Articles of Association. Transactions in TGS' shares are described in more detail in Note 10 to the Consolidated Financial Statements.

All but two of the members of the Board have received shares as a part of their compensation, which must be held for at least two years before they can be traded. Refer to Note 7 to the Consolidated Financial Statements for further information. In addition, certain shares acquired by the TGS executive team under the terms of a special bonus plan implemented in February 2017 are subject to restrictions on sale for a three year period. Beyond this, there are no other limitations to trading of shares imposed by the Company, other than Insider Trading Rules applicable to employees and the directors.

## 6. General Meetings

The General Meeting is the Company's ultimate corporate body. The Board strives to ensure that general meetings are an effective forum for communication between shareholders and the Board. The Board of Directors, the Nomination Committee and the Chief Executive Officer are all present at the Annual General Meetings as well as the Company's auditor. The minutes of general meetings are made available for inspection by shareholders at the Company's offices in Asker, Norway. These minutes are also made available on the Company's website shortly after the date of the general meeting.

The next Annual General Meeting (AGM) will be held on 9 May 2017. The notice calling the AGM and any Extraordinary General Meeting and all supporting documentation are made available on the Company's website ([www.tgs.com](http://www.tgs.com)) no later than three weeks in advance of the meeting. The notice and supporting documentation will also be mailed to any shareholders who request this service. The notice and supporting documentation include all the necessary information to allow shareholders to form a view on the matters to be considered. The Annual Report for 2016 is available on the Company's website.

In accordance with the Company's Articles of Association, the deadline for shareholders to notify the Company of their intention to attend the General Meeting is at the latest three days before the day of the meeting. The Company's

financial calendar is notified to the market by issuing a stock exchange announcement and is also published on its website.

Each General Meeting appoints a chairperson for the meeting, thereby ensuring that the General Meeting has an independent chairperson in accordance with the recommendations of the Norwegian Code of Practice of Corporate Governance.

The General Meeting is open for all shareholders, and any shareholder not in attendance can give proxy to vote on his/her behalf. Forms of Proxy are made available on the Company's website and are mailed to any shareholders who request this service, together with the notice of the call for the meeting. The Form of Proxy allows separate voting instructions to be given for each matter to be considered by the meeting. The proceedings in the General Meeting follow the agenda outlined in the call for the meeting. Shareholders who wish to raise a topic in the General Meeting have the option to do so, but must notify the Board of Directors of this in writing and in reasonable time before the call for the meeting is dispatched. The AGM cannot decide for a higher dividend than the Board of Directors has proposed for that year.

Shareholders are given the opportunity to vote separately either in person or by proxy for each candidate nominated for election to the Company's Board. The Board of Directors may also resolve that the shareholders may, within a limited time period prior to the shareholders' meeting, deliver their votes in writing, which shall include the use of electronic means. The right to vote in writing prior to the shareholders' meeting is conditioned upon the existence of an adequately secure method to authenticate the sender and will be subject to guidelines for advance voting in writing that are specified by the Board of Directors.. The notice to the shareholders' meeting shall provide information about whether the shareholders may vote in advance in writing, and about the guidelines that apply to such voting.

Shareholders are currently not allowed to participate in the General Meeting through the internet.

In accordance with the Norwegian Public Limited Liability Companies Act, the AGM is required to approve the annual financial statements, the Board of Directors' report and the distribution of dividends. The AGM should also deal with the Board of Directors' declaration relevant to the guidelines for determination of compensation to executive personnel and an advisory vote shall be held at the AGM following the Board of Directors' guidelines for the determination of salary and other remuneration to senior managers. The AGM shall also deal with the report on corporate governance.

The last Ordinary General Meeting was on 10 May 2016, and the minutes are available on the Company's website at [www.tgs.com](http://www.tgs.com).

Any other matters to be dealt with in the AGM will follow from the notice.

## 7. Nomination Committee

As required in the Company's Articles of Association, the Nomination Committee is responsible for the nomination of directors to the Board and the recommended remuneration payable to the directors. The Annual General Meeting stipulates guidelines for the duties of the Nomination Committee.

The Nomination Committee consists of a chairman and two members elected by and amongst the shareholders who also determine the Nomination Committee's own remuneration. The members serve for a period of two years. The members of the Nomination Committee currently are Tor Himberg-Larsen (Chair), Herman Kleeven and Christina Stray, all independent of the Board of Directors and executive personnel. Himberg-Larsen and Stray were elected for a two-year term at the Annual General Meeting on 6 May 2015, while Kleeven was elected for a two-year period at the Annual General Meeting on 10 May 2016.

The Company posts an invitation to shareholders at [www.tgs.com](http://www.tgs.com) prior to the Annual General Meeting every year to propose to the committee candidates as directors and members of the Nomination Committee.

As part of its work, the Nomination Committee meets at least annually with the Board of Directors and members of the executive management. Also, the committee consults relevant shareholders to ensure that its recommendations have their support.

The committee's recommendation provides a justification of how its recommendations take into account the interests of shareholders in general and the Company's requirements. The justification includes information on each candidate's competence, capacity and independence. If the committee recommends the re-election of a member of the Board of Directors, the justification also provides information on how long the candidate has been a member of the Board of Directors and his or her record in respect of attendance at Board meetings. If the recommendation includes candidates for election to the Nomination Committee, it also includes relevant information on these candidates.

In accordance with Section 6 above, the Nomination Committee's recommendations and report are made available in accordance with the 21-day deadline for the notice calling a general meeting.

## 8. Board of Directors: Composition and Independence

The Board of Directors currently consists of eight members, and all are independent. The Board members are elected by the shareholders for a term of one year.

The members of the Board of Directors are proposed by the Nomination Committee and elected by the AGM. The Chairman of the Board is also elected by the AGM.

The constitution of the Board reflects a strong background that balances specific industry experience with broader industrial, financial and management experience.

All directors, with the exception of one, are shareholders of TGS. Information on shares in TGS held by members of the Board can be found in Note 7 to the Consolidated Financial Statements.

A brief background description for each board member is listed as follows:

### Henry H. Hamilton III, Chairman

Born 1959. Mr. Hamilton served as CEO of TGS from 1995 through June 2009. He started his career as a Geophysicist with Shell Offshore (1981-1987) before he became employed by Schlumberger (1987-1995), where he ultimately held the position of VP and General Manager for all seismic product lines in North and South America. Mr. Hamilton joined TGS as its CEO in 1995 and remained in the position following the 1998 merger with NOPEC International. He also serves on the Board of Odfjell Drilling and for two non-profit organizations: the University of North Carolina College of Arts and Sciences Foundation and Defy Ventures. Mr. Hamilton was first elected as a director in 1998 and as Chairman in 2009.

### Elisabeth Harstad, Director

Born 1957. Ms. Harstad is currently Senior Vice President of DNVGL Oil and Gas, a subsidiary of DNVGL. She has held various positions within DNV since 1981, including Acting CEO and COO of the Energy Business Area in 2016, Technology Director of Energy from 2012 to 2015, Corporate Director for Research and Innovation from 2006 to 2011 and COO for the oil and gas business area from 2002 to 2006. She was first elected as a director in 2007.

### Mark Leonard, Director

Born 1955. Mr. Leonard is currently the President of Leonard Exploration, Inc. He retired in 2007 from Shell Oil Company after 28 years of service. During his tenure at Shell, Mr. Leonard held a number of executive positions including Director of New Business Development in Russia/CIS, Director of Shell Deepwater Services, Director of Shell E&P International Ventures and Chief Geophysicist for Gulf of Mexico. He was first elected as a director in 2009.

### Vicki Messer, Director

Born 1949. Ms. Messer is currently an independent consultant. She has 32 years of geophysical industry experience in various executive, management and supervisory positions for CGG Veritas, Veritas DGC, Halliburton Energy Services/Halliburton Geophysical, and Geophysical Services Inc. She was first elected as a director in 2011.

### Tor Magne Lønnum, Director

Born 1967. Mr. Lønnum is currently Chief Financial Officer of Aimia Inc. Prior to joining Aimia, he was Group CFO in Tryg AS and Tryg Forsikring AS from 2011 to 2016. He has also previously held the positions of CFO in Skipper Electronics AS, Accountant in Samarbeidende Revisorer AS, Manager in KPMG, Group CFO and Group Director in Gjensidige NOR Insurance, Deputy CEO and Group CFO in Gjensidige Forsikring ASA. He was first elected as a director in 2013.

### Wenche Agerup, Director

Born 1964. Ms. Agerup is EVP Corporate Affairs and General Counsel Executive of Telenor ASA. From 1997 to 2010, Ms. Agerup held various leading positions within Norsk Hydro ASA, including Plant Manager at Årdal Metal Plant in Norway and Project Director in Hydro UMC Joint Venture in Australia. From 2010 to 2015, Ms. Agerup was Executive Vice President, Corporate Staffs & General Counsel of Norsk Hydro and member of the Corporate Management Board, reporting to the Chief Executive Officer. Ms. Agerup serves as a board member of Statoil. She was first elected as a director in 2015.

### Elisabeth Grieg, Director

Born 1959. Ms. Grieg is currently CEO of Grieg International AS, co-owner of the Grieg Group and a member of the founding family. Ms. Grieg serves on the board of several of the Grieg Group companies. She has also been a board member of many prominent Scandinavian companies, such as Statoil, Norsk Hydro and Nordea AB, as well as a member of the corporate assembly of Orkla ASA. Ms. Grieg has chaired the board of GIEK (Norwegian Guarantee Institute for Export Credits) and been the President of the Norwegian Shipowners' Association. She



was first elected as a director in 2015.

#### **Torstein Sanness, Director**

Born 1947. Mr. Sanness served as the Chairman of Lundin Norway from April 2015 to March 2017, when he moved to the board of International Petroleum Corp., a Lundin Group company. He previously served as the Managing Director of Lundin Norway from 2004 to 2015. From 2000 to 2004, he served as Managing Director of Det Norske Oljeselskap AS, and from 1972 to 2000, he served in various capacities for Saga Petroleum, working primarily in the exploration and development of Saga's oil and gas interests globally. Mr. Sanness serves as a board member for Panoro Energy ASA. He was first elected as a director in 2016.

## **9. The Work of the Board Of Directors**

The Board of Director's tasks include the overall management and supervision of the Company. The Board is responsible for establishing control systems and for ensuring that TGS operates in compliance with laws and regulations, with TGS' Statement of Values and Code of Conduct, as well as in accordance with the owners' expectations of good corporate governance. The Board emphasizes the safeguarding of the interests of all shareholders, but also the interests of TGS' other stakeholders.

The Board prepares an annual plan for its work, emphasizing goals, strategies and execution.

The Board operates under specific rules of procedure, which define the duties, tasks and responsibilities of the Board of Directors and individual members of the Board, and also states guidelines for the CEO's work and duties of the Board of Directors.

The Board of Directors currently consists of eight members. (Refer to section 8).

The Board normally schedules six regular meetings each year but typically holds additional meetings as circumstances dictate. Three of the regularly scheduled board meetings deal with strategic issues. On at least a monthly basis the CEO updates the entire Board on the financial progress of the Company as well as other significant matters. The Board also sets specific objectives for the CEO on an annual basis.

The Board conducted a total of ten meetings in 2016: three physical meetings, three by videoconference, three by teleconference and one by circulation. One of the three physical meetings lasted two days, with the remainder lasting one day. Tor Magne Lønnum was unable to attend one of the meetings, and Wenche

Agerup was unable to attend two of the meetings. All other directors attended all meetings.

#### **Board Committees**

The following committees are established by the Board to monitor and guide certain activities. Each committee operates under a defined charter that may be viewed at: [www.tgs.com/about-tgs/policies/corporate-governance](http://www.tgs.com/about-tgs/policies/corporate-governance).

#### **Audit Committee**

The Audit Committee is appointed by the Board, and its primary responsibility is to supervise the Company's internal controls over financial reporting and to ensure that the Company's external auditor is independent. Further the responsibility of the committee is to ensure that the annual accounts provide a fair picture of the financial results and financial condition of the Company in accordance with generally accepted accounting practice. The Audit Committee receives reports on the work of the external auditor and the results of the audit.

The Audit Committee conducted a total of seven meetings in 2016, and all members attended all meetings.

The members of the Audit Committee with effect from the 2016 AGM are:

- Tor Magne Lønnum, Chairman
- Vicki Messer
- Elisabeth Grieg

#### **Compensation Committee**

The Compensation Committee reviews the compensation practices of TGS and its peer group and makes proposals to the Board on the employment terms and conditions and total remuneration of the CEO and other executive personnel. These proposals are also relevant for other employees.

The Compensation Committee conducted a total of seven meetings in 2016 and all members attended all meetings.

The members of the Compensation Committee with effect from the 2016 AGM are:

- Mark Leonard, Chairman
- Elisabeth Harstad
- Wenche Agerup
- Torstein Sanness

The Board of Directors carries out an annual evaluation of its own performance, working arrangements and competence. The assessment is made available to the Nomination Committee. The Board also carries out an annual evaluation of the CEO's performance.

## 10. Risk Management and Internal Control

The Board of Directors monitors TGS' risk exposure, and the Company continually strives to maintain and improve its internal control processes.

Executive management carries out an annual risk evaluation process to assess total enterprise risk in the Company. Through risk workshops, a number of strategic and operational risk factors are evaluated and prioritized in a risk matrix. Action plans are developed to manage any significant risk factors, and the process is made continuous with annual workshops and quarterly updates regarding action plan status. The key risk factors and related action plans are part of the annual Board presentation on risk management and internal control by the CEO and CFO. The Board also considers the need for any further measures in relation to the risk factors identified.

The Company's Audit Committee reviews the Company's routines for financial risk management and internal control which includes documentation for internal control and financial reporting procedures. Neither TGS' executive management nor its Audit Committee reported any material weaknesses in the related internal control systems at 31 December 2016.

TGS has implemented a regime with a Corporate Authorization Matrix and guidelines to specify the level of authority granted to management. The matrix is part of the Financial Manual which is approved by the Board, and the CEO has operational responsibility for ensuring that it is enforced.

TGS has a separate legal department, managed by the corporate General Counsel who reports to the CEO. Procedures and guidelines are in place to ensure that the legal department is involved in matters that could represent a material legal risk for the Company, including entering into material agreements. The Company has standard policies for contract terms and conditions.

TGS is committed to compliance with all legal and ethical requirements and standards of the geoscientific industry and the communities where TGS employees live and work. TGS considers its values based culture and environment a key element in continued success as a company.

As a function within the TGS executive team, the Compliance Program sets ethical standards, provides training and educational resources and responds to all concerns raised by TGS' internal and external stakeholders. The TGS Compliance Officer provides quarterly and annual reports to the Board of Directors, and the TGS CEO provides updates on a regular basis. The Board has endorsed and fully supports the continued implementation of the compliance program. All compliance reports are maintained as confidential to the extent possible, and no retaliation is allowed against reporting persons.

TGS investigates all potential violations of its Statement of Values and Code of Conduct, such as illegal acts, conflicts of interest, financial fraud, corruption issues or breaches of TGS' corporate policies. TGS also engages internal or external legal counsel as needed, in dealing with possible violations of its corporate policies. Employees are encouraged to report any violation of TGS' values or policies to the Corporate Compliance Officer or through the TGS hotline.

All agents, officers and key employees working for the Company must sign an annual anti-corruption compliance certification. Each employee of the Company must read and acknowledge the Company's Code of Conduct, Statement of Values and Policy on Insider Trading on an annual basis.

## 11. Remuneration of Board of Directors

The remuneration to the Board of Directors is designed to attract and retain an optimal Board structure in a competitive environment. Procedurally, the directors' compensation is recommended by the Nomination Committee and determined by the shareholders at the Annual General Meeting each year.

In recent years, the directors' compensation has been composed of both a fixed fee and a number of restricted TGS shares. The remuneration is not related to the Company's financial result. Note 7 to the Consolidated Financial Statements details the remuneration for 2016. TGS believes the remuneration reflects the Board's responsibility, expertise, time commitment and the complexity of the Company's activities.

No Board member has taken on specific assignments for the Company in addition to their appointment as a member of the Board.

## 12. Remuneration of Executive Personnel

### Declaration on Executive Personnel

TGS has prepared a Declaration on Executive Remuneration which is released alongside the Annual Report and is available for download at [tgs.com](https://tgs.com)

Pursuant to the Norwegian Public Limited Liability Companies Act, section 6-16 a (2), the Board will present the Declaration on Executive Remuneration to the 2017 Annual General Meeting.

The Declaration describes:

- TGS' Executive Remuneration Policy Statement
- 2017 Executive Remuneration including proposals and implementation
- 2016 Remuneration results and assessment

### Philosophy

TGS' Total Compensation Philosophy, as approved by the Board, is to provide a robust and competitive total rewards package that attracts and retains talented people and provides the greatest rewards for its employees who consistently and continually demonstrate the highest levels of performance. TGS uses a blend of components: base salary, incentive compensation (short-term and long-term awards) and non-financial benefits. TGS base salaries are targeted below the median of the compensation peer group. TGS' total actual cash compensation,

defined as base salary and Short Term Incentives (an annual performance cash bonus directly linked to TGS' operating profit), is intended to exceed the market average in years where the Company performs above market (target above 50th and up to 75th percentile of the market). It is also heavily weighted in variable pay so that employees share in the same risk and rewards as its shareholders. The Board of Directors believes that the issuance of Long Term Incentives is a valuable tool to aid in the retention of key employees and serves to reinforce the importance of maintaining a longer-term focus towards shareholder value creation.

### Executive Remuneration

TGS is an international company operating in the global geoscience industry. Its operations are conducted world-wide and the Company's employment base is and needs to be largely international. The Company's CEO and a large part of the Executive team are based in the U.S. The total compensation package for the CEO and other Executives therefore must be competitive within the Norwegian labor market, the U.S. labor market and internationally. Both the level of total compensation and the structure of the compensation package (in particular the variable pay component) for the CEO and other Executives must attract and retain talented international leaders.

The compensation program for Executives consists of industry competitive benefit programs, base salaries, short-term incentives and long-term incentives. Since 2015, the Long Term Incentives have been implemented through an annual Performance Share Unit ("PSU") plan. The various compensation elements are balanced in a way that recognizes the individual Executive's responsibilities and his or her abilities to influence the short and long-term profitable growth of the Company. Compensation is reviewed annually with performance assessed based on fulfilment of pre-defined goals. Base salaries are consciously set low for Executives (around 25th percentile of the Company's peer group) while the short-term incentive can be comparatively high.

### Governance

The Board of Directors has established a Compensation Committee with responsibility for reviewing Executive remuneration and making recommendations to the board. The Compensation Committee is composed of the following directors: Mark Leonard (Chair), Elisabeth Harstad, Wenche Agerup and Torstein Sanness (appointed in 2016).

The CEO is responsible for proposing the compensation packages (excluding his own) for all Executives for Compensation Committee review and Board approval. The CEO's proposal is based on performance assessed against pre-defined goals.



The Compensation Committee is responsible for recommending the CEO's compensation package to the Board for final review and approval. This includes the CEO's target bonus, which is specifically set by the Board.

The Board believes executive compensation should be reasonable and fair according to prevailing industry standards in the geographical markets where TGS operates, and should be understandable relative to scale, complexity and performance. The Board strives to ensure that executive compensation is administered consistently according to the TGS Total Compensation Philosophy.

The Compensation Committee retains an independent third party compensation benchmarking firm to assess and recommend changes to TGS' executive compensation practices relative to its peer group. The peer group is composed of several competitors and international oil and gas services companies (18 companies in total, eight of which are U.S. and five are Norwegian). The peer group is determined by considering a combination of relative factors including annual revenue, EBITDA, market capitalization, return on equity (ROE) and return on invested capital (ROI). This independent executive compensation analysis is conducted annually.

For further information on executive management compensation, please refer to Note 7 of the Consolidated Financial Statements and the Declaration on Executive Compensation.

## 13. Information And Communications

TGS' investor relations policy is designed to inform the stock market and all shareholders of the Company's activities and status in a timely and accurate manner. The Company submits quarterly and annual financial reports to Oslo Børs. In addition, any interim information of significance for assessing the Company's value is distributed as stock exchange announcements through InPublic – Nasdaq OMX, a commercial publisher of financial information. This information is also available via the Company's website at tgs.com.

The Company places great emphasis on complying with the Stock Exchange regulations by providing the same information to all investors, national and international. The Company uses the Code of Practice for Reporting of IR information issued by Oslo Børs and the Norwegian Investor Relations Association (NIRA) as a guideline for IR reporting. All press releases and news are published in English only and the Company has been granted exemption from the Norwegian Tax Authority to publish its Annual Report in English only.

The Company's quarterly earnings presentations are recorded and made available as webcasts or slide presentations in real time. The Company also makes national and international presentations and conducts road shows throughout the year to inform existing and potential investors about TGS.

The financial calendar displaying the dates for the coming years' interim reports and General Meetings for shareholders is posted at: [www.tgs.com/investor-center/financial-reports/financial-calendar/](http://www.tgs.com/investor-center/financial-reports/financial-calendar/).

## 14. Take-Overs

The Board of Directors has established guiding principles for how it will act in the event of a take-over bid received.

During the course of a take-over process, the Board of Directors and management of both the party making the offer and the target company are responsible to help ensure that shareholders in the target company are treated equally and the target company's business activities are not disrupted unnecessarily. The Board is particularly responsible to ensure that shareholders are given sufficient information and time to form a view of the offer.

The Board of Directors will not hinder or obstruct take-over bids for the Company's activities or shares.

In the event of a take-over bid for the Company's shares, the Board of Directors will not exercise mandates or pass any resolutions with the intention of obstructing the take-over bid unless this is approved by the General Meeting following announcement of the bid.

Any agreement with the bidder that acts to limit the Company's ability to arrange other bids for TGS shares will only be entered into where it is self-evident that such an agreement is in the common interest of TGS and its shareholders. This provision shall also apply to any agreement on the payment of financial compensation to the bidder if the bid does not proceed. Any financial compensation will be limited to the costs the bidder has incurred in making the bid.

If an offer is made for TGS' shares, the Board of Directors will issue a statement evaluating the offer and making a recommendation as to whether shareholders should or should not accept the offer. If the Board finds itself unable to give a recommendation to shareholders on whether or not to accept the offer, it will

explain the background for not making such a recommendation. The Board's statement on a bid will make it clear whether the views expressed are unanimous, and if this is not the case, the Board will explain the basis on which specific members of the Board have excluded themselves from the Board's statement. The Board will arrange for a valuation of TGS from an independent expert and the valuation will be made public no later than at the time of the public disclosure of the Board's statement. This will also apply if the bidder is a major shareholder, a member of the Board or executive management, or close associates of such individuals, or anyone who has recently held such a position. Any such valuation will be either appended to the Board's statement, be reproduced in the statement or be referred to in the statement.

Any transaction that is in effect a disposal of the Company's total activities shall be decided by a General Meeting.

## 15. Auditor

The Board of Directors has determined the procedure for the external auditor's regular reporting to the Board. The auditor attends at least one meeting each year with the Audit Committee of the Board as well as the Board of Directors where the Company's management is not represented. In addition, the auditor participates at meetings of the Board relating to the preliminary annual financial statements. If there are any significant changes from the preliminary accounts, the auditor will also participate in the meeting that approves the annual financial statements. In 2016, the auditor participated in all Audit Committee meetings.

The Company's external auditor presents the primary features of the plan for the execution of the audit to the Audit Committee and reports on the key accounting principles and estimates and the results of the audit to the Audit Committee and the Board of Directors. The auditor also presents to the Audit Committee and the Board any internal control weaknesses and improvement opportunities.

TGS has established guidelines for the right of management to use the external auditor for services other than auditing. The Audit Committee receives an annual summary from the external auditor of services other than auditing that have been provided to TGS. The auditor also presents any threats to his/her independence and documents measures implemented to reduce these, as required by the Audit and Auditors Act Section 5a-3 3. The external auditor provides the Audit Committee with an annual written confirmation of independence. The Board of Directors reports the remuneration paid to the auditor at the Annual General Meeting, including details of the fee paid for audit work and any fees paid for other assignments.

The auditor's fee is determined at the Annual General Meeting. Refer to Note 7 to the Consolidated Financial Statements for auditor's compensation for 2016.

The auditor is required to attend a General Meeting if the business to be transacted is of such a nature that his or her attendance must be considered necessary. In addition, the auditor is, in any case, entitled to participate in the General Meeting.









# CORPORATE SOCIAL RESPONSIBILITY

*"TGS is responsible to our customers, our employees, the communities in which we live and work, to the world community and to our shareholders. Living the TGS Values every day, in everything that we do, helps us to meet or exceed the expectations of our stakeholders both today and in the future, and is critical to delivering sustainable growth over the long term."*

**– Hank Hamilton, Chairman**



# Sustainability Report

## 1. Report on Corporate Social Responsibility

The term “Corporate Social Responsibility” (CSR) is often used interchangeably with “Corporate Sustainability.” The Dow Jones World Sustainability Index defines Corporate Sustainability as “a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments.”

TGS has prepared a CSR report to communicate to stakeholders how it integrates sustainability priorities within its business operations and strategy. Specifically the report covers TGS’ CSR policies, actions, results and future ambitions and plans, focusing on our People and our Conduct, namely our anti-corruption, health and safety, and environmental efforts within the Company and with our Stakeholders. Our commitments, activities and performance on the priorities identified by TGS are set forth in the case studies, facts and figures set forth below. It is the opinion of the Board of Directors that this report complies with the CSR requirements of the Norwegian Accounting Act section 3-3c.

## 2. Responsibilities Towards Our Stakeholders

TGS believes that Corporate Social Responsibility is a fully compatible and integrated part of conducting business successfully. The foundation of our Company’s superior business performance is built on our long-standing values of honesty, integrity, accountability, and respect for others. In order for TGS to prosper, we need the trust and respect of our customers, shareholders, employees, and the communities in which we work and live. These values have long been a fundamental part of how TGS has chosen to do business and the Company has developed and refined these values over time. The purpose of the TGS Statement of Values is to provide a moral and ethical compass to assist and guide the Company in business situations that arise every day. These standards apply to all its activities in every market that TGS serves.

Honesty, integrity and fairness form the cornerstones of TGS’ relationships inside and outside the Company.

*“TGS is responsible to our customers, our employees, the communities in which we live and work, to the world community and to our shareholders. Living the TGS Values every day, in everything that we do, helps us to meet or exceed the expectations of our stakeholders both today and in the future, and is critical to delivering sustainable growth over the long term.”*

*– Hank Hamilton, Chairman*



**TGS is responsible to its customers.** Through quality and service, the Company consistently strives to meet or exceed the expectations of customers, both promptly and profitably.

**TGS is responsible to its employees.** TGS' single greatest asset is its employee base. The Company considers each employee as an individual, and recognizes and respects the dignity, culture and merit of each employee. TGS aims to provide equal opportunity for employment, development and advancement. The Company's human resources policies are designed to ensure fair and equitable treatment and to encourage personal growth. The TGS health, safety and environmental management system (HSE-MS) is designed to ensure that all Company operations are conducted in the absence of significant risk, by continuously identifying and controlling hazards which may arise through any aspect of the Company's operations.

**TGS is responsible to the communities and environment** in which it operates and works and to the world community as well. TGS monitors its environmental performance versus plans and is dedicated to the continuous improvement of its environmental programs and standards for all of its operations. TGS works with its suppliers to ensure that their health, safety, and environmental standards are consistent with that of TGS. The Company actively supports reputable charitable programs and organizations, as well as local social welfare programs within the countries in which seismic data acquisitions are performed, that serve people and communities in need by providing ongoing financial donations. In addition, TGS implemented a program that encourages employees to donate their time and energy to help those in society who are less fortunate. The largest contributions were donated to organizations that work with underprivileged youth, homeless families and organizations that provide medical and humanitarian assistance in disease plagued regions. TGS supports the United Nations Universal Declaration of Human Rights and strives to apply the declaration's principles regarding the freedom, rights, dignity and worth of the human person and promotion of equality irrespective of gender, race or religion throughout business operations.

**TGS is responsible to its shareholders** and expects that they should realize a fair return. The Company understands that its main contribution to society comes from operating and growing a profitable and thriving business that creates value over the long term.

*TGS joined the UN Global Compact in 2016 and publicly committed to implementing the Global Compact's principals on human rights, labor, environment, and anti-corruption into our strategy, culture and day-to-day operations.*

### 3. Priority Identification

In identifying CSR priorities for TGS, it is important that the Company considers how its business impacts stakeholders across the value chain, from planning projects and consulting with local communities and regulatory authorities (including permitting requirements), to selecting and working with partners, agents and contractors, to managing HSE risks in geophysical operations, and to ensuring compliance with the TGS Code of Conduct and anti-corruption program in dealings with third parties.

On an annual basis, TGS conducts a risk assessment process whereby risks from across the business (including CSR risks) are assessed by different groups within TGS: Strategic, Operations, Legal and Compliance, and Finance. These groups identify the top risks, along with the current mitigation measures in place for each of those risks, and rank the risks based upon their impact to TGS, likelihood, and whether the risk is increasing, stable or decreasing. From these analyses, TGS' Executive Team identifies the top risks to TGS, some of which may relate to CSR risks, and implements a mitigation plan to address these risks for the coming year. In addition, all TGS departments, including Human Resources, Compliance, and Health, Safety and Environment, set annual goals for each year, and TGS executive team and Board of Directors participate in reviews of compliance, health, safety and environmental performance on at least a quarterly basis.

TGS also seeks feedback from regular meetings with shareholders, customers, other stakeholders and the International Association of Geophysical Contractors (IAGC). In addition, TGS joined the UN Global Compact in 2016 and publicly committed to implementing the Global Compact's principals on human rights, labor, environment, and anti-corruption into our strategy, culture and day-to-day operations.

From these inter-related processes TGS identified its CSR priority areas, set the CSR goals, plans and actions for 2016. The continuation of the challenging market conditions in the oil and gas industry resulted in TGS remaining steadfast in our commitment to:

- **People:** Engaging and developing employees in difficult market conditions
- **Anti-Corruption:** Employing the best practices to ensure anti-corruption compliance in all our operations
- **Health, Safety & Environment:** Promoting safe, healthy, and environmentally sound practices within the company and by our vendors and suppliers
- **Human Rights:** Advocating for responsible labor practices by our vendors and suppliers



## 4. People

### 4.1. Who We Are

TGS strives to promote and maintain a work environment in which our people are treated with dignity, decency and respect. TGS expects all relationships among persons in the workplace will be business-like and free of unlawful bias, prejudice and harassment. It is TGS' policy to ensure equal employment opportunity without discrimination or harassment on the basis of race, color, national origin, religion, sex, age, disability, or any other status protected by law.

TGS Code of Conduct prohibits discrimination and harassment in the workplace. All TGS employees must annually attend Code of Conduct training, which includes training on TGS' anti-discrimination and anti-harassment policies. New TGS employees must complete an online training focused on maintaining a workplace free from discrimination or harassment.

### 4.2. What We Did in 2016

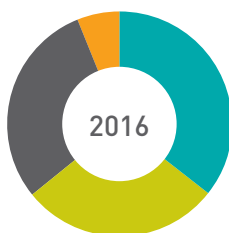
Employee engagement is critical to the long-term sustainability of TGS. TGS seeks to maintain high levels of employee engagement while complying with labor rights and providing favorable work conditions. Due to the difficult market conditions in the oil industry, 2016 continued to be a challenging year. TGS announced a reduction in workforce and implemented reduced work hours in select locations. TGS focused on keeping employees engaged and motivated and maintaining

#### Employee Statistics

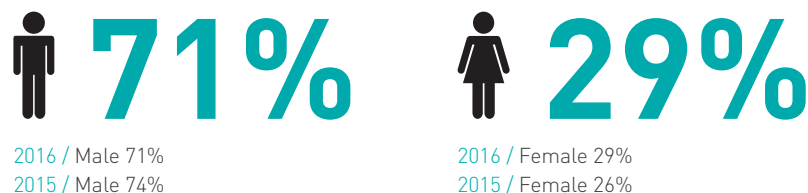
	2016	2015
Total # of Employees at year end	614	747
New Hires	19	31
Internal Job Fill	58%	56%
Employee Turnover	8%	10%

#### Tenure

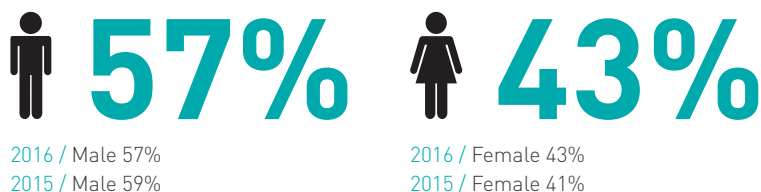
0 - 5	2015 / 46%	2016 / <b>36%</b>
5 - 10 years	2015 / 26%	2016 / <b>29%</b>
10 - 20 years	2015 / 23%	2016 / <b>30%</b>
+20 years	2015 / 5%	2016 / <b>6%</b>



#### Gender – Management

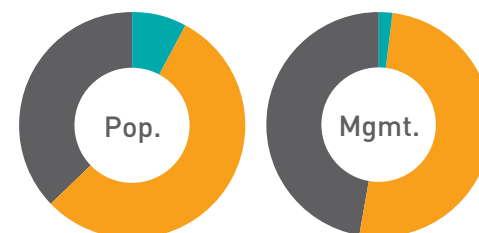


#### Gender – Total Employee Population



#### Age / 2016

- 30 y/o	Total Pop. / <b>8%</b>	Mgmt. / <b>2%</b>
30 – 50 y/o	Total Pop. / <b>55%</b>	Mgmt. / <b>51%</b>
50+ y/o	Total Pop. / <b>37%</b>	Mgmt. / <b>47%</b>



internal communications by launching our new intranet site which serves as a platform to enhance communication with our employees. We utilize the site to keep employees informed on industry updates, company programs & initiatives and employee events. In addition, through town hall sessions, we continued to update employees on the state of the industry and how TGS planned to approach the challenges ahead. We now broadcast our town hall sessions live globally on a quarterly basis. In addition, TGS continued to provide learning and professional development opportunities for employees, both internally and externally, aimed at encouraging employee advancement.

*It is TGS' policy to ensure equal employment opportunity without discrimination or harassment on the basis of race, color, national origin, religion, sex, age, disability, or any other status protected by law*

#### 4.2.1. Employee Engagement

One of TGS' main priorities in 2016 focused on keeping employees engaged and motivated to retain top talent and enhance performance in these challenging market conditions. TGS actively sought feedback and input from the workforce and continued to communicate with employees to address their concerns. Engaged employees are essential to the success of TGS. Increasingly, we understand that employee engagement is a requisite for high performance. Hence, TGS performed its biennial Global Employee Engagement Survey in November 2016, to help identify opportunities for increasing employee engagement. The anonymous survey measures employees' perceptions of past events, present experiences, and future expectations for a more complete view of employees' engagement levels. The survey compares TGS employee responses to a global, multi-industry benchmark across eight metrics to identify areas of improvement. TGS had an 87% response rate and scored highly in the areas of Culture/Values and Work Environment. Professional Development and Communication were identified as areas of focus to continue to improve engagement.

Communication across the organization is vital to maintaining an informed and engaged workforce in which employees are motivated to contribute and improve performance. Therefore, it is necessary for TGS's leaders to be visible and accessible to the entire workforce and employees be encouraged to share their opinion on important issues facing the organization. TGS holds quarterly employee meetings across all of its key offices, which include a Q&A session with the CEO and presentations from various projects or business units on their operations. Additionally, all business groups and departments hold a multi-day

planning session at the start of the year in which members of that department participate in planning and discussing business objectives and goals for the coming year.

#### 4.2.2. Professional Development

TGS is committed to strengthening our culture of excellence. Providing professional development opportunities for our workforce is a cornerstone to that end. Building upon long-term corporate objectives, TGS continued to provide general management skills, business acumen courses and technical training at each of its core offices in 2016.

TGS employees participate in an annual performance and professional development review, whereby the employee and his/her manager discuss the progress of last year's goals, establish goals for the upcoming year, discuss the employee's performance over the past year, review career aspirations and identify opportunities for further development. TGS recognizes that this process is critical to ensuring that its employees continue to develop the necessary skills to grow with the company.

TGS offers both onsite and out-of-office professional development training opportunities to employees, encourages employee participation in industry events, supports internal career progression, and provides tuition assistance for higher education courses for employees. TGS also continued its Executive Mentorship program for talented individuals to be mentored by members of the Executive management team.

 **1,815 hrs**

*2016 was the third full year of TGS' revamped technical training program, and employees participated in over 1,815 hours of in-house geological and imaging courses and lunch-and-learn sessions.*

Additionally, TGS provides technical training to its employees through onsite training programs and lunch- and-learns as well as encouraging employees to participate in industry events. Employees participated in over 1,815 hours of in-house geological and imaging courses and lunch-and-learn sessions (down from 2,006 hours in 2015 due to the fewer number of employees in the company). TGS employees also participated in five University Consortia around the world in 2016.

#### 4.3. Our Ambitions and Plans

TGS recognizes the value of having an engaged workforce and will continue to actively identify opportunities to improve engagement, provide professional

development, encourage career discussions, and maintain open communication in 2017. TGS's commitment will be further reinforced through the implementation of leadership sessions and focus on transparent communication from the top down. TGS will hold focus groups with employees to better understand the feedback and to gain understanding of the areas of improvement. Corporate goals that align with these initiatives will be posted in our new intranet (ODIN) and reinforced during quarterly employee meetings. Finally, TGS conducted its Global Employee Engagement Survey in 2016 and will use the results of that survey to measure our effort in increasing our employees' engagement, and we are committed to conducting another survey in 2017..

## 5. Anti-Corruption and Compliance

### 5.1. Our Code of Conduct

TGS expects the highest levels of personal conduct from its Board of Directors, its entire staff, regardless of position, and its agents and contractors. The TGS Code of Conduct sets the standard of responsible conduct for every TGS employee and serves as the Company's ethical roadmap – ensuring all employees perform their duties with honesty and integrity and in accordance with the law.

As a function within the TGS executive team, the Compliance Program endeavors to foster an open, transparent and ethical environment in accordance with the TGS Code of Conduct. The TGS Compliance Officer reports to the Board of Directors and the CEO and provides updates on at least a quarterly basis. The Compliance Officer aims to educate TGS employees on potential compliance concerns as well as implement policies, procedures, and guidelines to detect and prevent potential compliance concerns. In January of each year, an annual letter from the CEO is issued to all TGS employees that outline TGS's expectations regarding ethical and compliant conduct.

All TGS employees are to complete an annual certification that represents each employee's personal pledge that he or she has read, understood, and will uphold the Code in his or her business activities, as well as to participate in annual live Code of Conduct trainings, either held in-person or via video-conference, and other online compliance training initiatives.

TGS provides multiple avenues for TGS' internal and external stakeholders to discuss or report potential non-compliance. Employees are encouraged to report any violation of TGS' values or policies to their supervisor, the Compliance Officer, or through the TGS hotline, which allows employees to report suspected instances of non-compliance anonymously. TGS wants to know about potential problems before they become serious, and policies are in place that prohibit

retaliation against reporting employees. TGS investigates all potential violations of its Statement of Values and Code of Conduct, such as illegal acts, conflicts of interest, financial fraud, corruption issues or breaches of TGS' corporate policies. TGS will also engage internal or external legal counsel as needed in dealing with possible violations of its corporate policies.

*The TGS Code of Conduct sets the standard of responsible conduct for every TGS employee and serves as the Company's ethical roadmap – ensuring all employees perform their duties with honesty and integrity and in accordance with the law.*

### 5.2. What We Did in 2016:

As a Company that operates throughout the world, TGS recognizes that bribery and corruption is a serious risk in today's business environment. TGS works to ensure that its employees understand that when conducting business in other countries, employees must be sensitive to the legal requirements that apply to foreign operations, including the U.S. Foreign Corrupt Practices Act, the OECD Convention on Combating Bribery of Foreign Public Officials in International Business, and the U.K. Bribery Act.

TGS' Anti-Corruption policy applies to both TGS employees and third parties acting on behalf of TGS and expressly prohibits bribery, kickbacks and other illegal payments, as well as facilitation payments and political contributions on behalf of the company. Review and prior approval is required for gifts, entertainment, or travel expenses provided to government officials, as well as charitable or social welfare contributions to be made by or on behalf of TGS. TGS conducts due diligence on third party relationships based upon various risk factors, including but not limited to the location of where services are to be performed, the types of services to be performed, and the entity performing the services. TGS includes anti-corruption provisions in agreements with third parties providing services on behalf of the company, and third parties deemed to be high-risk must complete annual anti-corruption training and certification requirements. TGS continually conducts assessments of its anti-corruption policies, procedures, and guidelines to identify weaknesses and areas for improvements. International agents are periodically audited to ensure their compliance with their agreement to TGS and applicable anti-corruption laws.

To support the concept that compliance starts at the executive level and to ensure that all aspects of the business are up-to-date on anti-corruption best



practices, the Compliance Director provided quarterly and ad hoc presentations to the management team and business groups on global developments in anti-corruption laws and enforcement actions in 2016.

In 2016, TGS focused on monitoring third party relationships and implemented additional internal controls to monitor payments made to high risk third parties to ensure their compliance with contractual terms and the law.

Each year, all TGS employees are required to certify their compliance to TGS' Code of Conduct and participate in live Code-of-Conduct training, both of which include a focus on TGS' anti-corruption efforts. One-hundred percent of TGS employees completed both the Code of Conduct certification and Code of Conduct training for 2016. In addition to the Code of Conduct training, which includes discussion of TGS' Anti-Corruption policy, TGS administered an online anti-corruption training and certification program to key employees and managers who interact with government officials or oversee employees who interact with government officials that included training on and certifying compliance with TGS policies. One-hundred percent (100%) of active TGS employees completed the online anti-corruption training and certification (same as in 2015).

## 100% CERTIFIED

- 100% of TGS employees completed Code of Conduct certification and Code of Conduct training
- 100% of key TGS employees completed TGS' Anti-Corruption training and certification program
- 100% of TGS international agents certified their compliance with TGS' Anti-Corruption policy and completed Anti-Corruption training

TGS continued to work with its third party agents to stress the importance of and ensure compliance with international anti-corruption laws in 2016. All of TGS's international agents are required to annually certify compliance with TGS's Anti-Corruption policy and complete online anti-corruption training. One-hundred percent (100%) of TGS's international agents completed their annual certification of compliance with TGS's Anti-Corruption policy and anti-corruption training in the past year (same as in 2015).

### 5.3. Our Ambitions and Plans:

TGS will continue to be active in monitoring the international developments and "best practices" in anti-corruption compliance. Going forward TGS intends to further the actions undertaken during 2016 with a continued emphasis on monitoring both the payments made to and relationships with TGS's international

agents, and will maintain its hands-on approach to ensure our international agents understand and abide by TGS' anti-corruption policy. TGS will continue to aim for 100% compliance by both key TGS employees and international consultants with TGS' anti-corruption training and certification requirements. In the coming years as part of its monitoring of international agents, TGS will continue to review and update international agent due diligence information on a periodic basis so as to maintain current and accurate information for all international agents. Finally, TGS will continue to stay committed to internationally accepted "best practices" for anti-corruption compliance, and will work to update policies and procedures accordingly.

## 6. Health and Safety

### 6.1. What We Believe


TGS is dedicated to the continuous improvement of health, safety and security standards for its people and insists on the same policy from its contractors. TGS has defined safe operating procedures and guidelines in the HSE Management System that are designed to meet or exceed all appropriate legal requirements and, in the absence of any defined standards, to meet or exceed generally accepted industry-wide "best operating practices." TGS actively participates with all relevant client/contractor associations and relevant authorities in developing HSE standards.

TGS maintains a high level of safety awareness by means of safety meetings, internal auditing, review meetings and general communications. All employees and contractors are actively encouraged to participate in the conduct, management and continuous improvement of safety. TGS requires all employees and contractors to be accountable for and committed to their own health and safety as well as for those with whom they work. Employees and contractors are empowered to intervene and STOP any operation or activity that they feel is unsafe or hazardous, with the knowledge that such action will be supported by management.

Both the TGS HSE Director and senior management have responsibility for the communication and implementation of TGS health and safety policies, including provision of information, training and resources to employees.

### 6.2. What We Did in 2016: HSE Reviews and Training

TGS conducts quarterly HSE reviews with the executive team. TGS continues to promote a top-down message of health and safety by making its senior management responsible for ensuring that all employees completed at least two HSE training modules during 2016. Management also participated in audits of all

 Employee Health & Safety Statistics	2016	2015
Man-hours	1,103,829	1,562,934
Fatalities	0	0
Lost Time Injuries (LTI)	1	0
Medical Treatment Cases	0	0
Restricted Work Cases	0	1
Recordable Case Frequency*	0.18	0.64
LTI Frequency*	0.18	0.00
Working Days Lost	1,536	1,040
Sickness Absence Frequency	1.11%	0.53%

office locations, and all TGS staff are assessed on active HSE commitment during annual performance reviews.

In 2016, all TGS Executive Team members conducted at least 1 HSE facility inspection. All office locations performed at least one HSE related lunch and learn activity, which included topics such as First Aid / CPR Training, Bicycle Safety, Home Safety, and Fire Extinguisher Training.

There was one lost time incident for contractor field crews in 2016. An investigation was performed and remedial measures were put in place to prevent similar incidents from occurring in the future. With respect to TGS employees, there was one lost time incident in 2016. The Total Recordable Incident rate for 2016 was 0.18 (per 1,000,000 man hours).


There were 13 field visits from senior management and operations managers during 2016, and full compliance with vessel and land crew audit requirements was achieved. Additionally, 39 inspections were performed at TGS office locations globally.

The Motor Vehicle Accident Rate in 2016 (per 1,000,000 miles) was 0.00, as only a small number of land activity was completed.

One hundred percent (100%) of employees completed both HSE training courses offered in 2016.

### 6.3. Our Ambitions and Plans

TGS management will continue to champion TGS' HSE training initiatives by increasing management's presence at both land and marine operations and by having management conduct facility inspections at TGS' offices. TGS will continue to require all land and marine contractors to participate in TGS' Contractor Management System for both land and marine surveys. Additionally,

 Contractor Health & Safety Statistics	2016	2015
Man-hours	2,975,592	6,466,840
Fatalities	0	0
Lost Time Injuries (LTI)	1	1
Medical Treatment Cases	1	11
Restricted Work Cases	2	13
Recordable Case Frequency*	1.34	3.87
LTI Frequency*	0.34	0.15

\*Per million man-hours

all TGS employees will be required to complete two HSE training courses during 2017. Each office location has a goal to host two HSE Lunch and Learn events in 2017. Finally, TGS has set as targets for 2017 of zero lost time injuries across all operations, and a total recordable incident rate of less than 2.0 and a motor vehicle accident rate goal of less than 2.0 for land seismic operations.

## 7. Environment

### 7.1. What We Believe

TGS is committed to leading the industry in minimizing the impact of its activity on the environment. To achieve this, TGS continually assesses its impact on the environment and endeavors to plan operations that minimize environmental impact. TGS typically conducts environmental impact assessments as part of the permitting process prior to initiating seismic data acquisition. TGS monitors its environmental performance versus plans and is dedicated to the continuous improvement of its environmental programs and standards for all of its operations.

TGS strives for zero spills and unplanned releases to the marine environment during seismic vessel operations and zero reportable spills in the onshore environment. Through TGS's charters of the seismic vessels, TGS influences and aims to ensure our contractors comply with all applicable environmental laws and regulations. Seismic vessels chartered by TGS undergo audits from the International Marine Contractors Association/Offshore Vessel Inspection Database (IMCA/OVID audits), either conducted by TGS, the vessel, or another third party, that evaluate compliance with all applicable health, safety, and environmental regulations and industry requirements, and ensure that all required health, safety, and environmental permits and certificates are valid.

TGS understands the importance of working with local governments, regulatory authorities, and non-government organizations, and therefore, TGS maintains positive communication with regulatory authorities and other governmental and non-governmental organizations to help identify, understand and mitigate environmental risks associated with geophysical activities. Finally, we work to implement improved environmental awareness in office locations and minimize waste and manage waste output, minimize carbon emissions by survey design, guard against accidental and operational pollution, and mitigate against any active or operational pollution.

*TGS understands the importance of working with local governments, regulatory authorities, and non-government organizations, and therefore, TGS maintains positive communication with regulatory authorities and other governmental and non-governmental organizations to help identify, understand and mitigate environmental risks associated with geophysical activities.*

## **7.2. What We Do**

TGS continues to include environmental aspects within IMCA/OVID accredited audits on all chartered seismic vessel and monitor spills and unplanned releases during seismic operations. TGS assesses and reports upon biologically-important areas, which include marine mammal migration paths, spawning grounds, sanctuary areas, or other ecologically sensitive locations where TGS has activities. There were no recordable spills or unplanned releases to the marine environment and no reportable spills or releases to the onshore environment.

TGS actively supports the IAGC both financially and through employee participation in committees and projects. In 2016, TGS employees, including the SVP Onshore, General Counsel, Director Marine Acquisition and HSE Director actively served and participated in IAGC boards and committees. Through its work with the IAGC, TGS seeks to positively influence sensible and sustainable legislation and address environmental misconceptions associated with the geophysical industry. TGS supports the IAGC's efforts to create standards and protocols for seismic in frontier areas, and to plan seismic surveys to minimize environmental implications and liaise with stakeholders (including local fishing industry). TGS is also involved with the International Association of Oil & Gas Producers (IOGP) and supports its efforts to improve safety, environment and

social performance and promote responsible and sustainable operations within the oil and gas industry. Each year, TGS participates in IOGP's global forum, which includes both clients and competitors, to share best practices and to troubleshoot challenges that may have arisen in the industry.

One example of TGS' efforts in 2016 to work with stakeholders, including regulatory authorities and other governmental and non-governmental organizations, on identifying, understanding and mitigating environmental risks associated with geophysical activities is in the Asia Pacific region. TGS completed a comprehensive round of stakeholder engagement communications with a diverse range of government and non-government groups, most notably commercial fishermen, during the planning phase for the recently acquired North West Shelf Renaissance 2016 (NWSR16) regional 2D survey. Survey commitments included the deployment of independent Marine Fauna Observers on-board the survey vessel, who provided the means of compliance with the Australian Department of the Environment's EPBC Act Policy Statement 2.1, ensuring all mitigation and adaptive management procedures were adhered to when marine mammals were encountered.

TGS spent a period of 9-months throughout 2016 liaising with the Australian government regulator, NOPSEMA, on a basin-wide 5 year Environment Plan, which provides the building block upon for the company to develop and acquire new 2D or 3D surveys in a geographically expansive zone.

Additionally in 2016, TGS completed a seismic survey program in the arctic waters off of North East Greenland. The sensitive nature of the environment demanded careful planning of survey activities. TGS commissioned specialist environmental consultants CMACS (now NIRAS) to undertake a detailed environmental impact assessment (EIA) in line with requirements under Greenlandic regulations. The EIA report considered the potential effects of seismic survey in arctic waters, home to diverse and potentially sensitive marine wildlife such as whales, walrus and seabirds and the supporting ecosystem, as well as the potential for interactions with local communities and activities such as fishing and hunting.

Key considerations were the underwater noise associated with seismic surveys and potential for potential pollution from any hydrocarbon spills. Detailed noise modelling was completed to understand the potential effects on sensitive species such as the bowhead whale, narwhal and walrus. Taking into account the presence of protection areas for key marine groups, a comprehensive set of risk reduction and mitigation measures were developed. These included enhancements to standard 'best practice' approaches (e.g. marine mammal observer teams) because of concerns about highly sensitive species such as bowhead whales. Practical measures were developed to address stakeholder



concerns whilst allowing efficient survey operations.

There was active stakeholder engagement, most notably through a public hearing prior to the survey permit approval during which individuals, community groups, government authorities and NGOs had an opportunity to comment on the survey proposals.

### 7.3. Our Ambitions and Plans

Going forward TGS intends to continue its work with the IAGC and IOGP to develop and ensure compliance with environmentally sound practices in the seismic industry. As with prior years, TGS will continue to aim for zero spills and unplanned releases to the marine environment during seismic vessel operations and zero reportable spills in the onshore environment. Further, TGS has set a goal in 2017 for each chartered vessel will undergo an IMCA/OVID audit within six months of hire and every twelve months thereafter, and an audit within four weeks of start for land seismic crews. Finally, TGS will continue to ensure its marine and land contractors participate in and abide by the environmental standards set forth in TGS Contractor Management System.

## 8. Human Rights

TGS supports the UN Universal Declaration of Human Rights and aims to apply its principles throughout our business operations. These principles include recognition of the freedom, the rights, the dignity and the worth of the human person and promotion of equality irrespective of gender, race or religion. TGS will not use or support child labor or slavery in any of its offices. TGS also works with contractors and vendors to ensure that our field and seismic vessel operators abide by the UN Universal Declaration of Human Rights and do not use or support child labor or slavery in their operations for TGS. To that end, TGS' Contractor Management System requires vendors, contractors and suppliers to provide TGS their policies regarding their human rights and labor practices so that TGS may review and ensure that any contractors or third parties with whom TGS contracts maintain the same commitment to human rights as TGS.

## 9. Community and Charitable Relations

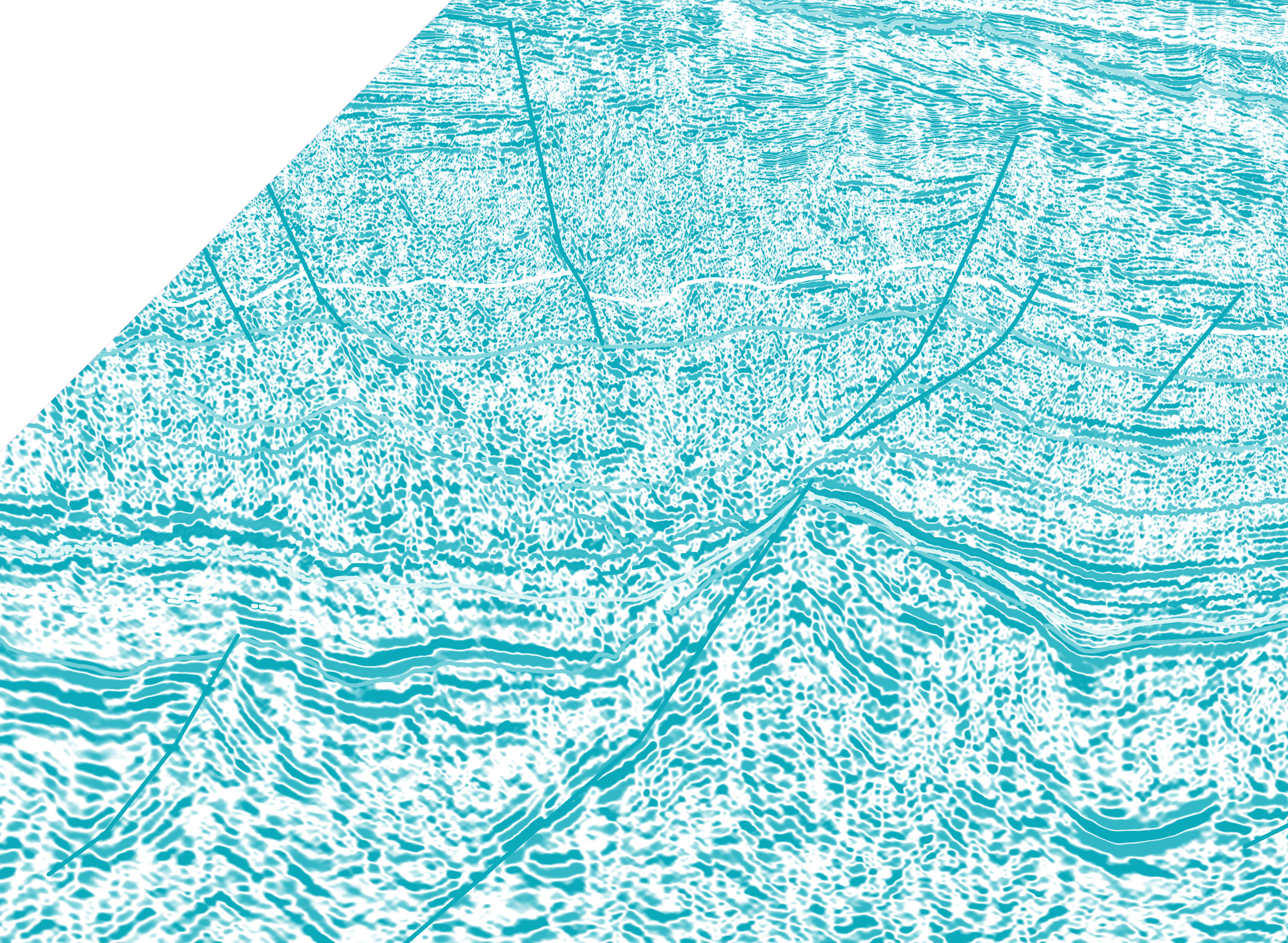
Through the TGS Charitable Contributions Committee and in accordance with its charitable contributions guidelines, TGS actively supports reputable charitable programs and organizations that serve people in need by providing ongoing financial donations as well as encouraging employees to donate their time and energy to help those in society who are less fortunate.

TGS is committed to supporting local, nonprofit community organizations and charities that focus their services on people and are dedicated to (i) providing access to healthcare, medical services, and helping to fight disease; (ii) assisting underprivileged, underrepresented, or at-risk communities or groups; (iii) providing humanitarian aid or disaster relief; (iv) addressing environmental issues; or (v) promoting geophysics and geoscience educational experiences to children.

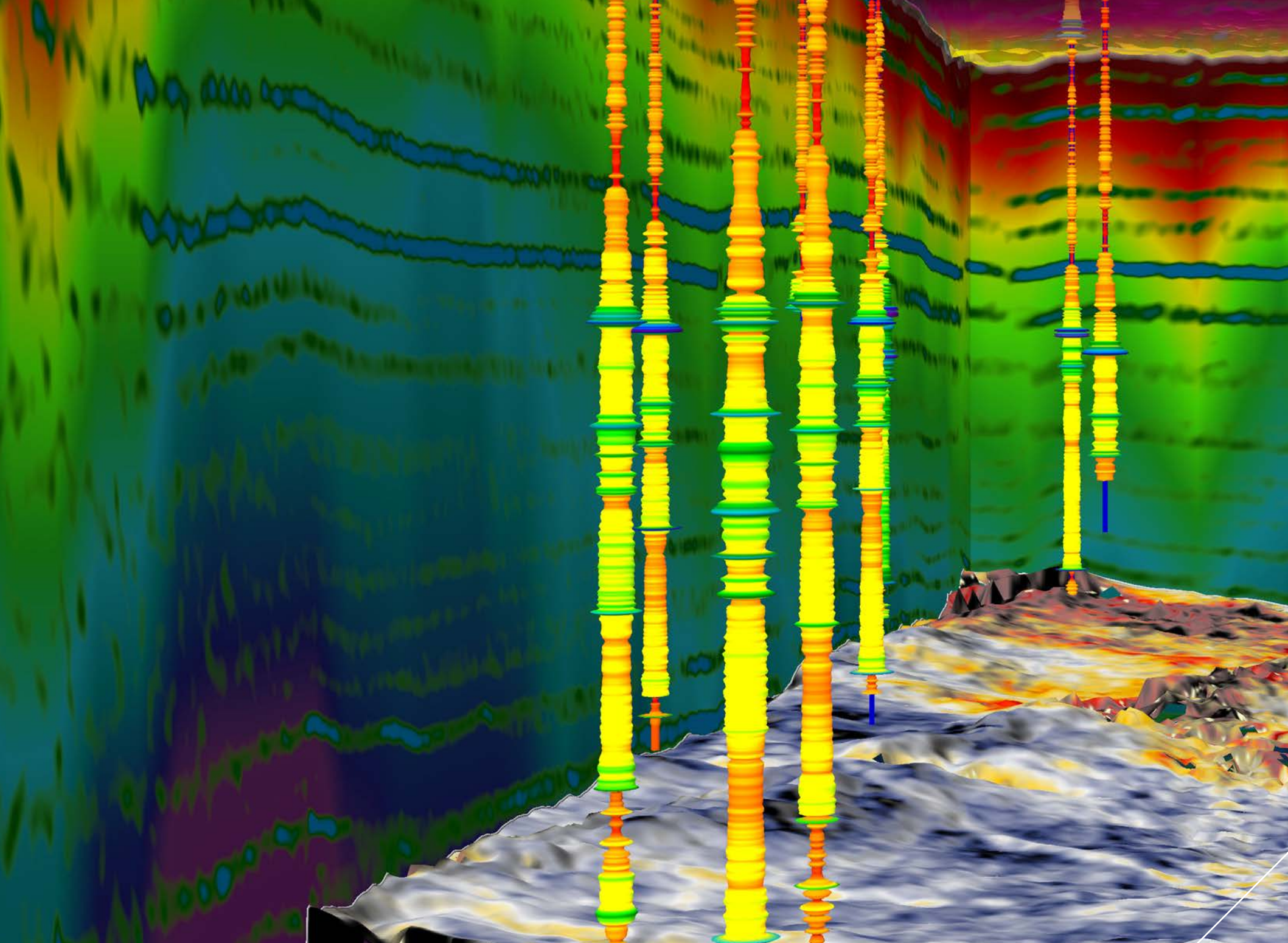
TGS consults with local communities to seek input and address concerns relating to seismic data acquisition projects, especially in relation to onshore seismic activities, areas sensitive to the fishing industry and the Arctic.

Significant contributions were made to over 21 charitable organizations during 2016. The largest charitable contributions were made to organizations that help underprivileged youth, fund medical research and access to healthcare, and provide humanitarian aid. Donations were also made to organizations that help homeless families and organizations promoting geophysics and geoscience educational experiences to children. TGS employees reported that they had spent more than 856 hours (up from 405 hours in 2015) on TGS-supported charitable activities during 2016. TGS will continue to support local charities and non-profits in the communities in which we operate and to encourage TGS employees to do the same.













# INVESTOR RELATIONS

TGS' strong cash flow enabled us to pay a dividend of USD 59 million to our shareholders in 2016, and we are proud to be one of few international oil service companies which have maintained a dividend throughout the severe down cycle.

# Investor Relations

## TGS Shareholder Facts

**Symbol:** TGS

**Listing:** Oslo Stock Exchange (member of the OBX index)

**ADR:** TGSGY (traded on the U.S. over-the-counter market)

**Analyst coverage:** 18 firms; for list see [www.tgs.com/investor-center/stock-information/analyst-coverage/](http://www.tgs.com/investor-center/stock-information/analyst-coverage/)

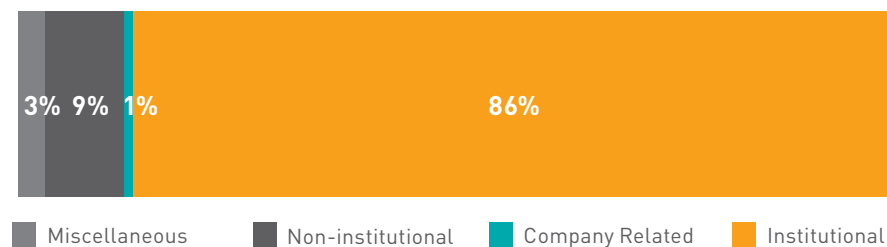
**Volume traded on the OSE during 2016:** 119,425,966 shares

**Average daily trading volume in 2016:** 472,039 shares

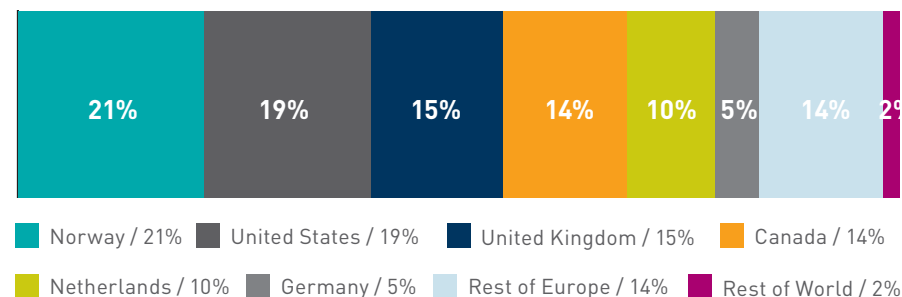
Shareholder Facts	2016	2015	2014	2013	2012
Market Value at 31 December (USD 1000s)	2,271,400	1,637,076	2,236,444	2,742,148	3,358,639
Total Equity at 31 December (USD 1000s)	1,169,124	1,198,088	1,339,201	1,292,979	1,168,360
Shares Outstanding 31 December	102,135,990	102,135,990	103,184,288	103,521,724	103,431,474
of which Treasury Shares 31 December	533,500	673,600	1,843,512	1,416,200	1,317,200
Volume Traded on the OSE	119,425,966	146,884,972	155,149,403	118,438,925	133,452,000
Average Daily Trading volume	472,039	585,199	620,598	475,658	531,681
Share Price at 31 December (NOK)	191.7	141.40	161.70	160.80	181.50
Share Price High (NOK at close)	193.8	201.70	209.70	229.30	198.90
Share Price Low (NOK at close)	107.0	136.20	145.40	140.00	136.30
Earnings per Share (Fully Diluted)	0.28	(0.28)	2.09	2.59	2.76
Dividend per Share (NOK)	USD 0.60	8.5	8.5	8.0	6.0
Yield [% closing price at day of announcement]	3.6%	5.2%	4.9%	3.9%	4.0%
Market Price/Earnings per Share (P/E)	82.14	(57.75)	10.37	10.23	11.77
Market Price/Equity per Share (P/B)	1.94	1.37	1.67	2.12	2.87
Enterprise Value/Operating profit (EV/EBIT)	39.23	(69.45)	6.72	6.36	7.52

## Distribution of Share Holdings\*:

### TGS Shareholder Composition



### TGS Shareholder Composition



\*Based on location of beneficial owners of TGS shares rather than location of nominee accounts at 31/12/2016. Source: Nasdaq identification of approximately 85% of the shares.

## Stock Performance and Total Return to Shareholders

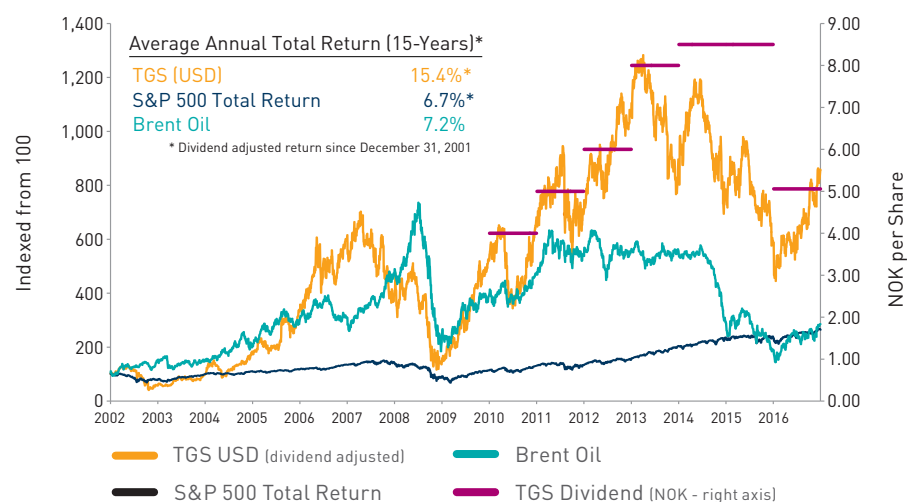
TGS is listed on the Oslo Stock Exchange and also has an American Depositary Receipt (ADR) facility managed by The Bank of New York Mellon. TGS is part of the OBX index, being among the 25 most liquid stocks in Norway.

Despite the challenging market conditions, TGS share price increased by 36% during 2016, closing at NOK 191.70 [31 December 2016].

## TGS Share Price and Volume



## TGS Share 15 Year Total Return vs. Benchmarks



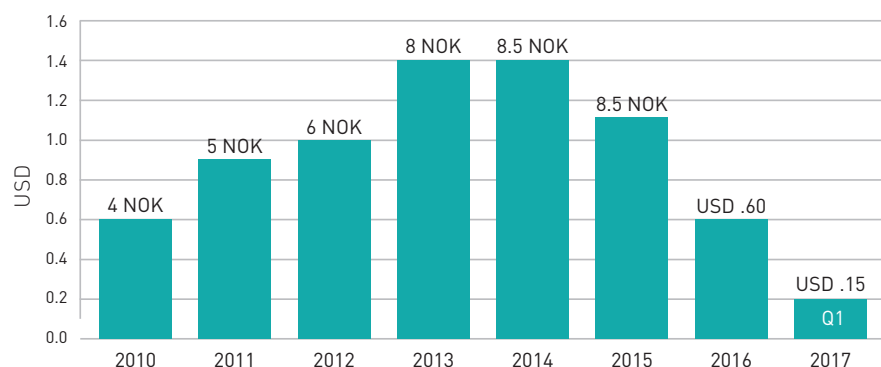


The total return from TGS stock has proven very attractive over the long term. The Total Return chart on the previous page shows total return from TGS stock over a 15 year period with share price adjusted for dividend distributions. The average annual total return during this period is 15.4% which is significantly above the total return from the S&P 500 (6.7%) and Brent oil (7.2%).

## Capital Distribution to Shareholders

The Company is constantly evaluating the best use of its cash flow from operations for continued shareholder growth. The Company uses cash for organic investments in the multi-client library, historically providing healthy returns. In addition, the company from time to time uses cash for inorganic investment opportunities. This can include the acquisition of third party libraries or complementary businesses that add value to the TGS offering.

**Dividend Paid\* (2011-2017)**



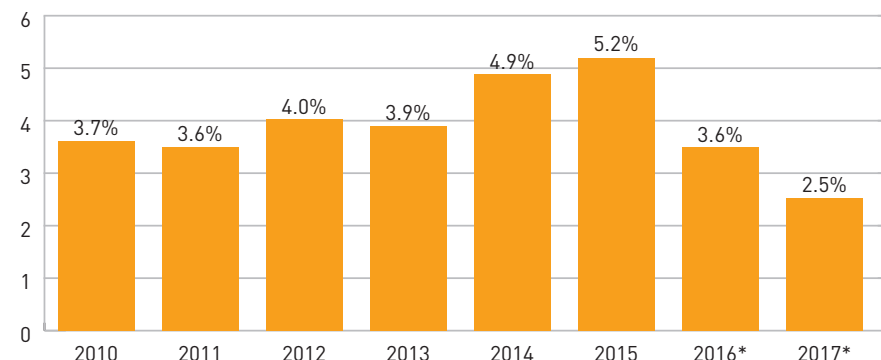
\* Quarterly Dividends, defined in USD from 2016  
Historical NOK dividends converted to USD using FX rate on ex-dividend date

It is the ambition of TGS to pay a cash dividend that is in line with its long-term underlying cash flow. When deciding the dividend amount, the TGS Board of Directors will consider expected cash flow, investment plans, financing requirements and a level of financial flexibility that is appropriate for the TGS business model.

In addition to paying a cash dividend, TGS may also buy back its own shares as part of its plan to distribute capital to shareholders.

From 2016, TGS started paying quarterly dividends in accordance with the

## Dividend Yield (2011-2017)



\*2016 and 2017 Dividend Yield annualized based on the weighted yield at the time of announcement of quarterly dividends

resolution made by the Annual General Meeting on 6 May 2015 and renewed on 10 May 2016. The aim is to keep a stable quarterly dividend through the year, but the actual level paid will be subject to continuous evaluation of market outlook, cash flow expectations and balance sheet development.

The ex-dividend date will normally be seven days after the announcement of the dividend in connection with the release of quarterly financial statements, with the payment date 14 days after the ex-dividend date.

The TGS Board of Directors resolved to pay a dividend of USD 0.15 per share in Q1 2017. The share traded ex-dividend on 9 February 2017 and the dividend was paid on 23 February 2017.

## Investor Relations at TGS

TGS places great emphasis on providing accurate and timely information to the market and shareholders. The earnings reports and press releases are issued only in English to ensure simultaneous and consistent information to all shareholders.

The full year financial reporting calendar is published and posted on the TGS website. This calendar is updated annually following the second quarter earnings release. The quarterly earnings results are either presented and

webcast live in Oslo, Norway or they are pre-recorded and published prior to the market opening on the date of the release. TGS entertains questions at the live presentations and the CEO and CFO hosts a conference call allowing questions and answers on the day of the release. All presentation material, including the question and answer sessions, are published on the TGS website in near real time. In addition to the quarterly and annual financial reports, TGS also provides interim information of significance through press releases to aid in the assessment of the Company's value. TGS management maintains a quiet period on discussing significant business during intervals spanning the last weeks of a financial quarter and the announcement of the results of that financial period.

The general shareholders meetings for TGS are held in Oslo, Norway. All shareholders are invited to attend. Shareholders who want to attend a shareholders meeting must notify the Company about their attendance at the latest three business days before the day of the meeting. Shareholders who have not given notice of attendance can be denied the right to meet and vote at a shareholders meeting. Documents concerning matters to be considered at the general shareholders meetings are made available on the Company's website prior to the event. To vote at an annual or extraordinary general meeting, a shareholder must be registered as a holder of title to the shares to be voted in the share register maintained at the Norwegian Central Securities Depository (VPS), in due time before the shareholders meeting

TGS Executive Management is available for direct contact with investors, potential investors and analysts on an ongoing basis and regularly participates in road shows and investor conferences in both Europe and North America. Historical financial reports can be found on the TGS website at <http://www.tgs.com/investor-center/financial-reports/>.

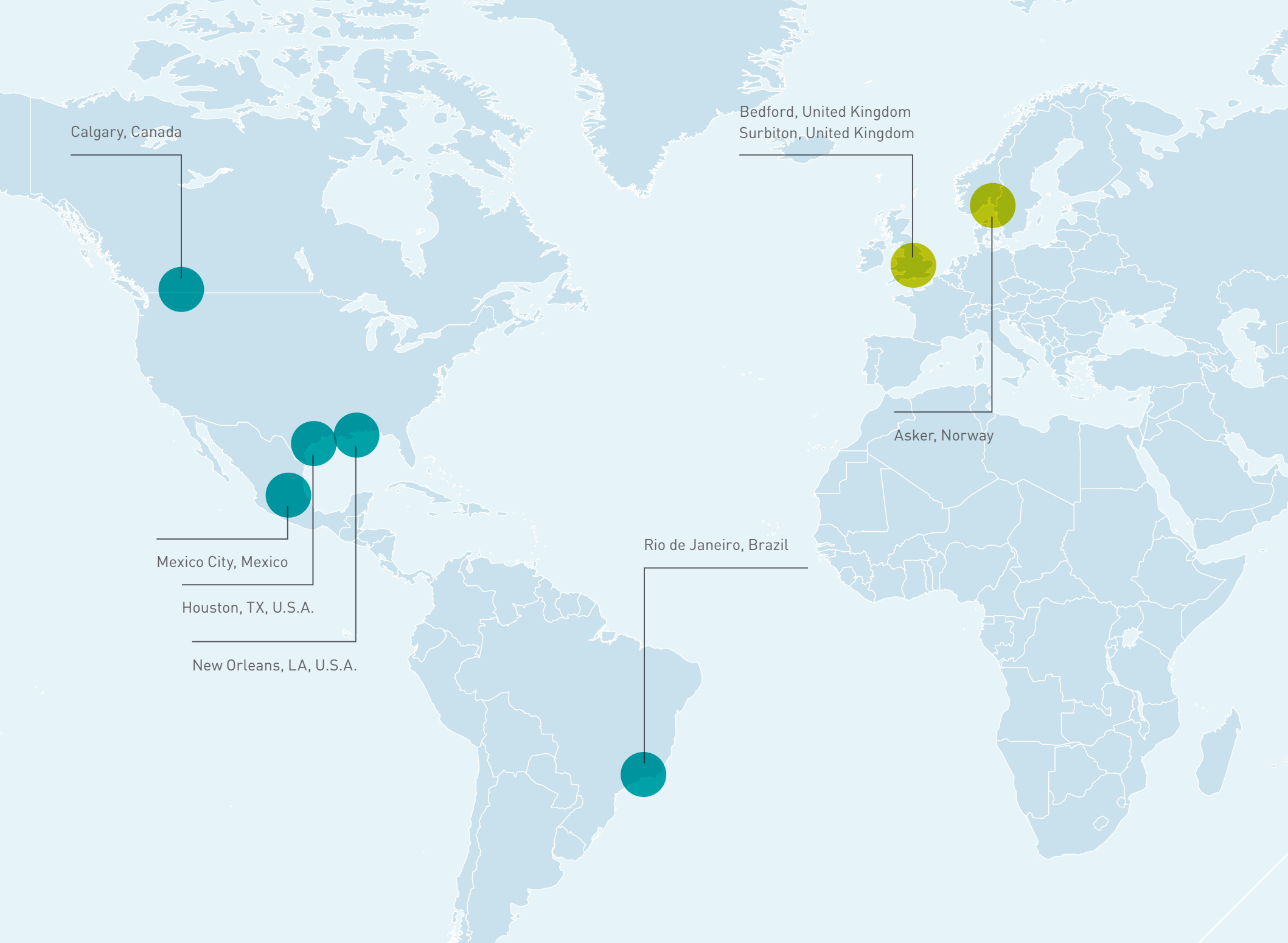
For more information regarding TGS, contact Sven Børre Larsen or Will Ashby.



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Asker, Norway



**Will Ashby**  
VP HR & Communication  
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See the energy at [TGS.com](http://TGS.com)