

ANNUAL REPORT



# **OUR MISSION**

Energy starts with us.

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

Our unique culture, people and quality library assure 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.

## 2018 Financial Highlights (All amounts in USD 1,000s apart from EPS, ratios and dividend per share)

	2018	2017	2016	2015	2014
Net operating revenues	614,239	492,181	455,991	612,347	914,785
🤨 EBIT	230,025	97,429	53,035	(21,230)	294,516
🔅 Pre-tax profit	236,771	99,636	52,675	(24,505)	288,327
🤨 Net income	178,800	75,594	27,653	(28,347)	216,074
🤨 EBIT margin	37%	20%	12%	-3%	32%
🔗 Net income margin	29%	15%	6%	-5%	24%
Return on average capital employed*	24%	10%	5%	-2%	28%
🛎 Earnings per share	1.75	0.74	0.28	(0.28)	2.12
🛎 Earnings per share fully diluted	1.73	0.73	0.28	(0.28)	2.09
🖄 Total assets	1,624,412	1,424,100	1,476,575	1,455,247	1,767,618
🛎 Shareholders' equity	1,251,699	1,200,102	1,169,124	1,198,088	1,339,201
🛎 Equity ratio	77%	84%	79%	82%	76%
🐏 Share buy-back				4.8	24.0
💓 Dividend per share (paid in year)	USD 0.8	USD 0.6	USD 0.6	NOK 8.5	NOK 8.5

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

\*\* Quarterly USD dividend introduced in 2016

Multi-client Library	2018	2017	2016	2015	2014
Opening net book value	799,015	812,399	838,916	818,132	758,093
Multi-Client data purchased from third parties	6,507	9,522	166	26,407	
Investments in new projects	256,922	279,440	271,010	501,653	462,318
Amortization	(270,781)	(302,346)	(297,693)	(507,276)	(396,666)
Adjustments related to implemenation of IFRS 15	78,832	- 11/2	Minerar		
Exchange rate adjustments	Stranger .	Califa -	and the po		(5,613)
Ending net book value	870,495	799,015	812,399	838,916	818,132
Prefunding % on operational investments	44%	44%	48%	52%	53%















### Dear Shareholders

Increased client spending combined with strong performance from TGS in 2018 indicate that we have passed the trough of the industry down-cycle. I'm pleased to report another positive year for TGS with 26%\* revenue growth and strongly improved return on capital. Our counter-cyclical investments during the downturn, with high volumes of data acquired at record-low cost, have started to pay off and bodes well for continued industry-leading returns going forward.

TGS' flexible, asset light business model combined with our ability to adjust costs rapidly allow us to deliver significant shareholder value, even during periods with challenging market conditions. Despite a relatively modest growth in clients' exploration spending, TGS generated free cash flow before dividends of USD 105 million in 2018. The strong cash flow enabled us to pay a dividend to our shareholders of USD 81.4 million, corresponding to a growth of 30% from the previous year. In February 2019, we announced a 35% increase in our quarterly dividend, and in May 2019, the Board will propose to the AGM that an authorization to pay further quarterly dividends for the next 12 months is granted.

Our return on capital continues to be industry leading. For every dollar of revenue in 2018, 17% was converted to free cash flow and this ratio ranks TGS as a top player in the global oil service industry. Our Return on Average Capital Employed (ROACE) continued to improve and at 18%\* it positions TGS as one of the few international oil service companies delivering a return above cost of capital.

While global exploration spending was slightly up in 2018, the energy markets continue to be characterized by significant volatility. Shale producers in North

America react swiftly to positive oil price trends and can adjust production such that the supply – demand balance is constantly challenged. As a result, oil price volatility remains high and our clients are continuing to focus on cost, capital discipline and more efficient use of technology. Through our multi-client model, built on the principles of shared economics, TGS is well positioned to help clients become more efficient in their exploration efforts both onshore and offshore.

High prospectivity, combined with improved political and regulatory conditions, have attracted the attention of major energy companies to the South Atlantic Margin, with Brazil and north west Africa proving to be hot areas for exploration. TGS is well-positioned in north west Africa and in Q4 2018 we commenced the 28,300 km<sup>2</sup> Jaan 3D program in the MSGBC basin, alongside a regional SeaSeep study, comprising multibeam and coring. After a four-year absence, TGS returned to Brazil to commence acquisition of a 15,000 km<sup>2</sup> 3D survey in the southern Santos Basin. This survey is also complemented by a SeaSeep study. TGS recently announced another 3D seismic survey in the Campos basin in Brazil and I am delighted to see our increased focus on this region delivering exciting growth opportunities.

TGS' strategy of making new technology available at large scale through the multiclient model is well exemplified by the recently announced multi-client Ocean Bottom Node (OBN) projects in the US Gulf of Mexico and the North Sea. Further, TGS is continuing to develop its technology offering in other areas. Several initiatives have been launched within the Imaging business to make sure that TGS's position as a leading data processing company is further enhanced. Moreover, TGS has added substantial resources to the data and analytics area over the past couple of years. Combining artificial intelligence and advanced data analysis capabilities with our strong geoscience knowledge and vast library of geophysical and geological data we are further enhancing the value offering to our clients.

North America onshore production continues to grow, and the Permian is expected to break 4 million bpd in early 2019. Large supermajors have taken big positions in this market and guided significant production growth for the future. Subsurface knowledge is increasingly important in the onshore market and seismic combined with well data have become critical tools for increasing efficiency. TGS' onshore data library consists of 35,000 km<sup>2</sup> of modern 3D data and almost 10 million digitized well logs and we continue to see good opportunities to grow these libraries further.

Population growth and global economic development support further growth in demand for oil and gas. Fossil fuels are expected to remain the dominant sources of energy even in long-term forecasts. However, there is an increasing concern from stakeholders that the industry must work more proactively to reduce the carbon

footprint. The Oil and Gas Climate Initiative consists of 13 energy companies, all clients of TGS, taking practical actions on climate change and reducing carbon footprint. As a member of UN Global Compact, TGS is committed to the principles and are taking actions to help clients reach their important goals. Industry collaboration is key, and through the multi-client model, TGS is working on facilitating more efficient utilization of seismic vessels helping to reduce the carbon footprint of our industry.

As we are looking forward into 2019, we see indications of a further improvement in exploration spending. The speed of the recovery will depend on the stability of commodity prices and sustained cash flow generation by our clients. Discoveries of new hydrocarbon resources have been down to historically low levels over the past three years, largely driven by cuts in exploration spending. This has driven global reserve replacement ratios down to unsustainably low levels. Energy companies will need to increase exploration efforts in order to grow production levels in the longer term to meet the expected growth in demand.

When energy companies return to the business of replacing the reserves that they are producing, they will need high-quality geoscience information. TGS' unique culture, people and quality library assure that it will be the leading energy information company providing data to support their exploration and drilling decisions.

The employees of TGS are strongly committed to our core values of quality, service, integrity and growth. Thanks to our people, TGS has become the largest and most successful multi-client geoscience data provider in the world.

On behalf of the TGS team, 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 another successful year for TGS and our shareholders.

**Kristian Johansen** Chief Executive Officer / TGS

\*Based on segment reporting. Please refer to Note 5 of the Consolidated Financial Statement for details on the basis for preparation.

## 2018 Highlights

#### **Offshore Data Library**

#### Europe

- Entered a collaboration with Axxis Geo Solutions (AGS) for multi-client ocean bottom node projects in the North Sea. The area of mutual interest covers the core part of the central North Sea up to and including the Utsira area. Under this agreement, the parties will work together to develop opportunities to co-invest in multi-client ocean bottom node projects, the first being a 1,500 km<sup>2</sup> project in Utisra where acquisition is ongoing.
- Acquired the new Erlend Wild West multi-client 3D seismic project, covering 1,815 km<sup>2</sup> in the UK West of Shetland region and tying into TGS' existing EW12 3D data.
- Completed the second season of the Atlantic Margin multi-client program in mid-Norway, which now comprises a total of 46,400 km<sup>2</sup> of 3D seismic data over a variety of play models with stratigraphic and structural traps in Paleocene and Cretaceous turbidite/fan deposits.
- Acquired the Hammerfest Basin 3D multi-client project in a JV with PGS in the Barents Sea, Norway. The survey is covering 4,034 km<sup>2</sup> in the active APA area of the Hammerfest Basin.

#### North & South America

- Partnered with Spectrum to acquire the Santos 3D program over the prospective southern Santos Basin offshore Brazil. The survey covers a 15,000 km<sup>2</sup> area south of the high-profile discoveries of the Santos Basin. Acquisition of the survey continues in 2019.
- Partnered with PGS to acquire a new 3D multi-client project, Lewis Hills 3D, spanning approximately 3,400 km<sup>2</sup> in East Canada.
- The TGS/PGS JV also acquired approximately 2,700 km<sup>2</sup> of additional data on the 2017 Harbour Deep and Cape Broyle 3D surveys in East Canada.
- Commenced a new 3D multi-client project with PGS in Canada, Tablelands 3D covering approximately 8,000 km<sup>2</sup> in an active Newfoundland area of the Flemish Pass and Orphan Basins. Bids for acreage covered by Tablelands 3D will close in November 2020.
- Commenced the Brazil Southern Basins SeaSeep Project in the Campos and Santos Basins, offshore Brazil. The project covers existing TGS surveys and includes coring and geochemistry.

#### Africa & Middle East

- Began acquisition of the Jaan 3D multi-client seismic project in the North West Africa Atlantic Margin, in partnership with PGS and GeoPartners. The program comprises a fully harmonized multi-client dataset in the southern portion of the MSGBC Basin. Approximately 11,135 km<sup>2</sup> of new acquisition is complemented by the reprocessing and full pre-stack merging of existing multi-client 3D. Once complete, the final depth migrated volume will be over 28,300 km<sup>2</sup>.
- Commenced acquisition of the first regional offshore MSGBC Multibeam and SeaSeep Project in the North West Africa Atlantic Margin. The program covers an area of more than 113,500 km<sup>2</sup>.
- Partnered with Western Geco to complete the acquisition of 11,625 km of 2D data in the Egyptian
  part of the Red Sea. Completed data will be available ahead of the licensing round announcement in
  2019.

#### **Onshore Seismic Library**

- Continued to build on our position in the prolific part of the SCOOP/STACK portion of the Anadarko basin with the addition of the 793 km<sup>2</sup> Hackberry Complex 3D.
- Commenced acquisition on two additional projects in the SCOOP/STACK, Canton 3D (1,400 km<sup>2</sup>) and Gloss Mountain 3D (1,507 km<sup>2</sup>). Acquisition on both projects started in 2018. When complete, these two projects will increase TGS's footprint to over 6,850 km<sup>2</sup> in this prolific play.
- Completed the 464 km<sup>2</sup> Sanderson 3D located along the eastern flank of the Delaware Basin predominantly in Pecos County, Texas.
- Completed the Quail Ridge East 3D in collaboration with Fairfield Geotechnologies. The
  project is covering 330 km<sup>2</sup> in Western Lea County, New Mexico. Additionally, TGS and Fairfield
  Geotechnologies entered into an agreement to jointly explore opportunities for new projects in the
  Permian Basin. The Area of Mutual Interest (AMI) encompasses 5,400 km<sup>2</sup>.
- Added an additional 460 km<sup>2</sup> to our data library in the Montney Shale area of the Western Canadian Sedimentary Basin, by acquiring the Dawson 3D and Dawson 3D Phase II multi-client seismic surveys in early and late 2018, respectively.
- Increased reprocessing efforts in the Southern Basins of Mexico.

#### **Geological Data Library**

- Expanded the world's largest library of digital well log data, including approximately 52,000 new digital Log ASCII Standard (LAS) wells, 9,300 new enhanced digital LAS+ well logs, 418,000 new Validated Well Headers, 209,000 raster images, as well as directional surveys, production data and multiple interpretive products.
- Updated multi-client interpretation studies in Norway, UK, Canada, Mexico, U.S. Gulf of Mexico and U.S. Onshore and continued with ongoing multi-client projects geared towards supplying customers with information on stratigraphy, structure, basin maturity and prospectivity.
- Enhanced our US Well Performance Database with Well Completion Data to enable correlation with well performance.
- Commercially released Mexico Well Performance Data providing the industry's only monthly production data, including production forecast and EURs on all active Mexico wells.

#### **Imaging Technology**

- Applied leading-edge 3D image-domain least-square reverse time migration to gathers to preserve amplitude for AVO analysis.
- Completed one of the industry's largest orthorhombic depth imaging projects (18,686 km<sup>2</sup>) for the
  Fusion 3D survey in the U.S. Gulf of Mexico. This orthorhombic depth imaging uses full waveform
  inversion (FWI) and RTM COR gathers to update the subsalt velocity and dirty salt and greatly improve
  the image around and below the salt.
- Applied interwoven passes of multilayer tomography, full waveform inversion (FWI) and image-guided tomography to generate a geologically reasonable, data-driven model for depth imaging in the northern Atlantic margin and North Sea.
- Applied full waveform inversion (FWI) to update the salt and subsalt velocity models using a sparsenode decimated version of OGO 3D.
- Applied hybrid 3D inversion-based deblending and denoise-based deblending to simulated heavily blended data up to 8 Hz with a maximum offset of 30 km. The study shows that it is possible to reveal the signals required for an FWI workflow to build a velocity model. This process was applied to 3D seismic in offshore Europe.
- Developed and applied onshore FWI and innovative onshore denoise such as MMF filter to more
  effectively isolate and attenuate seismic noise based on shape differences. The study shows its
  effectiveness for suppression of both coherent and incoherent noise that results in an improved signalto-noise ratio.
- Processed leading-edge TopSeis style acquisition for improved near-offset and multiazimuthal streamer seismic.
- Applied high-end depth imaging technologies: tomography using common-offset RTM (COR) gathers, and least-squares RTM to resolve sub-basalt prospectivity.

- Applied advanced depth imaging technology in the Permian Basin, onshore USA. Improved gather flattening results from the application of differential statics which represent the difference in vertical travel times between the refraction-based velocity estimate and the perturbed shallow velocity model.
- Processed coil-shooting data for broadband, long-offset, full-azimuth illumination using 5D
  regularization of dual-coil shooting full azimuth data. Tilted orthorhombic (TORT) imaging produced
  flat gathers in the shallow with Kirchhoff PSDM. Subsalt, the velocity is further updated using COR
  tomography, resulting in more continuous and interpretable events below salt.

#### **Data & Analytics Technology**

- Gathered and standardized TGS's multi-client data, integrated it into a new TGS Data Lake structure and developed software for guerying and extracting of metadata and data from the Data Lake.
- Began research on dozens of analytical solutions to geoscience problems and developed commercial solutions for salt identification in seismic (SaltNet) and missing log curve prediction (ARLAS).
- Utilized crowd-sourcing to develop an AI solution to a geoscience problem as one of the first oil & gas service companies. Over 4,000 data scientists competed in a "Salt Identification Challenge" that was hosted on the Kaggle platform. TGS utilized the winning entries along with its own research work to develop its SaltNet solution quickly and economically.
- Developed a data management solution that is being offered to clients.

# 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 employs approximately 550 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 further employees located in other cities around the globe. The company's stock is traded on the Oslo Stock Exchange and is part of the OBX Index (25 most liquid shares at the OSE) and has a market capitalization of approximately \$2.5 billion (December 2018). TGS' primary business is to provide geoscience data to energy companies worldwide. The company offers extensive global libraries that include seismic data, magnetic and gravity data, multi-beam and coring data, digital well logs and production data. Additionally, we offer 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, we have 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 business, 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, for segment reporting purposes, amortizes each project during the work-in-progress (WIP) phase based on total cost versus forecasted total revenues. 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 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 98 percent 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 vessels and equipment. Nor do we have seismic crews on the payroll. All data acquisition activity 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 are free to use the most appropriate vendors and technologies to tackle specific imaging challenges. TGS is asset- light, which means low overheads 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 get the highest quality seismic data. 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 the 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 prefunding 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 mergers & acquisitions 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 identify high-profile prospects for new surveys. In fact, most of our 3D seismic investments are in areas where we previously acquired 2D data or have extensive well data products.

#### **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 personnel has made TGS the world's leading multi-client player. They are the reason TGS delivers superior project quality and financial performance, year after year.

#### **Strategic Acquisitions**

While most of our growth has been organic, we have also expanded our business through acquisitions. These opportunities have allowed 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 where we see strong potential returns.

#### Sustainability

TGS believes that corporate sustainability is a fully compatible, integrated, and necessary part of conducting our business successfully. TGS has been a member of the UN Global Compact since 2016 and we continue to incorporate its ten principles on human rights, labor, environment, and anti-corruption into our strategy, culture and operations, as detailed in TGS' Corporate Social Responsibility Report. To further our sustainability efforts, in 2018, TGS established an Environmental, Social & Governance Committee ('ESG Committee'), which is developing strategies and business plans that will address the following UN Sustainable Development Goals: [1] Industry, Innovation & Infrastructure; [2] Climate Action; and [3] Life Below Water.

## Core Product Lines

#### **Geophysical Multi-client Data**

For more than 37 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 91% 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 project developers evaluate all available seismic, gravity, magnetic and geological 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 and develop 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 2018, we added over 49,000 new Log ASCII Standard (LAS) wells, 2,200 MUDLAS wells, 417,000 validated well headers, 208,000 raster logs, 9,200 LAS+ wells, 18,000 DS+ directional surveys, and 200 CheckShot 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 2018 we processed 180,000 km of 2D marine data, 100,000 km<sup>2</sup> of 3D marine data, 14,000 km<sup>2</sup> of WAZ/Node and 27,000 km<sup>2</sup> of onshore data from basins around the world.

The industry is moving towards inversion-based algorithms. TGS has been investing in these high-end inversion-based algorithms and has applied them to proprietary projects for many years. In 2018, we continued to enhance our full waveform inversion (FWI) and image-domain least squares RTM gathers, and started applying them to our large multi-client projects. We also continue to enhance our inversion-based deblending technology to separate seismic data acquired with simultaneous sources and continuous recording. We developed inversion-based adaptive 3D deghosting, which combines data adaptation and explicit 3D deghosting, to enhance seismic bandwidth. In 2018, TGS performed studies on processing and FWI on Ocean Bottom Node (OBN) data, in preparation for its first multi-client sparse OBN project - Amendment.

Recent TGS imaging advances include:

- FWI and Hessian-based RTM Angle Gathers: the latest depth-imaging technologies.
- New deblending technology to separate seismic data acquired with Simultaneous Sources and continuous recording.
- Inversion-based explicit 3D deghosting.



### **Executive Management**



#### 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.



#### CFO

Sven Børre 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 semisubmersible 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.



### Sr. VP Onshore Seismic & Well Data Products

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.



#### Sr. VP Europe & 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.



### Sr. VP Data Processing and Research & 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.



#### Sr. 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.



#### Sr. VP North America

Will joined TGS in 2011 with the acquisition of Stingray Geophysical. He has served TGS in a number of senior leadership and executive roles including M&A, Finance, Investor Relations and HR. Will was appointed Senior Vice President North America in 2019. 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.



#### Sr. VP New Ventures

Erik joined TGS in 2018 as Senior Vice President New Ventures. Prior to joining TGS, Erik served as Senior Vice President Exploration Excellence of Statoil (now Equinor). Mr. Finnstrom has over 30 years' industry experience in roles such as SVP Exploration North America, VP South Atlantic Exploration and VP Western Hemisphere Exploration and Chief Geophysicist for Statoil and Norsk Hydro as well as in research positions at Chevron and the Norwegian Institute of Technology. Erik graduated with a B.S. in Geophysics from UCLA in 1979 and an M.A. in Geophysics from UC Berkeley in 1981.



#### Sr. VP Legal & HR, General Counsel

Tana joined TGS in 2013 as General Counsel and Corporate Secretary, and in January 2019, gained additional executive responsibility for HR. Her background includes over 26 years of legal experience and 7 years of accounting experience, with significant knowledge of the energy sector. Tana previously served for over six years as the general counsel of a publicly traded construction contractor focused on energy infrastructure. Her legal background also includes over nine years in private practice in corporate and transactional law with several global law firms. She received her BBA degree in Accounting from Texas Tech University and her JD degree from the University of Houston Law Center, She is also licensed as a Certified Public Accountant.

### **Board of Directors**



#### 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.

Mr. Hamilton was first elected as a director in 1998 and as Chairman in 2009.



#### Director

Born 1964. Ms. Agerup has held positions in Telenor ASA since 2015. She is currently SVP and Head of Telenor Group Holdings and before that she served as EVP EVP Corporate Affairs and General Counsel. From 2010 to 2015, Ms. Agerup was EVP Corporate staffs and General Counsel of Hydro ASA, and from 1997 to 2010 she held various other leading positions in the same group.

Ms. Agerup also serves as a board member of Equinor. She was first elected as a director of TGS in 2015



#### 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 several publicly listed companies, such as Equinor, Hydro and Nordea AB. 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.



#### Director

Born 1953. Mr. Dyvik has served in various capacities for Wilh Wilhemsen, a global maritime company, most recently as Group CFO from 2007 to 2016. From 2002 to 2007. he served as CEO of Wallenius Wilhelmsen, from 1999 to 2002, as Deputy CEO of Wilh Wilhelmsen, and from 1996 to 1999, as Deputy CEO of Wilhelmsen Lines AS. Prior to joining Wilh Wilhemsen, he served as CEO and Deputy CEO for Norwegian American Line from 1988 to 1996 and worked with Kreditkassen (Nordea) from 1986 to 1988, L.M. Skaugen from 1980 to 1986, and Saga Petrokjemi from 1979 to 1980. Mr. Dyvik has extensive board experience, and currently serves as the Chair of NorSea Group and Wilhelmsen Ferd Offshore AS and as a member of the Board for The Maritime Rescue School.

He was first elected as a Director of TGS in 2017



#### 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 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.



#### Director

Born 1967. Mr. Lønnum is currently Chief Financial Officer of Falck Group in Denmark. Prior to joining Falck last year, he was CFO of Aimia Inc, and before that CFO in Tryg AS and Tryg Forsikring AS from 2011 to 2016. From 2004 to 2011 he was CFO and deputy CEO of Gjensidige Forsikring ASA. In addition, Mr. Lønnum has served as a board member of several publicly listed companies.

He was first elected as a director of TGS in 2013.



#### 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.



#### 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. Sannes is also serving on the boards of Lundin Petroleum, International Petroleum Corporation, Panoro Energy and Magnora.

He was first elected as a director of TGS 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.

## 2018 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 - including multi-client seismic data, magnetic and gravity data, digital well logs, production data and directional surveys - we offer 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 is 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 a going concern basis in accordance with the Norwegian Accounting Act section 3-3a, and the Board of Directors confirms that it believes that the prerequisites for a going concern assumption are indeed present.

#### Changes to accounting principles

TGS implemented the IFRS 15 accounting standard for Revenue from Contracts from 1 January 2018. This has changed the way revenues related to projects in the work-in-progress (WIP) phase are recognized. While revenues related to WIP projects were previously recognized according to percentage of completion (POC), IFRS 15 dictates that revenue must now be recognized when customers take delivery of data. Results prior to 2018 have not been restated. Please refer to Note 1 and Note 4 of the consolidated financial statements for more details.

For internal management purposes, TGS continues to use the revenue recognition principles applied historically. The numbers used for management reporting are referred to as "Segment reporting". See Note 5 for a description of the basis for preparation.

The IFRS 9 accounting standard for Financial Instruments was also implemented

from 1 January 2018 but had no practical impact on accounting policies.

From 1 January 2019, TGS has implemented the IFRS 16 accounting standard for Leases. Please refer to Note 1 of the consolidated financial statements for more details on both IFRS 9 and IFRS 16.

#### Financial results, financial position and capitalization – IFRS

Net revenues in 2018 amounted to USD 614.2 million, up 25% compared to the USD 492.2 million recognized in 2017. The increase is mainly a result of strong growth in sales of completed data from our multi-client library.

Operating profit for 2018 was USD 230.0 million, corresponding to a margin of 37%, compared to USD 97.4 million (20% margin) in 2017. In addition to the described increase in net revenues, the higher operating profit is a result of a reduction in amortization of our multi-client library. In 2018, amortization was USD 270.8 million versus USD 302.3 million in 2017. The reduction is due to the changes in accounting principles described above.

Net financial items amounted to USD 6.7 million in 2018 (USD 2.2 million in 2017), giving profit before taxes of USD 236.8 million (USD 99.6 million). Taxes increased to USD 58.0 million from USD 24.0 million. This resulted in a net profit of USD 178.8 million, a growth of 137% from USD 75.6 million in 2017.

At year-end 2018 cash and cash equivalents amounted to USD 273.5 million, up from USD 249.9 million at the end of 2017. TGS held current assets of USD 653.7 million and had current liabilities of USD 338.4 million.

As of 31 December 2018, total equity amounted to USD 1.25 billion, corresponding to an equity ratio of 77% (84% in 2017). The reduction in equity ratio was mainly caused by the implementation of IFRS 15 which, in addition to affecting revenue recognition, also led to changes to the amortization of our multi-client library.

TGS is listed on the Oslo Stock Exchange. It had a market capitalization of USD 2.5 billion on 31 December 2018. As of year-end, TGS was the 16th 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 2018, other than shares issued as part of employee long-term incentive programs. The Board does not anticipate issuing any new shares in 2019 other than shares issued as part of employee long-term incentive programs or unless necessary to finance the acquisition of a company or a major business opportunity.

#### Cash flow from operations, investments, financing and dividends

TGS' operating cash flow was USD 388.9 million in 2018 compared to USD 461.3 million in 2017. Operating cash flow is significantly higher than the operating profit as non-cash expenses, in the form of amortization and impairments of our multi-client library, are the Company's largest expense item.

Cash flow from investing activities amounted to USD 289.0 million in 2018 versus USD 352.7 million in 2017. This included cash investments in our multi-client library of USD 273.1 million, compared to USD 338.0 million in 2018.

TGS has paid quarterly dividends since 2016. The Annual General Meeting held on 8 May 2018 resolved to renew the Board of Directors' authorization to distribute quarterly dividends.

In 2018, TGS paid dividends totaling USD 81.4 million (equal to USD 0.80 per share), up from USD 62.8 million (equal to USD 0.60 per share) paid in 2017. On 6 February 2019, the Board of Directors resolved to pay a quarterly dividend equal to the NOK equivalent of USD 0.27 per share (NOK 2.30).

Including dividends and other cash flows from financing activities, TGS's net cash flow amounted to USD 23.6 million in 2018, down from USD 58.7 million in 2017.

Shareholders Value Metrics IFRS	2018	2017
Net Revenues (MUSD)	614.2	492.8
Operating Profit (MUSD)	230.0	97.4
Operating Margin	37%	20%
Earnings Per Share Fully Diluted (EPS) (USD)	1.73	0.73
Net Multi-client Revenues / Avg. Net Book Value of Multi-client Library	73%	60%
Return on Average Capital Employed (ROACE)	24%	10%
Cash Flow From Operations After Multi-client Investments (MUSD)	117.0	123.3
Shareholders Equity / Total Assets	77%	84%

#### **Operations**

The review of operations is based on "Segment reporting".

The global market for multi-client seismic data improved during 2018. In addition, TGS benefitted from a favorable position related to the transfer of assets between oil companies, (through M&A, asset purchases or farm-ins), which in many situations may create future sales opportunities. As a result, TGS' late sales grew by 43% to USD 508.2 million (USD 355.6 million).

Obtaining pre-funding from customers remained challenging in 2018 and prefunding revenues declined by 9% to USD 105.1 million (USD 115.8 million). Multiclient investments (excluding non-operational investments and investments contingent on sales) were USD 249.6 million (USD 260.3), implying a pre-funding rate of 42% (44%).

Including proprietary revenues of USD 8.4 million (USD 7.0 million), total net revenues amounted to USD 621.7 million, up 26% compared to the USD 492.2 million recognized in 2017.

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

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



The following review of the multi-client library is based on "Segment reporting"

With a net book value of USD 726.1 million (USD 799.0 million in 2017) TGS' library of multi-client seismic data, geological data and integrated products represented 49% (56% in 2017) of total assets as of 31 December 2018. Seismic data, representing 88% of the library's net book value at year-end, is amortized on a project-by-project basis as follows:

- During the work in progress (WIP) phase, amortization is based on total cost versus forecasted total revenues of the project
- After a project is completed, it is amortized on a straight-line basis. The straight-line amortization is assigned over the remaining useful life, which for most offshore projects is considered to be four years. For most onshore projects, the useful life after completion is considered to be seven years

In 2018, TGS booked total investments in our multi-client library of USD 263.4 million (USD 283.1 million). Of this, USD 7.3 million (USD 18.1 million) was for

investments contingent on sales and USD 6.5 million (USD 4.6 million) was to acquire completed surveys from other companies.

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

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



#### Segment Net Revenues 2018 by Year of Completion



### Segment Net Book Value as of 31 December 2018 vs. Investments per Year of Completion



#### **Revenue Split - Segment Reporting**



Due to the growth in net revenues, our operating margin improved to 28% from 20%, despite increased amortization of the multi-client library. Operating profit totaled USD 171.9 million in 2018, compared to USD 97.4 million in 2017.



TGS continues to generate multi-client revenues from a well-balanced mix of products. Comparing 2018 to 2017, our multi-client 2D seismic revenues increased 22%, multi-client 3D seismic revenues increased 27% and multi-client revenues from geological products increased 28%.



#### **Commitments to Seismic Acquisition Capacity**

TGS secures all seismic acquisition capacity from external suppliers for both offshore and onshore projects. At year-end 2018, the Company had entered into commitments for two 3D vessels, four OBN / source vessels, two multibeam vessels and one coring vessel, in addition to two land crews. All these commitments will expire in 2019 and the amount committed, including contractual lease agreements, totaled USD 57 million for marine capacity and USD 18 million for land capacity. (2017: USD 37 million).

At 31 December 2018, the deferred part of contingent rent agreements, which is contingent on future sales, totaled USD 18 million (2017: USD 13 million).

#### **Mergers and Acquisitions**

In August 2018 TGS completed the acquisition of the Capreolus 3D multi-client survey from Polarcus. The survey covers 22,130 km<sup>2</sup> of the Beagle and Bedout sub-basins offshore north-west Australia. The purchase price was USD 6.5 million.

#### **Risk Management and Internal Control**

TGS' activities are heavily dependent on the spending budgets of our clients, who are exploration and production (E&P) 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 fluctuations in these prices. Under TGS' business model, discretionary investments in new multi-client projects are by far the largest use of cash. As TGS does not itself own seismic vessels or onshore seismic crews, but rather outsources these acquisition services on short-term contracts to vendors, the Company can quickly adjust cash outflow in accordance with market changes, thereby mitigating part of the risk represented by movements in oil and gas prices.

TGS is exposed to financial risks such as currency, liquidity and credit risk. Our operational exposure to currency risk is low as significant portions of our revenues earned and costs incurred are in USD. However, as significant parts of our 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 NOK exposure significantly.

Liquidity risk arises from a lack of correlation between free cash flow and financial commitments. As of 31 December 2018, TGS held current assets of USD 653.7 million, of which cash and cash equivalents represented USD 273.5 million

and current liabilities were USD 338.4 million. In addition, a USD 100 million, Revolving Credit Facility, which remains undrawn at the date of this report, was established in January 2019. The Board considers the liquidity risk of the Company 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". Our 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 considers the concentration of risk with respect to trade receivables as low due to the Company's credit rating policies and because our clients are mainly large energy companies, considered to be financially sound.

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. We utilize bespoke investment proposal models and reporting tools to assess and monitor the status and performance of our multi-client projects. Reference is made to Note 15 in the consolidated financial statements and to 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**

TGS' global workforce was reduced by 8% from 2017 to 2018, mainly as a result of some outsourcing of projects. With the improving market conditions, the Board expects the number of employees to increase slightly in 2019.

The Board emphasizes the importance of employee engagement and has set relevant measures for our Management. In 2018, particular focus has been on communication, training & development, and compensation / rewards. The results from our annual employee engagement survey showed that Overall Engagement Capital (measured by an independent third party, CEB) remained flat at 61% in 2018, which is on a par with the cross-industry benchmark comprising 400 similar-sized companies from more than 20 industries. Furthermore, TGS continued to maintain a very low level of staff turnover at only 6% (on par with 2017) and was successful in attracting high performing individuals. The Board recognizes the importance of maintaining good employee engagement to ensure high levels of discretionary effort and employee retention. Therefore, employee engagement activities will continue to be a high priority for us.

The Parent Company had 42 employees as of 31 December 2018. At year-end, TGS had a total of 547 employees in the following locations: 346 employees in the United States, 42 employees in Norway, 93 employees in the United Kingdom, 50 employees in Canada, 11 employees in Australia and 5 employees in other countries. The number of employees at the end of 2017 was 597.

The Board considers the working environment in the Company to be good. The Board and Management believe that employees of diversified gender, ethnicity and nationality are provided with equal opportunity and treated fairly within the Company.

At the end of 2018, women comprised 37% of the total workforce in the Company (41% in 2017). The corresponding figure for managers is 29% at the end of 2018, which is unchanged from 2017.

#### Health, Safety and Environmental Issues

TGS' interaction with the external environment relates to utilizing vessels, land crews and aircraft rigged with specialized equipment to collect seismic, gravity, magnetic, coring and/or multi-beam data. As a supporter of environmental sustainability, TGS is fully committed to safeguarding and maintaining the environment in which we operate, whilst also providing a safe and healthy workplace for employees and contractors. TGS manages these activities through the active implementation of a comprehensive HSE Management System that includes and enforces appropriate policies and procedures.

TGS understands the importance of working with local governments, regulatory authorities, and non-government organizations. Therefore, we maintain positive communication with regulatory authorities and other governmental and non-governmental organizations to help identify, understand and mitigate environmental risks associated with geophysical activities. TGS complies with mandated legislation and local regulations, while also working closely with industry associations to investigate and implement ways to mitigate the impact of seismic operations on the environment. Prior to initiating seismic data acquisition, TGS typically conducts environmental performance against comprehensive plans and we are dedicated to the continuous improvement of our environmental programs and standards across all of our operations. Additionally, through the Contractor Management System, TGS works with vessel owners and seismic contractors to ensure compliance with the TGS Sustainability Program.

In 2018, TGS employees worked 937,044 man-hours and there were no recordable employee injuries. The injury frequency rate for 2018 was 0.00 (2017: 0.00) per million man-hours. The sickness absence frequency for TGS employees in 2018

was 0.97 %, as compared to 1.15 % in 2017. As part of its continuous improvement strategy, TGS Management participated in audits of office locations. Furthermore, all TGS employees were required to complete two HSE training modules and were assessed on their active HSE commitment during their annual performance review and development process. Towards the end of 2018, TGS Management identified and selected a group of employees from various TGS offices and formed an internal Environmental Sustainability Committee (ESG Committee). Reporting directly to TGS' CEO, the ESG Committee has been tasked with addressing various challenges related to sustainability, including identifying key areas for us to implement environmentally sustainable practices in our operations. The ESG Committee also focused on the UN's Global Compact Sustainable Goals (SDGs) and identified several goals for TGS to develop and implement: (1) Industry, Innovation & Infrastructure; (2) Climate Action; and (3) Life Below Water.

In 2018, every member of the TGS Executive Team conducted at least one HSE facility inspection, and all TGS Executives and Area Managers visited at least one seismic vessel or land crew with a goal of promoting the importance of HSE and a strong HSE culture. All office locations undertook at least two HSE-related "lunch and learn" activities.

More detailed information on TGS' HSE initiatives may be found in the Corporate Social Responsibility Report, included as a separate section of the Annual Report and on TGS' website.

#### **Corporate Social Responsibility Report**

TGS has prepared a Corporate Social Responsibility Report in accordance with the Norwegian Accounting Act, section 3-3c. The Board of Directors believes that the Company complies with the reporting requirements. The report, TGS' Corporate Social Responsibility Policy, is included as a separate section of this Annual Report and on TGS' website at <u>www.tgs.com</u>.

#### **Board Structure and Corporate Governance**

The Board of Directors consists of eight directors, each serving a one-year term. The Boards' Audit and Compensation Committees are composed exclusively of independent directors. No material transactions other than the remuneration disclosed in Note 9 have occurred in 2018 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 9 May 2017, while Kleeven was elected for a two-year term on 8 May 2018.

TGS emphasizes independence and integrity in all matters relating to the Board, Management and its 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 TGS' compliance activities and objectives.

TGS bases its corporate governance policies and practices on the Norwegian Code of Practice for Corporate Governance published on 17 October 2018. The Board of Directors believes that the Company complies in all areas relating to 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.

#### **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 benefits programs, a profit-sharing bonus plan based on the Company's performance and, in certain cases, stock option plans or other long-term incentive programs. For further details, please refer to section 12 of the Report on Corporate Governance and the Declaration on Executive Remuneration in this Annual Report.

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 9 to the Consolidated Financial Statements for details on the remuneration for 2018.

#### **Significant Litigation**

The Board is regularly updated on significant litigation matters. As a result, at each board meeting the Board receives an update on any criminal charges and investigations, as well as related civil claims. See Note 23 to the Consolidated Financial Statements for further details.

#### Outlook

In response to the sharp drops in the oil price experienced in 2014 and 2015, E&P companies cut spending substantially, driving global reserve replacement ratios down to historical low levels. This reduced spending also caused a severe cyclical downturn in all segments of the oil service industry, including the seismic sector.

However, over the past couple of years, a higher oil price, combined with the efficiency gains realized during the downturn, have improved E&P companies' cash flow substantially. With the market fundamentals continuing to improve, these companies are likely to come under increasing pressure to replenish reserves and secure growing production in the longer-term, which in turn should lead to increasing demand for seismic data.

In accordance with its counter-cyclical investment strategy, TGS has added substantial amounts of data to its multi-client library at an attractive unit cost through both organic and inorganic investments during the downturn. This, in combination with an efficient cost base, strong balance sheet and flexible business model, should put us in a unique position to benefit from improving market conditions in the future.

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 6 February 2019, the Board of Directors resolved to pay a quarterly dividend of the NOK equivalent of USD 0.27 per share (NOK 2.30) to shareholders. The dividend payments of USD 27.4 million were made on 28 February 2019.

In October 2018, TGS entered into a Revolving Credit Facility of USD 100 million. The facility, which closed on 25 January 2019, has a three-year maturity with a non-amortizing profile. It remains undrawn as of the date of this report.

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

In 2018, net revenues of the Parent Company increased by 11% to USD 344.1 million from USD 309.9 million in 2017. The increase was a result of higher sales from our multi-client library. 2018 operating profit amounted to USD 57.5 million compared to USD 42.1 million. This increase is driven by the growth in net revenues, partly offset by higher operating expenses.

Net income for 2018 was USD 38.5 million, an increase of 160% compared to USD 14.8 million in 2017.

The Board proposes that the Parent Company's net profit of USD 38.5 million shall be allocated as follows:

Allocated to Other Equity

USD 38.5 million

The Board of Directors resolved on 6 February 2019 to pay a quarterly dividend of USD 27.4 million (NOK equivalent of 2.30 per share) from the 2017 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.

#### Asker, 21 March 2019

Henry H. Hamilton III Chairman

Nils Peter Dyvik

Director

Director

Elisabeth Grieg Director

Tor Magne Lønnum Director

Torstein Sanness Director

Mark S. Leonard Wenche Agerup Director

Vicki Messer 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 2018 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.

#### Asker, 21 March 2019

Henry H. Hamilton III Chairman

Elisabeth Grieg Director

Tor Magne Lønnum Director

**Torstein Sanness** 

Mark S. Leonard

Nils Peter Dvvik

Director

Director

Wenche Agerup Director

Vicki Messer Director

Kristian Johansen Chief Executive Officer

Director



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# TGS FINANCIALS

TGS managed the cyclical downturn seen over the past few years through extraordinary focus on cost management and cash flow, combined with select counter-cyclical investments. This puts us in a good position to enhance our status as a leading provider of geoscience data to the oil & gas industry further.

### Consolidated Statement of Comprehensive Income

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

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	Note	2018	2017
Net revenues	4,17,24	614,239	492,181
Cost of goods sold - proprietary and other		584	565
Amortization and impairment of the multi-client library	7,17	270,776	302,346
Personnel costs Cost of stock options	9 9.10	70,318	54,293 243
Other operating expenses	7,10	33,639	243 27,805
Depreciation, amortization and impairment	6,7	8,897	9,499
Total operating expenses		384,214	394,752
Operating profit		230,025	97,429
Financial income	25	6,980	2,998
Financial expenses	25	(991)	(1,640)
Net exchange gains (losses)	25	756	848
Net financial items		6,746	2,207
Profit before taxes		236,771	99,636
Taxes	26	57,971	24,042
Net income		178,800	75,594
Other comprehensive income:			
Other comprehensive income to be reclassified to profit or loss in subsequent periods		(000)	050
Exchange differences on translation of foreign operations		(899)	359
Other comprehensive income, net of tax		(899)	359
Total comprehensive income for the period		177,901	75,952
Net income attributable to the owners of the parent		178,800	75,594
Net income attributable to non-controlling interests		-	(567)
		178,800	75,594
Total comprehensive income attributable to the owners of the parent		177,901	75,952
Total comprehensive income attributable to non-controlling interests		-	-
		177,901	75,952
Earnings per share (USD)	11	1.75	0.74
Earnings per share, diluted (USD)	11	1.73	0.73

### Consolidated Balance Sheet

As of 31 December

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

	Note	2018	2017
Assets			
Non-current assets			
Goodwill	7,8	67,925	67,925
Multi-client library	7	870,495	799,015
Other intangible non-current assets	7,8	8,366	9,045
Deferred tax asset	26	884	4,390
Buildings	6	3,518	5,213
Machinery and equipment	6	19,308	14,452
Other non-current assets	16	180	496
Total non-current assets		970,675	900,536
Current assets			
Accounts receivable	18	215,046	157,423
Accrued revenues	18	133,810	97,285
Other receivables	18	31,353	18,939
Cash and cash equivalents	13	273,527	249,917
Total current assets		653,736	523,564
Total assets		1,624,412	1,424,100

### Consolidated Balance Sheet

As of 31 December

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

	Note	2018	2017
Equity and liabilities			
Equity			
Paid-in capital			
Share capital	12	3,672	3,663
Treasury shares	12	(4)	(4)
Share premium	12	67,355	62,771
Other paid-in equity	12	45,248	39,722
Total paid-in capital		116,271	106,152
Other equity		1,135,435	1,093,957
Equity attributable to owners of the parent		1,251,706	1,200,109
Non-controlling interests	12	(7)	(7)
Total equity		1,251,699	1,200,102
Liabilities			
Non-current liabilities			
Long-term debt	16	2,500	2,500
Other non-current liabilities	16	2,514	2,850
Deferred taxes	26	29,261	23,721
Total non-current liabilities		34,275	29,071
Current liabilities			
Accounts payable and debt to partners	19	39,922	101,385
Taxes payable, withheld payroll tax, social security	26	27,062	25,197
Other current liabilities	19	271,454	68,345
Total current liabilities		338,436	194,927
Total liabilities		372,711	223,998
Total equity and liabilities		1,624,412	1,424,100

7 Asker, 21 March 2019

Henry H. Hamilton III Chairman

1/Min

Wenche Agerup Director



Nils Peter Dyvik Director

Tor Magne Lønnum Director

Kristian Johansen Chief Executive Officer

Mark & Leonard

Mark S. Leonard Director

Elisabeth Grieg Director

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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)

	[		Att	ributable to the ov	vners 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 31 December 2017	3,663	(4)	62,771	39,722	(21,574)	1,115,539	1,200,114	(7)	1,200,102
Opening balance adjustment IFRS 15	-	-	-	-	-	(54,895)	(54,895)	-	(54,895)
Opening balance 1 January 2018	3,663	[4]	62,771	39,722	(21,574)	1,060,644	1,145,219	[7]	1,145,207
Net income	-	-	-	-	-	178,800	178,800	-	178,800
Other comprehensive income	-	-	-	-	(899)	-	(899)	-	(899)
Total comprehensive income	-	-	-	-	(899)	178,800	177,901	-	177,901
Paid-in equity through exercise of stock options	9	-	4,584	-	-	-	4,594	-	4,594
Distribution of treasury shares	-	0.4	-	-	-	377	377	-	377
Deferred tax income related to stock options	-	-	-	-	-	-	-	-	-
Cost of equity-settled long-term incentive plans	-	-	-	5,526	-	-	5,526	-	5,526
Dividends	-	-	-	-	-	(81,906)	(81,906)	-	(81,906)
Balance 31 December 2018	3,672	(4)	67,355	45,248	(22,473)	1,157,914	1,251,711	[7]	1,251,699

r	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 2017	3,657	(21)	58,107	36,964	(21,933)	1,092,359	1,169,132	(7)	1,169,124
Net income	-	-	-	-	-	75,594	75,594	-	75,594
Other comprehensive income	-	-	-	-	359	-	359	-	359
Total comprehensive income	-	_	-	-	359	75,594	75,953	-	75,952
Paid-in equity through exercise of stock options	6	14	4,664	-	-	8,456	13,141	-	13,141
Distribution of treasury shares	-	0.4	-	-	-	250	250	-	250
Deferred tax income related to stock options	-	-	-	-	-	26	26	-	26
Cost of equity-settled long-term incentive plans	-	-	-	2,758	-	-	2,758	-	2,758
Dividends	-	-	-	-	-	(61,146)	(61,146)	-	(61,146)
Balance 31 December 2017	3,663	(4)	62,771	39,722	(21,574)	1,115,538	1,200,114	[7]	1,200,102

\* 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	2018	2017
Cash flow from operating activities			
Received payments from customers		551,368	579,854
Payments for salaries, pensions, social security tax		(70,828)	(56,567)
Payments of other operational costs		(55,099)	(49,559)
Paid taxes	26	(35,419)	(12,422)
Net cash flow from operating activities <sup>1)</sup>		390,022	461,306
Cash flow from investing activities			
Investments in tangible and intangible assets		(16,369)	(9,919)
Investments in multi-client library		(273,062)	(337,964)
Investments through mergers and acquisitions <sup>2</sup>		(6,501)	(7,776)
Interest received		6,980	2,958
Net cash flow from investing activities		(288,952)	(352,701)
Cash flow from financing activities			
Interest paid		(991)	(328)
Dividend payments	12	(81,440)	(62,767)
Proceeds from share issuances		4,971	13,141
Net cash flow from financing activities		(77,460)	(49,954)
Net change in cash and cash equivalents		23,610	58,651
Cash and cash equivalents at the beginning of the period	13	249,917	190,739
Net unrealized currency gains/(losses)		0	527
Cash and cash equivalents at the end of the period	13	273,527	249,917
1) Reconciliation			
Profit before taxes		236,771	99,636
Depreciation/amortization/impairment	6,7,8	279,672	311,846
Changes in accounts receivables and accrued revenues		(94,148)	65,634
Net unrealized currency gains/(losses)		(899)	(168)
Changes in other receivables		6,135	20,156
Changes in other balance sheet items		(2,090)	(23,376)
Paid taxes	26	(35,419)	(12,422)
Net cash flow from operating activities		390,022	461,306

# 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 under the trading symbol "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 21 March 2019.

#### **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 2018 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. The financial statements of the subsidiaries have been prepared for the same reporting year as the Parent Company, using consistent accounting policies.

#### Summary of Significant 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 2018. Control is achieved when TGS is exposed, or has rights, to variable returns from its involvement with

the investee and can 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 resulting gain or loss is recognized in profit or loss. Any retained investment is accounted for in accordance with the applicable 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.

#### Revenue from Contracts with Customers

The IASB has issued a new revenue recognition standard, IFRS 15, which TGS implemented with effect from 1 January 2018. The standard replaces previous 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 1 January 2018.

Revenue from contracts with customers is recognized when control of the goods or services are transferred to the customers at an amount which reflects the consideration to which the Group expects to be entitled in exchange for those goods or services. The Group has generally concluded that it is the principal in its revenue arrangements, because it typically controls the goods or services before transferring them to the customer.

#### Unfinished data

Multi-client pre-funding contracts and contracts for late sales of unfinished data (i.e. contracts entered into after commencement of a survey, but prior to data being ready for delivery) are considered to be "right to use licenses" under IFRS 15, meaning that all revenues related to these contracts will be recognized at the point in time when the license is transferred to the customer, which would typically be upon completion of processing of the survey and granting of access to the finished survey or delivery of the finished data, independent of services delivered to clients during the project phase. Consequently, the implementation of IFRS 15 impacts the timing of revenue recognition and amortization on such contracts compared to previous accounting principles that provided for recognized and processing services were delivered. Thus, revenues will typically be recognized later under IFRS 15 compared to the previous accounting principles.

#### Finished Data

Revenues for sale of finished data are recognized at a point in time, generally upon delivery of the data (i.e. when the client has gained access to the data under a binding agreement). Through the binding agreement the customer is granted a non-exclusive license to use the finished data. Sales of finished data are presented as part of late sales revenues together with sales of unfinished data in cases where the relevant survey had already commenced when the contract was entered into.

For late sales of finished data, there are no material effects following the implementation of IFRS 15.

#### Volume Sales Agreements

In certain situations, TGS grants licenses to the customer for access to a specified number of blocks of the 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 follows the same principles as revenue recognition for finished data. The Company recognizes revenue when data is delivered to the customers.

#### Revenue Sharing Arrangements

From time to time, TGS enters into contracts where revenues are shared with governments or other parties (see joint arrangements below). Revenues are recognized on a net basis in accordance with applicable recognition principles.

#### Proprietary Contracts

Revenues from proprietary contracts, where TGS delivers services for the exclusive benefit of the customer, are recognized over time, normally on a percentage of completion basis, measured according to the acquired and processed volume of data in relation to the total size of the project.

#### Royalty Income

Royalty income is recognized when the subsequent sale related to the royalty occurs.

#### 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

Prior to implementing IFRS 15, the Company recognized revenue and amortization (expense) over time, in line with the project's progress. During the work in progress phase, amortization was based on total cost versus forecasted total revenues of the project, i.e. amortization was recorded in line with how revenues were recognized for each project during this phase.

Under IFRS 15, no amortization is recognized until the point in time when the license is transferred to the customer, which would typically be upon completion of processing of the survey and granting of access to the finished survey or delivery of the finished data. At this point in time a customary impairment test is done (as described below) to determine if the net book value of the survey is equal or lower than the recoverable value. If this is not the case, an impairment is recognized immediately.

After a project is completed, a straight-line amortization is applied. The straightline 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.

#### 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 of the data is recognized. The straight-line amortization is based on the cost 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 impairment of the multi-client library, see Note 8.

#### Joint Arrangements

A joint arrangement is a contractual arrangement providing that 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 the multi-client library, its share of revenues from the sale of the multi-client survey, related amortization, and expenses. When TGS has a right 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 presented as gross, with the portion due to the partner upon collection from the customer is presented as debt to partners. Similarly, when a partner holds the right to market and sell the project 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 expensed in the period in which the expenditure is incurred.

Intangible assets with finite life 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 profit or loss. 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 IFRS 9, it is measured at fair value at each reporting date and changes in fair value will be recognized in profit or loss.

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 2
Tangible Non-Current Assets	- Note 6
Impairment Testing of Goodwill	- Note 8
Impairment Testing Multi Client Library	- Note 8

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 Test Multi-Client Library" above and Note 8.

#### **Provisions and Contingencies**

Provisions are made when TGS has a current obligation (legal or constructive) as a 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 23.

#### 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 pursuant to which 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 2015-2018 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 valuator using an appropriate pricing model.

The expense 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 11).

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 were cash settled share-based payments. These RSUs vested and were paid out to the respective employees in 2017. The fair value of these RSUs were measured at the end of each reporting period and accrued over the period until the employees had earned an unconditional right to receive them. These fair values were expensed over the period until the vesting date with recognition of a corresponding liability. The ultimate cost of such a cash-settled transaction was the actual cash paid by TGS, which was the fair value at settlement date. The fair values of the RSUs and PSUs are recognized as personnel costs.

#### **Financial Instruments**

A financial asset is any contract which gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

The Company adopted IFRS 9 Financial Instruments as of 1 January 2018, see below for further information. In practice there is no change in the accounting policies for financial instruments for the Company due to implementation of IFRS 9, and no additional information on accounting policies under IAS 39 is provided.

#### **Financial Assets**

IFRS 9 contains three principal classification categories for financial assets: measured at amortized cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL).

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and the Company's business model for managing them. With the exception of trade receivables that do not contain a significant financing component, the Company initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs.

The Company's financial assets are trade and other receivables, accrued revenues (contract assets) and cash and cash equivalents. Based on the nature of these assets and how they are managed, the Company has evaluated that these qualify for classification as measured at amortized cost.

#### **Financial Liabilities**

The Company has financial liabilities measured at amortized cost. Financial liabilities at amortized cost comprise largely of accounts payable and debt to partners, taxes and some minor amounts of non-current liabilities and long-term debt. These obligations are initially recognized at fair value less transaction costs, and subsequently measured at amortized cost through using the effective interest method. The Group has no financial liabilities at fair value through profit or loss.

#### Impairment of Financial Assets

The Company recognizes an allowance for expected credit losses (ECLs) for all debt instruments not held at fair value through profit or loss. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Company expects to receive, discounted at an approximation of the original effective interest rate. The expected cash flows will include cash flows from the sale of collateral held or other credit enhancements that are integral to the contractual terms.

Loss allowances are deducted from the gross carrying amount of the financial asset. The gross carrying amount of a financial asset is written off when the Company has no reasonable expectations of recovering a financial asset in its entirety or a portion thereof. Receivables are written off if the customer goes bankrupt, collection by a debt collector has been unsuccessful for a period and in other concrete cases. The Company expects no significant recovery from the amount written off. However, financial assets that are written off could still be subject to enforcement activities.

#### 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 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 of expected credit losses. 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

In 2018, TGS applied for the first time, certain amendments to the standards, which are effective for annual periods beginning on or after 1 January 2018. The Group has not early adopted any standards, interpretations or amendments that have been issued but are not yet effective.

The nature and the impact of each amendment is described below.

#### IFRS 9 Financial Instruments

IFRS 9 Financial Instruments was effective from 1 January 2018. The standard includes revised guidance on classification and measurement of financial instruments, including a new expected credit loss model for calculating impairment of financial assets and new general hedge accounting requirements.

Changes in accounting policies resulting from the adoption of IFRS 9 are generally to be applied retrospectively, except that the group has taken advantage of the exemption allowing it not to restate comparative information for prior periods with respect to classification and measurement (including impairment) changes. Implementation of IFRS 9 did not have any effect on equity for the Company at transition.

IFRS 9 replaces the "incurred loss model" in IAS 39 with an "expected credit loss"

(ECL) model. For the Company, the new impairment model applies to financial assets measured at amortized cost, which are trade and other receivables, accrued revenues (contract assets), and cash and cash equivalents. Under IFRS 9, credit losses are generally recognized earlier than under IAS 39, and impairment losses are generally expected to increase and become more volatile. Due to the Company's history with very limited realized losses, its established policy, procedures and control relating to customer credit risk management and its previously applied policy for estimating credit losses, the Company has concluded that the loss provision at 1 January 2018 would not have increased under the IFRS 9 loss model, and no additional impairment has been recognized at transition to IFRS 9.

IFRS 9 contains three principal classification categories for financial assets: measured at amortized cost, fair value through other comprehensive income (FVOCI) and fair value through profit or loss (FVTPL). The classification of financial assets is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. IFRS 9 eliminates the previous IAS 39 categories of held to maturity, loans and receivables and available for sale. The Company has evaluated that its financial assets qualify for classification as measured at amortized cost. The Company has no investments in shares (equity investments) or derivatives.

IFRS 9 largely retains the existing requirements in IAS 39 for the classification and measurement of financial liabilities. The adoption of IFRS 9 has not had a significant effect on the Company's accounting policies related to financial liabilities.

#### IFRS 15 Revenue from Contracts with Customers

The Company has elected to apply the modified retrospective approach for the transition under IFRS 15. Under this approach, the comparative periods will not be restated, and the cumulative effect of initially applying IFRS 15 is recognized at the date of initial application on 1 January 2018. According to IFRS 15, sales of unfinished data is not recognized before the right of use license is transferred to the customer, which would typically be upon completion of processing of the survey and granting of access to the finished survey or delivery of the finished data, independent of services delivered to clients during the project phase.

Prior to implementing IFRS 15, the Company recognized revenue and amortization (expense) before the project was completed on a percentage of completion basis. During the work in progress phase, amortization was based on total cost versus forecasted total revenues of the project. Amortization was recorded in line with the recognition of revenues for each project during this phase.

As control over goods and services, according to IFRS 15, has not been

transferred to the customer in the project phase and the multi-client survey is not ready for its intended use, there is no basis to commence amortization of project costs before the customer receives access to the finished data. Consequently, the amortization (expensing) of project costs has been adjusted to equity 1 January 2018 together with the related revenue that had been recognized in the project phase.

IFRS 15 has been applied retrospectively only to contracts that were not completed as of 1 January 2018.

As a consequence, some revenues relating to unfinished multi-client projects and associated amortization that were recognized in prior periods have been reversed as at 1 January 2018. The reversed revenues and amortization have been partly recognized in 2018 and will be partly reconized in future periods, without prior periods being restated.

The following table summarizes the impact, net of tax, of transition to IFRS 15 on retained earnings as of 1 January 2018.

Retained earnings	Impact of adopting IFRS 15 as of 1 January 2018
Prefunding and revenue from sale of contracts committed prior to completion of projects	149,010
Amortization of Multi Client Library	(78,832)
Related taxes	(15,283)
Reduced equity as of 1 January 2018	54,895

The following tables summarize the impacts of adopting IFRS 15 on the Company's statement of financial position as at 31 December 2018 and its statement of profit and loss and OCI for the year 2018 for each of the line items affected. There was no material impact on the Company's statement of cash flow for the year ended 31 December 2018.

Equity	1,251,699	13,697	1,265,397
Total non-current assets	970,674	(144,787)	825,887
Deferred tax asset	1,348	(900)	449
Multi-client library	870,495	(144,352)	726,143
Non-current assets			
31 December 2018	As reported	Adjustments <sup>1]</sup>	Amounts without adoptino of IFRS 15

Total current liabilities	338,436	(156,452)	181,986
Other current liabilities	271,454	(203,912)	67,542
Accounts payable and debt to partners	39,922	47,460	87,382
Current liabilities			
Total non-current liabilities	34,275	(2,033)	32,242
Deferred taxes	29,261	(2,033)	27,228
Non-current liabilities			
31 December 2018	As reported	Adjustments <sup>1)</sup>	Amounts without adoption of IFRS 15

 $^{\rm 1)}{\rm Adjustments}$  relate to the treatment of prefunding and late participant multiclient revenue and amortization treatment

2018	As reported	Adjustments <sup>1)</sup>	Amounts without adoption of IFRS 15
Net revenues	614,239	(7,441)	621,680
Amortization and impairment of multi client library	270,776	(65,520)	336,295
Total operating expenses	384,213	(65,520)	449,733
Taxes	57,971	16,881	41,090
Profit for the period	178,800	41,197	137,602
Total comprehensive income for the period	178,800	41,197	137,602

 $^{1\!\mathrm{j}}\mathsf{Adjustments}$  relate to the treatment of prefunding and late participant multiclient revenue and amortization

#### New Standards and Interpretations Issued, but not yet effective

#### IFRS 16 Leases

The Company is required to adopt IFRS 16 Leases from 1 January 2019. The Company has assessed the estimated impact that initial implementation of IFRS 16 will have on its consolidated financial statements, as described below.

IFRS 16 introduces a single, on-balance sheet lease accounting model for lessees. A lessee recognizes a right-of-use asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments. There are recognition exemptions for short-term leases and leases of low-value items. Lessor accounting remains similar to the current standard – i.e. the lessor continue to classify leases as finance or operating leases.

#### Leases in which the Group is a Lessee

The Company will recognize new assets and liabilities for its operating leases of offices and data processing equipment. The nature of expenses related to those leases will now change because the Company will recognize a depreciation charge for right-of-use assets and interest expense for lease liabilities.

Previously, the Company recognized operating lease expense on a straight-line basis over the term of the lease, and recognized assets and liabilities only to the extent that there was a timing difference between actual lease payments and the expense recognized.

Based on the information currently available, the Company estimates that it will recognize additional lease liability of USD 42 million as at 1 January 2019, and a corresponding right of use as a lease asset.

#### Leases in which the Company is a Lessor

No significant impact is expected for leases in which the Company is a lessor.

#### Transition

TGS has chosen the modified retrospective approach for the implementation of IFRS 16 Leases where comparative figures are not restated. TGS has a limited number of leases, mainly related to office leases and leasing of computer equipment.

The Company will recognize a right of use asset equal to the lease liability. Short term leases and leases of low value are not included in the calculation of the lease liability and the right of use asset.

#### IFRIC 23 Uncertainty over Income Tax Treatments

The interpretation clarifies how to consider uncertain tax treatment in IFRS accounts. Uncertainty over income tax treatments arises when it is unclear how the applicable tax regulations should be understood for a specific transaction or event, and when it is uncertain whether taxation authorities will approve an entity's tax treatment. The interpretation specifically addresses the following:

- Whether an entity considers uncertain tax treatments separately or together
- The assumptions an entity makes about the examination of tax treatments by taxation authorities
- How an entity determines taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates (how to reflect uncertainty in these positions)
- How an entity considers changes in facts and circumstances

The interpretation is effective for annual reporting periods beginning on or after 1 January 2019, but certain transition reliefs are available. The Company does not

expect that IFRIC 23 will have any significant impact at the time of implementation.

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.** 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 2018. 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, 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 sales forecasts materially. The future sales forecasts are evaluated on a regular basis and impairments are recognized in the period they occur.

A 10% reduction in the net present value of estimated future revenues for all multi-client projects as of 31 December 2018 would have resulted in an impairment of USD 23.2 million.

For details about the book value, amortization and impairment of the multi-client library, see Note 7 and 8.

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

#### Impairment Evaluation of Goodwill

TGS tests the value of its goodwill 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 or fair value less cost of disposal, whichever that is highest 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 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 goodwill and impairment, see Note 8

#### 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 deferred tax assets, see Note 26.

#### **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.

### *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 18.

#### 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 share-based payments, see Note 9.

### **3.** Business Combinations

No significant business combinations, either individually or collectively, took place in 2018 or 2017.

### **4.** Revenue from Contracts with Customers

The Company's revenues from contracts with customers have been disaggregated and presented in the table below:

Revenue Type	IFRS (As reported)	Adjustments	Segment
Prefunding	117,429	(12,367)	105,062
Late sales - unfinished data	69,743	19,808	89,550
Late sales - finished data	418,671	-	418,671
Proprietary	8,397	-	8,397
Total	614,239	7,441	621,680

#### Performance Obligations Pre-funding and Late Sales of Unfinished Data

Revenues from pre-funding contracts and contracts for late sales of unfinished data (i.e. contracts entered into after commencement of a survey, but prior to data

being ready for delivery) are recognized when data transferred to the customers at an amount which reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. The Company has generally concluded that it is the principal in its revenue arrangements, because it typically controls the goods or services before transferring them to the customer.

#### Performance Obligations Late Sales of Finished Data

Revenue is recognized for sales of finished data at a point in time, generally upon delivery of the data 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 together with late sales of unfinished data.

#### **Performance Obligations Proprietary Sales**

Revenue related to proprietary contracts are generally recognized over time in line with progress on the relevant projects.

Remaining performance obligations unsatisfied or partly unsatisfied are as of year-end:

Remaining perfomance obligations	2018
Within one year	219,495
Total	219,495

The following table provides information about receivables, contract assets and contract liabilities from contracts with customers.

Receivables as included in Accounts receivables	31.12.2018	01.01.2018
Contract assets:		
Accounts receivables	215,046	157,423
Accrued unbilled revenue	133,810	97,285
Contract liabilities:		
Debt to partners	(39,921)	(60,666)
Deferred revenue	(231,818)	(214,913)

# **5.** 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, Data & Analytics, 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 using different principles for recognition of multi-client revenues and amortization of the multi-client library than the principles applied in the consolidated accounts, describe in Note 1 and Note 4. In the segment reports, revenues related to unfinished projects are recognized in accordance with percentage of completion of the relevant projects, while amortization in the work in progress phase is based on forecasted total revenues versus total forecasted cost. In the period after completion of the data, revenue recognition and amortization principles are consistent with those used for the consolidated accounts.

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 2018 or 2017. Employee bonuses and cost related to share options are recognized within "Corporate costs".

2018	North & South America	Europe & Russia	Africa, Middle East & Asia/Pacific		Segments reported Consolidated	Adjustments <sup>1)</sup>	Consolidated
Net operating revenues	356,432	144,137	52,717	68,394	621,680	(7,441)	614,239
Net external revenues	356,432	144,137	52,717	68,394	621,680	(7,441)	614,239
Costs of goods sold-proprietary & other	125	144	6	309	584	-	584
Amortization and impairment of multi-client library	214,937	70,517	27,798	23,043	336,295	(65,520)	270,775
Operational costs	9,159	4,262	5,126	85,408	103,954	-	103,954
Depreciation, amortization and impairment	632	38	50	8,177	8,897	-	8,897
Operating profit/(loss)	131,578	69,176	19,737	(48,543)	171,946	58,079	230,025

<sup>1]</sup> Relates to revenues from unfinished data that has been recognized over time in segment reporting

Impairments of the multi-client library totaled USD 21.3 million for 2018.

2017	North & South America	Europe & Russia	Africa, Middle East & Asia/Pacific		Segments reported Consolidated	Adjustments <sup>1)</sup>	Consolidated
Net operating revenues	239,940	157,336	44,357	50,548	492,181	-	492,181
Net external revenues	239,940	157,336	44,357	50,548	492,181	-	492,181
Costs of goods sold-proprietary & other	71	445	30	19	565	-	565
Amortization and impairment of multi-client library	171,813	77,166	29,729	23,639	302,347	-	302,347
Operational costs	9,060	3,511	2,845	66,924	82,339	-	82,339
Depreciation, amortization and impairment	562	67	134	8,736	9,499	-	9,499
Operating profit/(loss)	58,435	76,148	11,618	(48,771)	97,431	-	97,427

<sup>1)</sup> Prefunding and amortization treatment which was over time.

Impairments of multi-client library totaled USD 7.5 million for 2017.

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

Operating profit/(loss)	2018	2017
Operating profit for reportable segments	278,570	146,199
Operating profit for other segments/corporate costs	(48,543)	(48,770)
Total segments	230,025	97,429
Financial income	6,980	2,998
Financial expenses	(991)	(1,640)
Exchange gains/losses	756	848
Profit/(loss) before taxes	236,771	99,636

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 68.0 million in 2018, arising from sales in NSA and EUR. In 2017, net revenues from one customer exceeded 10% of total revenues and amounted to USD 62.3 million, arising from sales in all geographic areas.

Analysis of external revenues:

Total net revenues	621,680	492,181
Proprietary	8,397	6,993
Late sales	508,221	369,379
Prefunding	105,062	115,809
External revenues	2018	2017

### 6. Tangible Non-Current Assets

#### 2018

Acquisition Cost and Depreciation:	Machinery and Equipment	Buildings <sup>2)</sup>	Total
Cost as of 1 January 2018	121,440	7,118	128,558
Additions	12,305	(30)	12,275
Disposals 1]	(8,832)	(81)	(8,913)
Cost as of 31 December 2018	124,913	7,007	131,920
Accumulated depreciation as of 1 January 2018	106,980	1,907	108,887
Depreciation for the year	2,280	1,626	3,906
Accumulated amortization/depreciation on disposals	(8,855)	[44]	(8,899)
Capitalized to the multi-client library	5,200	-	5,200
Accumulated depreciation as of 31 December 2018	105,605	3,489	109,094
Net book value as of 31 December 2018	19,308	3,518	22,826
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> Mainly leasehold improvements

#### 2017

Acquisition Cost and Depreciation:	Machinery and Equipment	Buildings <sup>2]</sup>	Total
Cost as of 1 January 2017	114,560	7,125	121,685
Additions Disposals <sup>11</sup>	7,614 (745)	223 (228)	7,837 (973)
Cost as of 31 December 2017	121,429	7,120	128,549
Accumulated depreciation as of 1 January 2017	98,297	366	98,663
Depreciation for the year	3,776	1,653	5,429
Accumulated amortization/depreciation on disposals	(422)	(112)	(534)
Capitalized to the multi-client library	5,326	-	5,326
Accumulated depreciation as of 31 December 2017	106,977	1,907	108,884
Net book value as of 31 December 2017	14,452	5,213	19,665
	0.1 7	0	

Useful life

2 to 7 years 3 to 12 years

<sup>1)</sup>No gains or losses were recognized during the year

<sup>2)</sup> Mainly leasehold improvements

# 7. Intangible Assets

#### 2018

Acquisition Cost and Depreciation:	Goodwill	Multi-client Library	Multi-client Library In Progress <sup>1</sup>	Other Intangible Assets <sup>2</sup>	Total
Cost as of 31 December 2017	118,538	4,441,022	-	92,389	4,651,949
Opening balance adjustments	-	(44,617)	44,617	-	-
Cost as of 1 January 2018	118,538	4,396,405	44,617	92,389	4,651,949
Acquistion of assets from third parties	-	6,507	14,101	-	20,608
Additions	-	39,894	202,927	3,984	246,805
Transfers		20,697	(20,697)		-
Disposals	-	-	-	(6,012)	(6,012)
Cost as of 31 December 2018	118,538	4,463,503	240,948	90,360	4,913,349
Accumulated amortization and impairment as of 31 December 2017	50,615	3,642,007		79,247	3,771,869
Opening balance adjustments	50,015	(78,832)		/ /,24/	(78,832)
Accumulated amortization and impairment as of 1 January 2018	50,615	3,563,175		79,247	3,693,037
Amortization for the year	-	249,504	_	4,159	253,663
Impairment for the year	-	21,277	-	· _	21,277
Accumulated amortization on disposals	-	-	-	(1,412)	(1,412)
Accumulated amortization and impairment as of 31 December 2018	50,615	3,833,956	-	81,994	3,966,565
Net book value as of 31 December 2018	67,925	629,547	240,948	8,366	946,784
Useful life		4 to 7 years	3 to 7 years	3 to 7 years	

<sup>1)</sup> Internally developed additions to the multi-client library represents USD 33.7 million <sup>2</sup> Other intangible assets are internally developed software

#### 2017

Acquisition Cost and Depreciation:	Goodwill	Multi-client Library	Other Intangible Assets <sup>2)</sup>	Total
Cost as of 1 January 2017	118,538	4,152,060	88,264	4,358,862
Acquisition of assets from third-parties	-	9,522	-	9,522
Additions 1)	-	279,440	4,164	283,604
Cost as of 31 December 2017	118,538	4,441,022	92,428	4,651,988
Accumulated amortization and impairment as of 1 January 2017	50,615	3,339,661	79,295	3,469,571
Amortization for the year	-	294,819	-	294,819
Impairment for the year	-	7,527	-	7,527
Accumulated amortization/depreciation on disposals 11	=	· -	-	
Accumulated amortization and impairment as of 31 December 2017	50,615	3,642,007	79,287	3,771,909
Net book value as of 31 December 2017	67,925	799,015	13,141	880,080

Useful life

4 to 7 years

3 to 7 years

<sup>1)</sup> Internally developed additions to the multi-client library represents USD 70.8 million <sup>2)</sup> Other intangible assets are internally developed software

### 8. Impairment Evaluation of Multi-client Library, Goodwill and Other Intangible Assets

#### Multi-client library

TGS performs impairment reviews and determines the value in use of the multi-client library during each financial year. The company estimates value in use based on discounted estimated future sales forecasts.

For the multi-client library, the value in use has been determined based on revenue and cash flow projections from financial estimates prepared by management. The approved budget has been used for 2019. 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, 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. Local tax rates and sales costs are applied.

TGS is operating in a global industry. TGS' customers are operating on a global scale, and the market for TGS's products is global. The market for TGS' products is mainly mirrored by the market for oil and gas, which is a truly global commodity market with a global pricing pattern. Based on this, TGS is using the same pre-tax WACC of 12% for all the Cash Generating Units throughout the Company.

The table below shows the impairment charges recognized for the multi-client library:

Total	21,277	7,567
Other	2	29
Land	1	2
Africa, Middle East and Asia Pacific	6,792	2,217
Europe	4,487	3,213
North and South America	9,995	90
Impairment of multi-client library	2018	2017

#### Goodwill

The table below shows net book value of goodwill by cash generating unit.

Specification of goodwill:	Imaging	GPS Well Logs	GPS Interpretation	Arcis	Other	Total
Net book value as of 1 January 2018	27,928	12,791	7,558	18,581	1,067	67,925
Additions	-	-	-	-	-	-
Impairment	-	-	-	-	-	_
Net book value as of 31 December 2018	27,928	12,791	7,558	18,581	1,067	67,925

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

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 5.

Goodwill for all the CGUs has been tested for impairment. No impairments have been recognized during 2018 (2017: USD 0 million).

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.

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 2019. The value in use calculations has not assumed any growth in 2020. 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 2022 of the business unit has been determined by discounting the projected cash flow in 2022 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 years projection period were discounted using the 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. In the most realistic negative scenarios, if TGS were to increase the WACC to 17%, or reduce the annual growth rate from 2% to 0% for all years, the valuation of the CGU does not fall below the 127 MUSD in NBV recognized in TGS financial statements at 31 December 2018.

Management does not see any other reasonable changes in the key assumptions that would cause the value in use to be lower than it's 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 2019. The value in use calculations have assumed 5% growth in 2020 and in 2021. 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 2022 of the business unit has been determined by discounting the projected cash flow in 2022 assuming a nominal growth of 2%. The terminal value and the cash flows in the five years projection period were discounted using the 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 it's carrying value.

#### **GPS Interpretations**

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 slightly higher than USD 2 million annually for the next five years

A terminal value in 2022 of the business unit has been determined by discounting the projected cash flow in 2022 assuming a nominal growth of 2%. The terminal value and the cash flows in the five years projection period were discounted using the 12% (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 it's 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 2019. The value in use calculations has assumed a growth rate of 2% for the subsequent four years, which is viewed as conservative based on current market expectations.

A terminal value in 2022 of the business unit was determined by discounting the projected cash flow in 2022 assuming a nominal growth of 2%. The terminal value and the cash flows in the five years projection period has been discounted using the 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 is not aware of any other reasonable changes in the key assumptions that would cause the value in use to be lower than it's carrying value.

### Personnel Costs / Number of Employees / Remuneration to Executive Management, Board of Directors and Auditors

Personal cost	2018	2017
Payroll	79,691	70,485
Social security costs	8,096	5,552
Pension costs	4,034	3,281
Other employee related costs	4,797	5,948
Salaries capitalized to developed software	(5,004)	(1,384)
Cost of RSU/PSU	5,526	2,515
Salaries capitalized to multi-client library	(26,822)	[32,104]
Personnel costs	70,318	54,293
Cost of stock options (see Note 10)	-	243
Personnel costs and cost of stock options	70,318	54,536

The number of employees as of 31 December 2018 was 547 versus 597 as of 31 December 2017.

In 2018 TGS' Short-Term Incentive bonus plan was funded by allocating 12.75% of operating profit among all full-time employees. A similar plan is in place for 2019, with an allocation of 9.5% of operating profit. Employees are generally eligible to participate in the bonus plan after being employed for six months. 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 pool is based on level of responsibility, individual contribution, performance versus previous year goals and benchmark data. All bonuses earned in respect of the 2018 bonus plan have been paid or accrued as of 31 December 2018. More information on the Short-Term Incentive is provided in the company's Declaration on Executive Remuneration, published contemporaneously with the Annual Report.

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

Executive Management	No. of Shares Held 31/12/2018	No. of Options Held 31/12/2018	No. of Options Granted In 2018	No. of Options Exercised in 2018	PSUs awarded in 2018	Total balance of free-standing warrants related to PSUs/RSUs
– Kristian Johansen (CEO)	26,200	-	-	12,000	68,000	204,000
Sven B Larsen (CFO)	5,600	-	-	-	32,000	96,000
Knut Agersborg (VP Global Services)	5,300	-	-	-	25,000	71,000
Will Ashby (VP HR and Communication)	3,214	-	-	-	25,000	71,000
Katja Akentieva (SVP Onshore)	2,500	-	-	-	25,000	77,000
Zhiming Li (SVP Data Processing and Research & Development)	75,694	-	-	20,000	25,000	77,000
Tana Pool (VP General Counsel)	1,575	-	-	-	25,000	71,000
Fredrik Amundsen (SVP Europe & Asia Pacific)	4,750	-	-	10,100	25,000	77,000
Erik Finnstrom (SVP New Ventures)	500	-		-	25,000	25,000

The tables below show total expensed compensation to executive management:

Executive Management 2018	Salary	Bonuses	Other Benefits <sup>1]</sup>	Payments from long-term incentive plans	Total Remunerations
Kristian Johansen	558	1,490	109	-	2,157
Sven B Larsen	412	407	16	-	836
John A. Adamick (Retired May 2018)	254	339	40	-	634
Knut Agersborg	201	163	31	-	395
Katja Akentieva	307	303	29	-	639
Zhiming Li	348	431	41	-	821
Tana Pool	320	266	29	-	615
Will Ashby	260	237	88	-	586
Fredrik Amundsen	251	330	16	-	598
Erik Finnstrom	143	106	-	-	249
Tanya Herwanger (Transitioned to a non-executive role in September 2018)	119	90	1	-	210

Executive Management 2017	Salary	Bonuses	Other Benefits <sup>1]</sup>	Payments from long-term incentive plans	Total Remunerations
 Kristian Johansen	528	972	68	26	1,594
Sven B Larsen	366	272	18	-	656
John A. Adamick	242	257	25	70	594
Knut Agersborg	177	109	20	66	372
Katja Akentieva	298	203	22	14	537
Zhiming Li	342	288	22	41	693
Tana Pool	305	172	22	2	501
Will Ashby	243	100	16	60	419
Fredrik Amundsen	208	220	15	-	443
Tanya Herwanger (Executive from January 2017)	178	71	16	-	265

TGS awards its executives Long Term Incentives with performance metrics measured over a period. In 2018, a limited number of performance share units (PSUs) were issued to the executive management under the 2018 Long Term Incentive Plan. The plan and status versus performance metrics is further described in the Declaration on Executive Remuneration. The 2018 plan is equity settled, and each of the PSUs represent the right to receive the maximum of one share. The 2018 plan also provides for the issuance of RSUs to non-executive key employees, as further described in the 2018 Declaration on Executive Remuneration.

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 for CEO or CFO, 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.

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

Board of Directors 2018	Director's Fee <sup>1)</sup>	Value of Shares Received <sup>21</sup>	Total Remunerations
Hank Hamilton (Chairman of the Board)	200	-	200
Mark Leonard	42	46	82
Vicki Messer	36	46	82
Tor Magne Lønnum	42	46	82
Wenche Agerup	36	46	82
Elisabeth Grieg	36	46	82
Torstein Sanness	36	46	82
Nils Petter Dyvik	36	46	82

Board of Directors 2017	Director's Fee <sup>1)</sup>	Value of Shares Received <sup>21</sup>	Total Remunerations
– Hank Hamilton (Chairman of the Board)	200	-	200
Mark Leonard	36	29	64
Vicki Messer	36	29	64
Tor Magne Lønnum	36	29	64
Wenche Agerup	36	29	64
Elisabeth Grieg	36	29	64
Torstein Sanness	36	29	64
Nils Petter Dyvik (Director from May <sup>2017</sup> )	18	29	47
Elisabeth Harstad (Director until May <sup>2017</sup> )	73	-	73

<sup>11</sup>The tables include Director's fees paid during the year. Directors receive fees on a biannual basis as decided by the AGM. Deviations in individual fees are related to the timing of the bi-annual payments.

<sup>21</sup> In May 2018, each of the Directors, other than the Chairman received 1,650 restricted shares in TGS.

	No. of Restricted Shares Received during 2018	No. of Shares Held 31/12/2018
Hank Hamilton (Chairman of the Board )	-	1,352,400
Mark Leonard (Director)	1,650	22,150
Vicki Messer (Director)	1,650	13,050
Tor Magne Lønnum (Director)	1,650	9,850
Wenche Agerup (Director)	1,650	6,600
Elisabeth Grieg (Director)	1,650	5,945
Torstein Sanness (Director)	1,650	4,950
Nils Petter Dyvik (Director)	1,650	3,300

Compensation to the members of the Nomination Committee <sup>1)</sup>	2018	2017
 Tor Himberg-Larsen (Chairman)	15	24
Christina Stray	6	13
Herman Kleevan	6	14

<sup>1)</sup>The table shows compensation paid during the year. The members of the committee receive compensation per meeting held.

Auditor's fee	2018	2017
KPMG		
Statutory audit	338	-
Other attestation services	3	-
Other Services	58	-
Total fees	399	-
EY		
Statutory audit	332	444
Tax advice services	41	20
Total fees	373	464

All amounts are exclusive of VAT.

The Group changed auditor during 2018 from EY to KPMG with the effect for the audit of the 2018 financial year.

### **10.** Long Term Incentive Plans

In 2014 to 2018, TGS issued performance-based incentive awards to its executive team using metrics as described below and in the 2018 Declaration on Executive Remuneration. 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 which expired in 2017, were secured by treasury shares. Options granted under the 2013 plan, which expired in 2018, were secured by free-standing warrants.

In 2014 a limited amount of restricted share units (RSUs) were issued to nonexecutive key employees other than the executive management. The 2014 restricted unit plan was a cash-settled plan measured at the end of each reporting period and was paid out in 2017 upon vesting, three years after grant. In addition, performance units were granted to executive management. This plan was also a cash-settled plan, the value was measured at the end of each reporting period, and the awards were paid out in 2017 at vesting.

In 2015 to 2018, a limited number of performance share units (PSUs) were issued to executives, while a limited amount of restricted share units (RSUs) were issued to non-executive 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 vest three years after grant. The 2015 PSU awards vested in 2018, with no pay-out due to the failure of all performance metrics. The RSUs awarded in 2015 also vested in 2018.

The actual number of shares to be received by holders of the 2018 PSUs are

dependent on three performance metrics which are measured for the period 1 January 2018 through 31 December 2020 (2016 plan: 1 January 2017 through 31 December 2019);

- Relative return on average capital employed
- Absolute return on average capital employed
- Health, social and environmental metric

The performance metrics are described in more detail in the Declaration on Executive Remuneration. If all the performance metrics are fully earned, the payout percentage will be 100% which is equal to a total of 290,000 PSUs (2017 plan: 296,000 PSUs remaining at 31 December 2018). The fair value of the PSUs granted in 2018 is measured based on the market value at the grant date and expensed over 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 2018 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 143,900 RSUs were granted in 2018. (2017 plan: 141,000 RSUs).

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

Expenses related to share-base payment plans	2018	2017
Expense arising from equity-settled share-based payment plans	5,526	2,988
Expense arising from cash-settled share-based payment plans	-	254

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 to 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 has been determined by a level 3-technique from the fair value hierarchy, see also Note 15.

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

No. WAEP (NOK) No. WAEP (N	JK)
Outstanding as of 1 January 904,805 46.8 1,352,801	4.71
Granted during the year 433,900 0.25 437,000	0.25
Adjusted quantity due to performance criteria(226,201)(157,925)	
Forfeited during the year - (23,230) 1	0.49
Exercised during the year (301,900) 122.45 (703,841) 1	4.79
Expired during the year	
Outstanding as of 31 December 810,604 .25 904,805	6.80
Exercisable as of 31 December - 232,300	

The weighted average remaining contractual life for the long-term incentive plans outstanding on 31 December 2018 is 1.68 years (2017: 1.59 years).

The weighted average fair value as of 31 December 2018 of the PSUs and RSUs granted during 2018 was NOK 319.31. The weighted average fair value of the PSUs and RSUs granted during 2017 was NOK 168.36.

The strike price for outstanding options at the end of 2017, which vested during 2018, was NOK 181.90.

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 RSU and PSU plan is 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 as of 31 December 2018, the liabilities arising from the plans amounted to USD 0.5 million (2017: USD 0.4 million).

#### Outstanding PSUs and RSUs as of 31 December 2018:

Price/ conditions Granted		Holders	Exercise dates	No. of PSUs/RSUs
alue (FMV) of a share including expected dividends5 August 2016ected dividends, adjusted for performance criteria5 August 2016	Fair market value (FMV) of a Fair market value (FMV) of a share including expected dividends	Key employees Executive management	See below <sup>1]</sup> See below <sup>2]</sup>	143,000 273,000
alue (FMV) of a share including expected dividends4 August 2017ected dividends, adjusted for performance criteria4 August 2017alue (FMV) of a share including expected dividends3 August 2018	Fair market value (FMV) of a share including expected dividends	Key employees Executive management Key employees	See below <sup>3]</sup> See below <sup>4]</sup> See below <sup>5]</sup>	141,000 296,000 143,900
	Fair market value (FMV) of a share including expected dividend	Executive management	See below <sup>6]</sup>	290,000

1,286,900

<sup>1)</sup>The holders will receive maximum one share per unit on 5 August 2018.

<sup>4)</sup>The holders will receive one share per unit on 4 August 2020. <sup>5</sup> The holders will receive maximum one share per unit on 4 August 2020.

<sup>3)</sup>The holders will receive maximum one share per unit on 5 August 2019.

<sup>2)</sup>The holders will receive one share per unit on 5 August 2019.

<sup>6</sup>The holders will receive maximum one share per unit on 3 August 2021.

PSUs and RSUs issued in 2016 and 2017 vest upon a change of control as defined in the plan documents. The PSUs and RSUs issued in 2018 do not include any change of control provisions and therefore do not vest upon a change of control. PSUs and RSUs are forfeited upon termination of employment, regardless of the reason.

### **11**. 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 (RSUs and PSUs) into ordinary shares.

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

	2018	2017
Net profit attributable to ordinary equity holders of the Parent	178,800	75,594
Weighted average number of ordinary shares (excluding treasury shares) for basic earnings per share	102,403	101,979
Effect of dilution: Share options, RSUs and PSUs	1,069	1,026
Weighted average number of ordinary shares (excluding treasury shares) adjusted for effect of dilution	103,472	103,005
Basic earnings per share Diluted earnings per share	1.75 1.73	0.74 0.73

There have been no transactions involving ordinary shares or potential ordinary shares between the reporting date and the date of authorization of these financial statements.

### **12.** Equity and Shareholders' Authorizations

#### Ordinary Shares Issued and Fully Paid

	Number of shares	USD
31 December 2016	102,135,990	3,657
Issued 20 February 2017 for cash on exercise of stock options Issued 20 November 2017 for cash on exercise of stock options	33,050 176,850	1 5
31 December 2017	102,345,890	3,663
Issued 28 February 2018 for cash on exercise of stock options	73,600	2
Issued 1 June 2018 for cash on exercise for stock options	129,500	4
Issued 23 August for cash on vesting of RSU	98,800	3
31 December 2018	102,647,790	3,672

#### **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 2018, TGS held 104,630 treasury shares, 0.1% of the total shares issued (2017: 116,180 shares, 0.1%).

The following table shows the movement of treasury shareholdings:

	Number of shares	USD
31 December 2016	533,500	21
16 February 2017, treasury shares transferred to cover exercise of stock options	(285,875)	(11)
10 May 2017, treasury shares distributed to Board members	(11,550)	(0.4)
24 May 2017, treasury shares transferred to cover exercise of stock options	(14,520)	(0.5)
31 May 2017, treasury shares transferred to cover exercise of stock options	(105,375)	(3)
31 December 2017	116,180	4
9 May 2018, treasury shares distributed to Board members	(11,550)	(0.4)
31 December 2018	104,630	4

### 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 8 May 2018, the Board is authorized to, on behalf of the Company, increase share capital of the Company by up to NOK 2,560,487.25 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. The authorization is valid until the Annual General Meeting in 2019, but no later than until 30 June 2019.

By resolution of the Annual General Meeting held 8 May 2018, 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 2,560,487.25, 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 2019, but no later than 30 June 2019.

During 2018, the Company increased the share capital by NOK 75,475 of which NOK 57,075 came from share capital increases between 8 May 2018 and 31 December 2018. The Company did not issue any convertible loans between 8 May 2018 and 31 December 2018.

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

By resolution of the Annual General Meeting held 8 May 2018, the Board is authorized to acquire, on behalf of the Company, the Company's own shares up to 10% of the nominal value of Company's share capital, which pursuant to the current nominal value is up to NOK 2,560,487.25. 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 2019, however no longer than until 30 June 2019.

The Company did not acquire any shares for treasury between 8 May 2018 and 31 December 2018.

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

The Annual General Meeting held 8 May 2018 authorized the Board of Directors to distribute quarterly dividends on the basis of the 2017 annual accounts. 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 2019, but no later than 30 June 2019. The authorization has been used for the following quarterly dividends:

- On 8 May 2018, the Board of Directors resolved to pay a quarterly dividend of the NOK equivalent of USD 0.20 per share (NOK 1.62) to the shareholders.
- On 1 August 2018, the Board of Directors resolved to pay a quarterly dividend of the NOK equivalent of USD 0.20 per share (NOK 1.62) to the shareholders.
- On 31 October 2018, the Board of Directors resolved to pay a quarterly dividend of the NOK equivalent of USD 0.20 per share (NOK 1.68) to the shareholders.
- On 6 February 2019, the Board of Directors resolved to pay a quarterly dividend of the NOK equivalent of USD 0.27 per share (NOK 2.30) to the shareholders.

#### The 20 Largest Shareholders as of 31 December 2018 as Registered with VPS:

	Name	Country		Shares	%
1	FOLKETRYGDFONDET	NORWAY		10,549,898	10.3%
2	THE BANK OF NEW YORK MELLON SA/NV	BELGIUM	NOM	8,859,176	8.6%
3	STATE STREET BANK AND TRUST COMP	U.S.A.	NOM	3,832,624	3.7%
4	RBC INVESTOR SERVICES TRUST	GREAT BRITAIN	NOM	3,586,008	3.5%
5	VERDIPAPIRFONDET DNB NORGE (IV)	NORWAY		2,704,589	2.6%
6	STATE STREET BANK AND TRUST COMP	U.S.A.	NOM	2,486,005	2.4%
7	STATE STREET BANK AND TRUST COMP	U.S.A.	NOM	2,208,285	2.2%
8	PARETO AKSJE NORGE VERDIPAPIRFOND	NORWAY		1,949,649	1.9%
9	INVESCO FUNDS	BELGIUM		1,838,350	1.8%
10	JPMORGAN CHASE BANK, N.A., LONDON	GREAT BRITAIN	NOM	1,570,628	1.5%
11	JP MORGAN SECURITIES PLC	BELGIUM		1,393,576	1.4%
12	HENRY HAYWOOD HAMILTON	U.S.A.		1,352,400	1.3%
13	THE NORTHERN TRUST COMP, LONDON BR	GREAT BRITAIN	NOM	1,331,094	1.3%
14	CLEARSTREAM BANKING S.A.	LUXEMBURG	NOM	1,303,746	1.3%
15	THE NORTHERN TRUST COMP, LONDON BR	GREAT BRITAIN	NOM	1,285,005	1.3%
16	SWEDBANK ROBUR SMABOLAGSFOND	GREAT BRITAIN		1,260,000	1.2%
17	STATE STREET BANK AND TRUST COMP	U.S.A.	NOM	1,208,908	1.2%
18	STATE STREET BANK AND TRUST COMP	U.S.A.	NOM	1,048,764	1.0%
19	JPMORGAN CHASE BANK, N.A., LONDON	GREAT BRITAIN	NOM	1,015,232	1.0%
20	CITIBANK, N.A.	GREAT BRITAIN	NOM	989,675	1.0%
	20 largest shareholders			51,773,612	50.5%
	Total number of shares, par value of NOK 0.25			102,543,160	100.0%

Norwegian shareholders held 32,264,178 (31.46%) of TGS' outstanding shares (excluding treasury shares) at 31 December 2018. Shares held in treasury as of 31 December 2018 were 104,630.

# **13.** Cash and Cash Equivalents

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

Total cash bank deposits	273,527	249,917
Restricted cash deposits	426	430
Bank deposits	273,101	249,487
Cash and cash equivalent	2018	2017

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

# 14. Related Parties

#### Terms and Conditions of Transactions with Related Parties

No material transactions took place during 2018 or 2017 with related parties. See Note 9 for further information of the remuneration to the Board of Directors and to the executive management.

See Note 22 for further information about the subsidiaries. Internal transactions are eliminated in the consolidated financial statements and do not represent transactions with related parties.

# **15.** Financial Risk Management Objectives and Policies

TGS has various financial assets. These are mainly held in USD, which is the functional currency for 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 liabilities calculated in NOK, a change of 10% on the NOK/USD currency exchange rate could have an impact on net income of approximately USD 1.7 million (2017: USD 1.7 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 653.7 million, of which cash and cash equivalents represented USD 273.5 million and other current assets represent USD 380.2 million. In comparison current liabilities amounted to USD 338.4 million. As of 31 December 2018, TGS considers the liquidity risk to be low.

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

2018	0-6 months	6-12 months	> 1 year	Total
Accounts payable and debt to partners	39,922	-	-	39,922
Taxes	-	27,062	-	27,062
Other non-current liabilities	-	-	2,514	2,514
Long-term debt	-	-	2,500	2,500
Total	39,922	27,062	5,014	71,998
2017	0-6 months	6-12 months	> 1 year	Total
Accounts payable and debt to partners	101,385	-	-	101,385
Taxes	-	25,197	-	27,197
Other non-current liabilities	-	-	2,850	2,850
Long-term debt	-	-	2,500	2,500
Total	101,385	25,197	5,350	131,932

#### **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 18. TGS considers the concentration of risk with respect to trade receivables as low due to the company's credit rating policies and as our 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.

As of 31 December 2018, none of the outstanding accounts receivables were secured by ORRIs (2017: USD 0 million).

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

For details on other financial assets, please see Note 16.

#### **Capital Management**

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

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

As of 31 December 2018, total equity represented 77% of total assets (2017: 84%).

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 paid quarterly dividends. The Annual General Meeting held 8 May 2018 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.

On 6 February 2019, the Board of Directors resolved to pay a quarterly dividend of USD 0.27 (NOK 2.30) per share. The dividend was paid to the shareholders on 28 February 2019.

#### 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 of the long-term debt is determined by using the discounted cash flow method that reflects the issuer's borrowing rate as at the end of the reporting period.

31.12.2018	18 Financial instruments at amortized cost	
Assets		
Accounts receivable	215,046	215,046
Accrued revenues	133,810	133,810
Cash and cash equivalents	273,527	273,527
Total Financial assets	622,383	622,383
Liabilities		
Interest bearing loans and borrowings	;	
Long term debt	2,500	2,500
Derivatives		
Other financial liabilities		
Trade and other payables	80,065	80,065
Total financial liabilities	82,565	82,565

31.12.2017	Financial instruments at amortised cost	Total
Assets		
Accounts receivable	157,423	157,423
Accrued revenues	97,285	97,285
Cash and cash equivalents	249,917	249,917
Total Financial assets	504,625	504,625
Liabilities		
Interest bearing loans and borrowings		
Long term debt	2,500	2,500
Derivatives		
Other financial liabilities		
Trade and other payables	104,235	104,235
Total financial liabilities	106,735	106,735

#### 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 to E&P Holding AS and Skeie Energy AS (see Note 16) 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. The fair value of the long-term debt has been determined by using a level 2-technique.

# 16. Other Non-current Assets and Liabilities

#### **Other Non-current Assets**

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 2018.

Other non-current liabilities of USD 0.8 million are due in 2019 and USD 0.6 million are due in 2020. USD 1.5 million are due during the years 2021-2025.

TGS has interest-bearing loans to E&P Holding AS and Skeie Energy AS. The two loans have a total value of gross USD 42.1 million (net to TGS of USD 29.4 million), One of the loans has been fully reserved for, and is recognized at USD 0 million as of 31 December 2018 (31 December 2017: USD 0 million). The second of the loans was written off as uncollectible in 2016.

#### Other Non-current Assets

	2018	2017
Other non-current receivables	180	496
Interest bearing loans	21,100	21,100
- Provision for impairment of interest bearing loans	(21,100)	(21,100)
Interest bearing loans written off during the year as uncollectible	-	-
Total other non-current assets	180	496

#### **Non-current Liabilities**

As of 31 December 2018, TGS has recognized other non-current liabilities of USD 0 million which primarily represent non-current restructuring liabilities.

#### Long-term Debt

In 2017, subsidiaries of the Company, together with 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 5.8 million, USD 3.3 million of which was paid in cash at closing, with the balance of USD 2.5 million payable in January 2021 under a promissory note guaranteed by the Company. The principal amount of USD 2.5 million bears interest at a fixed rate of 3.5% per annum.

### **17.** 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 and share the costs of the project.

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:

	2018	2017
Gross revenues (projects invoiced by TGS) Revenue share (projects invoiced by TGS)	346,666 (133,283)	275,817 (112,727)
Net revenues (projects invoiced by TGS) Net revenues (projects invoiced by partner)	213,383 36,062	163,090 40,177
Net revenues joint operations	249,445	203,267
Amortization Impairment	187,481 20,710	117,593 4,829
Net book value of multi-client library (joint operations) as of 31 December (recognized by TGS)	423,018	261,077

# 18. Accounts Receivables and Other Current Receivables

Accounts receivables are measured at cost less any amounts of expected credit losses.

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 multiclient projects during the seismic data acquisition phase.

For certain multi-client library projects, TGS has cooperation agreements pursuant to which 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 24 for a breakdown of gross revenues and revenue share and Note 17 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.

	2018	2017
Accounts receivables	215,450	158,844
- Provision for impairment of accounts receivables	(404)	(1,421)
Accounts receivables - net	215,046	157,423
Accrued revenues	133,810	97,285
Other current receivables	31,353	18,939
Total	380,209	273,647

The aging of the accounts receivables and accrued revenue (nominal amounts) are as follows:

	Total	Not due	< 30 days	30 - 60 days	60 - 90 days	Over 90 days
2018	349,261	317,003	15,059	7,659	7,711	1,828
	Total	Not due	< 30 days	30 - 60 days	60 - 90 days	Over 90 days
2017	256,129	227,705	15,226	6,483	2,379	4,336

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:

As of 31 December	404	1,421
Amount collected	-	(1,980)
Receivables written off during the year as uncollectible	(1,421)	(374)
Provision for receivables impairment	404	94
As of 1 January	1,421	3,681
	2018	2017

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 15.

## **19.** Accounts Payables and Other Current Liabilites

Total accounts payable and other payables	338,438	194,927
Taxes	27,062	25,197
Other current liabilities	271,454	68,345
Accounts payable and debt to partners	39,922	101,385
	2018	2017

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

Other current liabilities consist of accrued expenses and deferred revenues.

# **20.** Bank Overdraft Facility and Guarantees

#### 3 Year Term Secured Revolving Credit Facility:

In October 2018, with closing in January 2019, TGS entered into a secured revolving credit facility of USD 100 million with an interest rate of LIBOR + 2% per interest period depending on what TGS selects and as per the defined terms of the revolving credit facility. The credit facility was closed in January 2019. TGS is obligated to pay an upfront fee of 0.60% of the facility amount and a commitment fee of 0.40 % per annum for the unused and uncancelled part of the facility, With respect to financial conditions, TGS must maintain (i) an equity ratio of 50% or more, (ii) a leverage ratio of no more than 1.00:1.00, (iii) EBITDA minus operational capex at zero or above, and (iv) must maintain a liquidity of USD 75 million on a consolidated basis. As of 21 March 2019 TGS had not drawn any amounts under the facility.

The facility is secured by a lien on the assets of the parent company and subsidiaries having net revenues representing 5% or more of the group's net revenues as defined in the facility (TGS AP Investment AS, TGS-Nopec Geophysical Company, A2D Technologies Inc, TGS Geophysical Company (UK) Limited, TGS Canada Corp.) and guaranteed by the same subsidiaries.

#### Guarantees

Per 31 December 2018, one bank guarantee has been issued on behalf of TGS of a total of USD 0.2 million related to a seismic program (2017: USD 0.2 million).

Under section 479A of the UK Companies Act 2006; five of TGS' subsidiaries, TGS Geophysical Company (UK) Limited (Registration number: 05731700),

TGS Geophysical Investments Limited (Registration number: 09281097), Aceca Limited (Registration number: 03672833), TGS-NOPEC Geophysical Company Limited (Registration number: 02896729) and Magsurvey Limited (Registration number: 04568744) have availed exemption for audit of their statutory financial statements pursuant to guarantees issued by TGS to indemnify the subsidiaries of any losses towards third parties that may arise in the financial year ended 31 December 2018 in these subsidiaries. TGS can make an annual election to support such guarantees for each financial year.

### **21.** Commitments and Contingencies

#### **Operating Leases**

As of the end of 2018, TGS had entered into commitments for two 3D vessels, four OBN/Source vessels, two Multi Beam vessels, and one Coring vessel, in addition to two land crews. All these commitments will expire in 2019, and the amount committed, included contractual lease agreements, totaled USD 57 million for marine capacity and USD 18 million for land capacity (2017 total: USD 37 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 these leases.

Operating leases of USD 8.0 million were recognized as expenses in 2018 (2017: USD 7.1 million).

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

	2018	2017
Within one year	17,097	16,972
After one year but not more than five years	33,337	42,292
More than five years	3,427	6,757
	53,861	66,021

#### **Contingent rent agreements**

As of 31 December 2019, the deferred part of contingent rent agreements that is contigent on future sales, totaled USD 18 million (2017: USD 25.4 million).

## **22.** Subsidiaries

#### As of 31 December 2018, 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%
OBS MC Investments I 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%
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%

# **23.** Contingent Liabilities

#### Økokrim Charges and Related Civil Matters

In 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. Skele 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.

In March 2017, Økokrim issued a corporate fine of NOK 85 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. The Company rejected the fine, and the trial regarding the alleged violations was held in early 2018, concluding in April 2018.

In October 2018, the Oslo District Court released its decision, holding TGS guilty and assessing a corporate fine of NOK 90 million (approximately USD 11 million) (as expected, due to the rejection of the fine in 2017). The decision was split, with a majority of the court holding TGS guilty and the minority finding no guilt. TGS has appealed the decision, which deferred the payment of any fine. The appellate court granted the appeal in March 2019, and the appellate trial is expected to occur in late 2019/early 2020.

Despite the District Court's decision, the Company maintains that it acted diligently in connection with the transactions with Skeie and did not commit the alleged violations of the law. The Company believes the court's reasoning in the case is both legally and factually inaccurate and is not reflective of the evidence presented at trial. Accordingly, the Company does not consider it probable that an outflow of resources embodying economic benefits will be required in connection with criminal charges and, accordingly, no provisions have been made.

TGS has also been notified of various claims or potential claims, asserting liability

on TGS' part in relation to the 2009 transaction with Skeie. The claims are generally predicated on whether the parties making the claims are ultimately held responsible for all or any part of unwarranted tax refunds and suffer damages that can be attributed to TGS. The following summarizes the claims and potential claims:

- Skeie and two affiliated parties have notified TGS of potential claims of joint responsibility for losses arising from the tax refunds received by Skeie.
- In May 2016, the Norwegian Government notified TGS of a claim of compensation in connection with the Government's alleged losses arising from tax benefits received by Skeie under the Petroleum Tax Act for the purchase of seismic data from TGS. The Government alleges TGS aided and abetted Skeie in obtaining unwarranted tax refunds and claims the amount of the unwarranted tax refunds plus interest, which totaled approximately NOK 326 million at the time of the notice. TGS has granted the Government a three-year extension of the statute of limitations for legal actions relating to the claim. Similar claims were made by the Government against other parties involved with Skeie.
- 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 Norwegian Government has claimed that Skeie Technology is liable for the tax refunds obtained by Skeie under a parent guarantee issued by Skeie Technology on behalf of Skeie. These claims were unsuccessful in the trial court, and the Government has appealed, which will likely be decided in mid-2019, although the matter is subject to further appeal to the Supreme Court. The proceedings in the case brought by Skeie Technology against TGS (and others) have been stayed pending the resolution of the guarantee dispute between Skeie Technology and the Government. No specific damages have been asserted in the writ.
- In March 2017, TGS received notice from DNB that it will hold TGS responsible for any amounts payable by DNB to the Norwegian Government. DNB received notice from the Norwegian Government in December 2016, claiming liability for repayment of the tax refunds under a provision in the Tax Payment Act due to DNB's status as a pledgee of the tax refunds. In April 2017, the parties entered into a mutual standstill agreement to stop the tolling of the statute of limitations for three years. In November 2017, TGS received notification that, notwithstanding the standstill, DNB had filed a claim against TGS and various other parties for responsibility for any amounts that DNB may owe in relation to this matter. This claim

initially arose out of the claims against Skeie Technology by the Norwegian Government in connection with Skeie Technology's parental guarantee, but the DNB claim has now been severed as a separate case. In March 2018, the court stayed the proceedings by DNB pending the resolution of the guarantee dispute between Skeie Technology and the Government.

The civil matters that 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 appeal proceedings will confirm that TGS did nothing wrong, the Company also believes these civil claims of liability are not well-founded, and it intends to challenge the claims vigorously. As a result, the Company consider it less than probable that an outflow of resources embodying economic benefits will be required to settle the obligations and, accordingly, no provisions have been made.

# **24.** Gross and Net Revenues

TGS shares certain multi-client revenue with governments in certain countries and other companies pursuant to joint operations (see Note 17) and the governments in certain countries. Operating revenue is presented net of the portion shared. The table below provides the breakdown of gross revenue for 2017 and 2018.

	2018	2017
Gross revenues from sales	749,400	605,928
Revenue sharing	(135,161)	(113,747)
Net revenues	614,239	492,181

Revenue sharing includes amounts not considered to be classified as joint operations as reported in Note 17.

# **25.** Financial Items

Net financial items	6,746	2,207
Total financial expenses	(3,163)	(3,414)
Other financial expenses	-	(1,271)
Exchange loss	(2,172)	(1,815)
Interest expense	(991)	(328)
Total financial income	9,910	5,622
Other financial income	-	-
Exchange gains	2,930	2,664
Interest income	6,980	2,958
	2018	2017

# **26.** Tax Expense and Deferred Tax

	2018	2017
Profit before taxes		
Norway	128,449	52,207
Outside Norway	108,321	47,428
Total profit before taxes	236,771	99,636
Current taxes		
Norway	11,284	22,103
Outside Norway	23,119	11,588
Total current taxes	34,403	33,691
Changes in deferred taxes		
Norway	21,519	2,755
Outside Norway	2,049	(12,404)
Total changes in deferred taxes	23,568	(9,649)
Income tax expense reported in the income statement	57,971	24,042
Tax expense related to other comprehensive income	2018	2017
Tax expense - other comprehensive income	-	
	2018	2017
Profit before taxes:	236,771	99,636
Expected income taxes according to corporate income tax rate in Norway	54,452	23,896
Tax rates outside Norway different from 23%/24%	3,247	6,527
Adjustment in respect of current income tax of previous year	(1,376)	(4,360)
Deferred tax asset related to stock options	[43]	217
Change in deferred tax asset not recognized	2,089	93
Non-taxable income	(880)	(1,720)
Withholding taxes expensed	-	316
Effect of change in tax rates	(128)	(11,742)
Non-deductible expenses	2,576	1,496
Currency effects	(1,964)	9,321
Income tax expense	57,971	24,042
Effective tax rate in %	24%	24%

#### 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 different than the Norwegian tax rate of 23% (2017: 24%) tax rate. After the tax rate reduction in the US, which lowered the tax rate from 35 % to 21 %, the difference between Norway and the subsidiaries outside Norway has been decreased.

#### 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 9.8 million (2017: 28.6 million) where no deferred tax assets were recognized in the balance sheet, all of these unused tax losses sit in entities outside Norway.

#### Effect of change in tax rates

The effect of change in tax rates does mainly relate to deferred tax liability positions in Norway. Tax rate in Norway will change from 23% to 22% in 2019.

#### Non-deductible expenses

Non-deductible expenses consist of various types of expenses and payments of various local taxes, which are not deductible for tax purposes in the tax jurisdictions where TGS operates.

#### Currency Effects

TGS 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.

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

	2018	January 1 2018	2017
Differences that give raise to a deferred asset or a deferred tax liability			
Multi-client library/well logs	(15,579)	(1,446)	16,309
Fixed assets	(17,288)	(15,358)	(15,358)
Revenues on seismic projects in the work in progress phase	(0)	-	[28,278]
Goodwill and intangibles	(4,082)	(3,243)	(3,243)
Accruals	7,092	13,702	8,942
Interest deductions carried forward	-	-	-
Accounts receivable	253	(2,441)	(2,441)
Tax losses carried forward	1,547	2,074	2,074
Deferred revenue	(1,250)	507	507
Stock options	-	70	70
Financial instruments	-		-
Withholding taxes carried forward	408	1,890	1,890
Other	522	197	197
Total net deferred tax liability	(28,377)	(4,048)	(19,331)
Of which:			
Change in net deferred tax liability	2018	2017	
As of 1 January <sup>11</sup>	4,048	29,718	
Recognized in profit or loss	23,568	(9,649)	
Withholding taxes recognized as deferred tax assets	-	(536)	
Currency effects	761	(202)	
As of 31 December	28,377	19,331	
### 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 United Kingdom (USD 2.3 million).

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

Withholding taxes carried forward and recognized as deferred tax assets relate to Norway. The full amount carried forward of USD 1.9 million has to be utilized no later than 2020.

#### 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.

#### **Draft Taxation Ruling in Australia**

On 20 December 2017, the Australian Tax Office (ATO) released for public comment a draft taxation ruling (2017/D11 Income tax: capital allowances: expenditure incurred by a service provider in collecting and processing multiclient seismic data).

The preliminary contention of the Commissioner in the draft ruling is that costs associated with the collection of multi-client data are not immediately deductible for income tax purposes but rather are depreciable over, generally, 15 years. The draft ruling is proposed to apply for any seismic data the taxpayer started to hold after 14 May 2013. TGS has an opposing view of the application of the law, and has, in line with industry practice, deducted such costs in the year they have occurred. The Company is of the opinion that there is a good basis to support its tax treatment of the costs that are dealt with in the draft ruling for prior income years.

TGS has submitted its comments to the ATO and expressed that the draft ruling has incorrectly characterized the activities of companies like TGS, and that the application of the income tax act is incorrect.

A final ruling has not yet been issued by the ATO, and TGS remains of the opinion the factual differences between the operations of TGS and the specific fact pattern in the draft ruling may result in a different technical position. Therefore, it is not probable that there will be an outflow of resources embodying economic benefits necessary to settle an obligation, and no provisions have been made

### **27.** Events After the Balance Sheet

On 6 February 2019, the Board of Directors resolved to pay a quarterly dividend of the NOK equivalent of USD 0.27 per share (NOK 2.30) to the shareholders. The dividend payments USD 27.4 million were made on 28 February 2018.

TGS entered into a revolving credit facility of USD 100 million. The facility, which closed on 25 January 2019, has a three-year maturity with a non-amortizing profile. It remains undrawn as of the date of this report. See Note 20.

On 27 March 2019, the Borgarting Court of Appeal notified TGS that it granted the appeal of the decision of the Oslo District Court issued in October 2018. See Note 23.

To the best of the management's and the directors' knowledge, there are no other significant subsequent events not described in this Annual Report that have occurred since 31 December 2018 that would impact the financial statements as presented for 2018.



# ALTERNATIVE PERFORMANCE MEASURES

TGS continued to perform in 2018 with 26% growth in segment revenues and improving margins.

# Alternative Performance Measures

### **Definitions – Alternative Performance Measures**

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 future 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)

EBITDA	509,699	409,274
Amortization and impairment of multi-client library	270,776	302,346
Depreciation, amortization and impairment	8,897	9,499
Net financial items	(6,746)	(2,207)
Taxes	57,971	24,042
Net Income	178,800	75,594
	2018	2017

### 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 during 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 2018	31 December 2017
Equity	1,251,699	1,200,102
Interest-bearing debt	2,500	2,500
Cash	273,527	249,917
Net interest-bearing debt	(271,027)	(247,417)
Capital employed	980,672	952,685
Average capital employed	966,679	965,535
Operating profit	230,025	97,429
ROACE	24%	10%

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

Free cash flow (after MC 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)

Free cash flow (after multi-client investments)	113,960	123,342
Investments in multi-client library	116,690	(337,964)
Cash flow from operational activities	273,062	461,306
	2018	2017

### 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)

Multi-client net revenues/average net book value ratio	0.73	0.60
Average net book value	834,755	805,707
Closing balance multi-client library	870,495	799,015
Opening balance multi-client library	799,015	812,399
Multi-client net revenues	605,844	485,188
	2018	2017

### Backlog

Backlog is defined as the total value of future net revenues 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 2018 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

(All amounts in USD 1,000s)

	Note	2018	2017
Net revenues	17	344,054	309,859
Cost of goods sold - proprietary and other		283	449
Amortization and impairment of the multi-client library	3	207,354	207,127
Personnel costs	4	12,808	9,511
Cost of stock options	4	-	36
Other operating expenses	13, 18	65,707	50,177
Depreciation, amortization and impairment	2	439	476
Total operating expenses		286,590	267,776
Operating profit/(loss)		57,464	42,083
Interest income	15	4,096	1,969
Financial income	15	-	831
Exchange gains	15	833	1,161
Interest expenses	15	(11,767)	(6,971)
Financial expenses	15	(633)	(7,434)
Net financial items		(7,472)	(10,445)
Profit before taxes		49,992	31,638
Taxes	16	11,456	16,830
Net income		38,536	14,808
Profit/(loss) for the year is proposed allocated as follows:			
Provision for dividend		27,687	20,466
To/(from) other equity	6	10,849	(5,658)
Total allocated		38,536	14,808

### Parent Company

## Balance Sheet

As of 31 December.

(All amounts in USD 1,000s)

	Note	2018	2017
Assets			
Non-current assets			
Intangible non-current assets			
Goodwill	3	-	-
Multi-client library	3	440,983	497,720
Deferred tax asset	16	408	1,890
Total intangible non-current assets		441,391	499,611
Tangible non-current assets			
Machinery and equipment	2	2,290	1,048
Total tangible non-current assets		2,290	1,048
Financial non-current assets			
Investments in subsidiaries	7	119,562	119,395
Total financial non-current assets		119,562	119,395
Total non-current assets		563,243	620,053
Current assets			
Receivables			
Accounts receivable	9	118,524	164,440
Current receivables group companies	10	79,489	63,200
Other receivables	9	8,076	6,206
Total receivables		206,089	233,846
Cash and cash equivalents	8	35,940	69,974
Total current assets		242,029	303,820
Total assets		805,273	923,873

# Balance Sheet

### Parent Company

As of 31 December.

(All amounts in USD 1,000s)

	Note	2018	2017
Equity and Liabilities			
Equity			
Paid-in capital			
Share capital	5,6	3,672	3,663
Treasury shares held	5,6	[4]	[4]
Share premium	6	67,355	62,771
Other paid-in capital	6	9,061	6,992
Total paid-in capital		80,084	73,422
Retained earnings			
Other equity	6	61,346	111,260
Total retained earnings		61,346	111,260
Total equity		141,430	184,682
Liabilities			
Non-current liabilities			
Other non-current liabilities	19	-	-
Deferred tax	16	9,476	9,111
Total non-current liabilities		9,476	9,111
Current liabilities			
Accounts payable and debt to partners		29,549	46,306
Current liabilities group companies	10	538,806	630,592
Taxes payable	16	11,090	3,753
Social security, VAT and other duties		3,271	662
Provisions for dividends	6	27,687	20,446
Other current liabilities	11	43,963	28,322
Total current liabilities		654,366	730,080
Total liabilities		663,843	739,191
Total equity and liabilities		805,273	923,873

Asker, 21 March 2019

Henry H. Hamilton III Chairman

MAA

Wenche Agerup Director

Nils Peter Dyvik Director



Tor Magne Lønnum Director

Kristian Johansen Chief Executive Officer

Mark & Leonard

Mark S. Leonard Director

Elisabeth Grieg Director

lesser

Vicki Messer Director

Torstein Sanness Director

## Statement of Cash Flow

(All amounts in USD 1,000s)

	Note	2018	2017
Cash flow from operating activities			
Profit before taxes	16	49,992	31,638
Depreciation/amortization/impairment	2, 3	207,793	207,603
Impairment shares in subsidiaries and receivables	7, 10	(757)	7,139
Unrealized currency gain/(loss)		-	(527)
Changes in accounts receivables and accrued revenue		46,694	32,291
Changes in other receivables		(250)	(2,382)
Changes in other balance sheet items		(93,030)	46,100
Net cash flow from operating activities		210,442	321,861
Cash flow from investing activities			
Investment in tangible assets	2	(1,682)	(57)
Investments in multi-client library	3	(157,833)	(248,587)
Investments in subsidiaries	7	-	-
Interest received	15	4,096	1,969
Net cash flow from investing activities		(155,419)	(246,675)
Cash flow from financing activities			
Interest paid	15	(11,767)	(6,971)
Dividend payments	6	(81,906)	(62,767)
Purchase of treasury shares	6	-	-
Proceeds from share offerings	6	4,593	13,141
Net cash flow from financing activities		(89,080)	(56,598)
Net change in cash and cash equivalents		(34,057)	18,588
Cash and cash equivalents at the beginning of the period	8	69.974	50,859
Exchange rate effects	0	23	527
Cash and cash equivalents at the end of the period		35,940	69,974

Parent Company

# 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 Lensmannslia 4, 1386 Asker, Norway. The Company is listed on the Oslo Stock Exchange (under the trading symbol "TGS").

The Company's financial statements were authorized by the Board of Directors on 21 March 2019.

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

The Company, as used in these financial statements, is the Parent Company under the Consolidated Financial Statements also included in this Annual Report.

### **Reporting Currency**

The Company 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 2018. This requires an estimation of net sales value or value in use, whichever is highest. 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, 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 sales forecasts materially. The revenue estimates are evaluated regularly and impairments are recognized in the period they occur.

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 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.

### **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.

### 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 and presented as 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.

### 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 asset 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 changed its amortization policy for seismic data in 2016. The change was 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

### 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.

### Contingent Rent Agreements

The Company has entered into agreements on rental of seismic vessels where a part of the rental payment is paid during the rental period, while the other part of the rent is deferred and contingent on a future sale. The balance of the other part of the rent will be paid as/if sales occur. The deferred payment is not considered to be a current liability, and no provision has been recognized as future payment is based on a future sales event. When sales occur TGS will recognize revenues with a corresponding investment recognition. The obligation to pay the remaining vessel rent will be recognized as a liability when the sales transaction occurs.

### 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 present obligation (legal or constructive) as a 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 that 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 resulting from 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, are disclosed in the accompanying notes. A contingent asset is not recognized in the financial statement, but is disclosed if there is a certain degree of probability that it will be an advantage to 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, along with 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 offset 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 a tax expense.

### Share-based Payments

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

The cost of equity-settled transactions (stock options, PSUs and the 2015-2018 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 fair value of the RSUs is measured at the end of each reporting period and is 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 is required to maintain a pension plan in accordance with the Norwegian Pension Benefit Act. The pension plan of the Company complies with the requirements set forth in the Norwegian Pension Benefit Act. 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 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 a 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 at 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 contributions exceed withheld profits after the acquisition date, the excess amount represents a 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

### 2018

Acquisition cost and depreciation:	Machinery and Equipmen		
Cost as of 1 January 2018	4,804		
Additions	1,682		
Disposals <sup>1)</sup>	(157)		
Cost as of 31 December 2018	6,329		
Accumulated depreciation as of 1 January 2018	3,757		
Depreciation for the year	439		
Accumulated depreciation on disposals <sup>1]</sup>	(157)		
Accumulated depreciation as of 31 December 2018	4,039		
Net book value as of 31 December 2018	2,290		
Straight-line depreciation percentage Useful life	14% - 33.3% 3 - 7 years		

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

### 2017

Acquisition cost and depreciation:	Machinery and Equipment
Cost as of 1 January 2017	
Additions	57
Disposals <sup>1)</sup>	(86)
Cost as of 31 December 2017	4,804
Accumulated depreciation as of 1 January 2017	3,368
Depreciation for the year	476
Accumulated depreciation on disposals <sup>1]</sup>	(86)
Accumulated depreciation as of 31 December 2017	3,757
Net book value as of 31 December 2017	1,048
Straight-line depreciation percentage Useful life	14% - 33.3% 3 - 7 years

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

### **3.** Intangible Non-Current Assets

### 2018

Acquisition cost and depreciation:	Goodwill	Multi-client Library	Total
Cost as of 1 January 2018 Additions	3,073	<b>3,270,571</b> 150,617	<b>3,273,644</b> 150,617
Cost as of 31 December 2018	3,073	3,421,188	3,424,261
Accumulated amortization as of 1 January 2018 Amortization for the year	3,073	<b>2,772,851</b> 207,354	<b>2,775,924</b> 207,354
Accumulated amortization as of 31 December 2018	3,073	2,980,205	2,983,278
Net book value as of 31 December 2018	-	440,983	440,983
Straight-line amortization percentage Useful life	10% 10 years <sup>2)</sup>	4 to 7 years <sup>1)</sup>	

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

<sup>21</sup> Goodwill paid for in acquisitions of companies is amortized over the first ten years after the date of the acquisition.

Amortization for the year includes impairments of USD 14.2 million.

#### 2017

Acquisition cost and depreciation:	Goodwill	Multi-client Library	Total
Cost as of 1 January 2017 Additions	3,073	<b>3,079,781</b> 190,791	<b>3,082,854</b> 190,791
Cost as of 31 December 2017	3,073	3,270,571	3,273,645
Accumulated amortization as of 1 January 2017	3,073	2,565,724	2,568,797
Amortization for the year	-	207,127	207,127
Accumulated amortization as of 31 December 2017	3,073	2,772,851	2,775,924
Net book value as of 31 December 2017	-	497,720	497,720
Straight-line amortization percentage	10%		
Useful life	10 years <sup>2)</sup>	4 to 7 years <sup>1)</sup>	

<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.

Amortization for the year includes impairments of USD 4.6 million.

### 4. Salaries/Number of Employees/Benefits/ Employee Loans/Pensions

	2018	2017
 Payroll	10,913	7,946
Social security costs	1,017	1,068
Pension costs	329	295
Other employee related costs	548	201
Salaries capitalized	-	-
Personnel costs	12,808	9,511
Cost of stock options	-	36
Payroll and cost of stock options	12,808	9,547
Number of employees at 31 December	42	41
Average number of employees	42	42

As of 31 December 2018, the Company had 42 employees: 26 male employees and 16 female employees.

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

Auditor Fees	2018	2017
KPMG		
Statutory audit	166	0
Other attestation services	3	0
Other services outside the audit scope	58	0
Total fees	227	0
EY		
Statutory audit	226	327
Tax advisory services	41	5
Total fees	267	332

All amounts are exclusive of VAT.

The Group changed auditor during 2018 from EY to KPMG with the effect of being auditor of the 2018 financial year.

Information about remuneration of the Board of Directors and the executive management is included in Note 9 to the consolidated financial statements.

For information about share-based payment plans, see Note 10 to the consolidated financial statements.

### **5.** Share Capital and Shareholder Information

The share capital of the Company as of 31 December 2018 was NOK 25,661,947.50, consisting of 102,647,790 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 12 to the consolidated financial statements.

### **6.** Equity Reconciliation

Equity Reconciliation	Share Capital	Treasury shares	Share premium	Other Reserves	Retained Earnings	Total Equity
Balance 1 January 2018	3,663	[4]	62,771	6,992	111,260	184,682
Capital increase during 2018	9	-	4,584	-	-	4,594
Treasury shares distributed	-	0.4	-	-	377	377
Cost of stock options, RSU/PSU	-	-	-	2,069	-	2,069
Quarterly dividends resolved and paid	-	-	-	-	(61,140)	(61,140)
Provisions for quarterly dividends (USD 0.20 per share) *)	-	-	-	-	(27,687)	(27,687)
Profit/(loss) for the year	-	-	-	-	38,536	38,536
Balance 31 December 2018	3,672	(4)	67,355	9,060	61,345	141,430
Balance 1 January 2017	3,656	(19)	58,107	6,011	154,098	221,854
Capital increase during 2017	6	-	4,664	-	-	4,670
Treasury shares distributed	-	15	-	-	8,706	8,721
Cost of stock options, RSU/PSU	-	-	-	981	-	981
Quarterly dividends resolved and paid	-	-	-	-	(45,906)	(45,906)
Provisions for quarterly dividends (USD 0.20 per share)	-	-	-	-	(20,446)	(20,446)
Profit/(loss) for the year	-	-	_	-	14,808	14,808
Balance 31 December 2017	3,663	[4]	62,771	6,992	111,260	184,682

\*<sup>1</sup> The Annual General Meeting held on 8 May 2018 authorized the Board of Directors to distribute quarterly dividends based on the 2017 statements. The authorization shall be valid until the Company's next Annual General Meeting.

On 6 February 2019, the Board of Directors resolved to pay a quarterly dividend of the NOK equivalent of USD 0.27 per shares (NOK 2.30) to the shareholders.

### 7. Investments in Subsidiaries

As of 31 December 2018, 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	184	1	22	100%
TGS AP Investments AS	Asker, Norway	NOK 200,000	1,000	35,214	(1,235)	79,204	100%
Marine Exploration Partners AS	Asker, Norway	NOK 800,000	800,000	-	-	(483)	100%
TGS Contracting AS	Asker, Norway	NOK 100,000	1,000	147	[7]	114	100%
TGS-NOPEC Geophysical Company	Houston, U.S.A.	USD 1,000	1,000	1,483	30,852	789,254	100%
TGS-NOPEC Geophysical Company (UK) Ltd.	Bedford, UK	GBP 50,100	50,100	-	-	(24)	100%
Aceca Ltd.	Surbiton, UK	GBP 50,762	507,620	-	-	(72)	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	162	18,080	(2,173)	100%
TGS-NOPEC Geophysical Company Pty Ltd	Perth, Australia	AUD 1	1	0	(579)	14,706	100%
TGS-NOPEC Geophysical Company Pte Ltd	Singapore	SGD 0	0	-	23	361	100%
TGS do Brasil Ltda.	Rio de Janeiro, Brazil	BRL 43,400,200	39,060,180	9,900	(3,519)	6,694	90%
Arcis Seismic Solutions Corp.	Calgary, Canada	CAD 73,945	100,000	71,950	13,322	118,256	100%
TGS-NOPEC Geophysical Company Moscow Ltd	Moscow, Russia	RUB 300,000	1	-	(137)	(3,241)	100%
Nopec Geophysical Company, S. de R.L. de C.V.	Mexico City, Mexico	MXN 1,000	1	-	-	-	90%
Balance sheet value				119,041			

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

### 8. Restrictions on Bank Accounts

As of 31 December 2018, USD 0.4 million of cash and cash equivalents are restricted to meet the liability arising from payroll taxes withheld. (2017: USD 0.4 million).

### **9.** Accounts Receivable and Other Receivables

Accounts receivable, including accrued revenues, is stated in the balance sheet at net realizable value and totaled USD 118.5 million as of 31 December 2018 (2017: USD 164.4 million). The Company has made a bad debt provision of USD 0 million in 2018 (2017: USD 0 million). The Company expects to collect the stated balance of receivables as of 31 December 2018. Realized losses on trade receivables in 2018 amounted to USD 0 million (2017: USD 0.8 million). Prepayments to suppliers and other short-term receivables totaled USD 8.0 million as of 31 December 2018 (2017: USD 6.2 million).

# **10.** Current Receivables and Liabilities Group Companies

dsds	2	018	20	17
Company	Receivables	Liabilities	Receivables	Liabilities
Maglight AS	-	21	-	14
TGS AP Investments AS	39,132	-	63,002	-
Aceca Norge AS	-	5,179	-	4,422
TGS-NOPEC Geophysical Company	-	506,147	-	617,138
A2D Technologies Inc.	-	100	-	9
TGS Geophysical Company (UK) Ltd.	-	25,193	-	8,417
TGS-NOPEC Geophysical Company PTY Ltd	104	-	-	62
TGS-NOPEC Geophysical Company Pte	6	-	5	-
OBS MC Investments   AS	29,197	-	-	-
TGS Moscow	130			
Arcis Seismic Solutions Corp.	-	2,167	-	529
TGS do Brasil Ltda.	10,921	-	193	-
Total	79,489	538,806	63,200	630,592

In October 2018, the Parent Company entered into a secured revolving credit facility of USD 100 million with an interest rate of LIBOR + 2% per interest period, as per the defined terms of the facility. The credit facility was closed in January 2019. The Parent Company is obligated to pay an upfront fee of 0.60% of the facility amount and a commitment fee of 0.40% per annum for the unused and uncancelled part of the facility. With respect to financial conditions, the Parent Company must maintain: (i) an equity ratio of 50% or more, (ii) a leverage ratio of no more than 1.00:1.00, (iii) EBITDA minus operational capex at zero or above, and (iv) a liquidity of USD 75 million on a consolidated basis. As of 21 March 2019, TGS had not drawn any amounts under the facility.

The facility is secured by a lien on the assets of the Parent Company and subsidiaries having net revenues representing 5% or more of the Parent Company's net revenues, as defined in the facility. At the time of closing, such subsidiaries are: TGS AP Investment AS, TGS-Nopec Geophysical Company, A2D Technologies Inc, TGS Geophysical Company (UK) Limited, TGS Canada Corp. The same subsidiaries guaranteed the obligations under the facility.

Realized losses on intercompany receivables in 2018 amounted to USD 0 million (2017: USD 0.1 million).

### **11.** Other Current Liabilities

Total other current liabilities	43,963	28,322
Other accrued expenses	16,215	4,767
Accrued project costs	10,646	17,267
Deferred revenues	17,102	6,288
	2018	2017

### 12. Guarantees

### Parent Company Guarantee

In 2017, subsidiaries of the Company, together with 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 5.8 million, USD 3.3 million of which was paid in cash at closing, with the balance of USD 2.5 million payable in January 2021 under a promissory note guaranteed by the Company. The principal amount of USD 2.5 million bears interest at a fixed rate of 3.5% per annum.

### **Bank Guarantees**

As of 31 December 2018, one bank guarantee has been issued on behalf of the Company, amounting to USD 0.2 million, for one country's authorities related to seismic work program.

Under section 479A of the UK Companies Act 2006 five of TGS' subsidiaries - TGS Geophysical Company (UK) Limited (Registration number: 05731700), TGS Geophysical Investments Limited (Registration number: 09281097), Aceca Limited (Registration number: 03672833), TGS-NOPEC Geophysical Company Limited (Registration number: 02896729) and Magsurvey Limited (Registration number: 04568744) - have availed exemption for audit of their statutory financial statements pursuant to guarantees issued by TGS to indemnify the subsidiaries of any losses towards third-parties that may arise in the financial year ended 31 December 2018 in these subsidiaries. TGS can make an annual election to support such guarantees for each financial year.

### **13.** Commitments and Contingencies

### Operating Leases - Company as Lessee

As of the end of 2018, TGS had entered into commitments for two 3D vessels, four OBN/source vessels, two multi-beam vessels and one coring vessel, in addition to two land crews. All these commitments will expire in 2019, and the amount committed, included contractual lease agreements, totaled USD 57 million for marine capacity and USD 18 million for land capacity (2017 total: USD 37 million).

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

Rental expenses for operating leases were at USD 0.5 million for the year ended 31 December 2018 (2017: USD 0.5 million). Future minimum payments for operating leases as of 31 December are as follows:

	2018	2017
Within one year	509	508
After one year but not more than five years	1,060	1,566
More than five years	-	-
	1,569	2,074

The Company does not have any financial leases.

### **Contingent rent agreements**

As of 31 December 2108, the deferred part of contingent rent agreements, which is contingent on future sales, totaled USD 3.0 million (2017: USD 9.8 million).

### 14. Related Parties

No material transactions took place during 2018 with related parties, other than operating business transactions between the companies in the TGS group. All companies within the TGS group 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:

	2018	2017
Data processing costs	27,133	27,133
Brokerage fees	34,927	29,757
Management fees	13,892	16,121

For information about inter-company interest income and expense, see Note 15.

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

For a specification of inter-company receivables and liabilities, see Note 10.

### **15.** Financial Items

Financial income/expense:	2018	2017
Interest income	2,593	434
Interest income subsidiaries	1,503	1,535
Exchange gain	2,786	2,263
Other financial income	4	831
Total financial income	6,887	5,063
Interest expense	(322)	(125)
Interest expense subsidiaries	(11,445)	(6,846)
Exchange loss	(1,954)	(1,103)
Other financial expenses	(638)	[7,434]
Total financial expense	(14,358)	(15,508)
Net financial items	(7,472)	(10,445)

Other financial income in 2017 mainly consists of dividends from the subsidiaries Aceca Ltd and TGS NOPEC Geophysical Company (UK) Ltd. and has been reduced by a corresponding impairment of the shares in these companies. Other financial expenses in 2017 mainly consists of impairment of shares in TGS do Brasil Ltda.

### **16.** Tax Expense

Current tax:	2018	2017
Profit/(loss) before taxes	49,992	31,638
Permanent differences <sup>1)</sup>	10,391	6,655
Changes in temporary differences	(3,464)	18,905
Group contribution		
Tax loss carried forward	-	(78,734)
Currency exchange effects on base for current tax	(8,704)	37,173
Basis for current tax	48,215	15,638

#### Total tax expense for the year:

Deferred tax - changes	366	13,076
Taxes payable	11,090	3,753
Adjustment in respect of current income tax of previous year	-	-
Tax outside Norway	-	-
Total tax expense for the year	11,456	16,830
Effective average tax rate	23%	53%
Taxes payable	2018	2017
Taxes payable on current year profit	11,090	3,753
Withholding tax payable due to Norwegian Tax Authorities' resolution	-	-
Deduction in Norwegian tax for taxes paid outside Norway	-	-
Total taxes payable	11,090	3,753

#### Specification of basis for deferred taxes:

Temporary differences:	2018	2017
Multi-client library	(59,958)	(52,035)
Revenues on seismic projects in the work in progress phase	115,554	105,301
Accounts receivable	(976)	(1,733)
Accruals	(11,314)	(11,056)
Interest deduction carried forward	-	-
Tax loss carried forward	-	-
Other	(231)	(866)
Total	43,075	39,611
Deferred tax liability/(asset) based on temporary differences	9,477	9,111
Withholding taxes carried forward <sup>3)</sup>	(408)	(1,890)
Deferred tax liability/(asset) recognized	9,068	7,220
Explanation of total tax expense versus nominal tax rate on pre-tax profit:	2018	2017
Tax calculated using nominal tax rate on pre-tax profit	11,498	7,909
Effect of permanent differences 1)	2,494	1,664
Effect of change in tax rate <sup>2]</sup>	(419)	(396)
Exchange gain/loss reported as tax expense	(2,117)	7,652
Total tax expense recorded in income statement	11,456	16,830
<sup>1)</sup> Permanent differences related to non-tax deductible items. In 2018, th	ne main item	ı relates

<sup>11</sup> Permanent differences related to non-tax deductible items. In 2018, the main item relates to a fine of MNOK 90 (approximately USD 11 million) following the decision of the Oslo District Court in the Skeie Energy case which is appealed by the Parent Company.

<sup>2]</sup> For the income year 2019, the Norwegian nominal tax rate on ordinary income has been reduced to 22%. The basis for deferred taxes as of 31 December 2018, was calculated with the new tax rate.

<sup>3]</sup> Withholding taxes carried forward must be utilized no later than 2020.

### **17.** Gross and Net Revenues

TGS shares certain multi-client revenue with governments in certain countries and other companies pursuant to joint operations. Operating revenue is presented net of portion shared. The table below provides the breakdown of gross revenue for 2017 and 2018.

Net revenues	344,054	309,859
Revenue sharing	(53,034)	(41,814)
Gross revenues from sales	397,088	351,673
	2018	2017

### **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. As of the balance sheet date, the Company held current assets of USD 242.0 million, of which cash and cash equivalents represents USD 35.9 million, and current liabilities of USD 654.4 million, of which debt-to-subsidiaries represents USD 538.8 million. As of 31 December 2018, TGS considers the liquidity risk to be low.

### Credit Risk

All placements of excess cash are either in 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 uses best efforts to manage this risk. 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 considers the concentration of risk with respect to trade receivables to be low due to the Company's credit rating policies and because the clients are mainly large oil and gas companies, considered to be financially sound.

From time to time, the Company 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 accounts 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 of 31 December 2018.

TGS has interest-bearing loans to E&P Holding AS and Skeie Energy AS. The two loans have a total value of gross USD 42.1 million (net to TGS of USD 29.4 million). The first of the loans has been fully reserved for and is recognized at USD 0 million as of 31 December 2018 (31 December 2017: USD 0 million). The second of these loans was written off as uncollectible in 2016.

### **20.** Contingent Liabilities

### Økokrim Charges and Related Civil Matters

In 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.

In March 2017, Økokrim issued a corporate fine of NOK 85 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. The Company rejected the fine, and the trial regarding the alleged violations was held in early 2018, concluding in April 2018.

In October 2018, the Oslo District Court released its decision, holding the Parent Company guilty and assessing a corporate fine of NOK 90 million (approximately USD 11 million) (as expected, due to the rejection of the fine in 2017). The decision was split, with a majority of the court holding the Parent Company guilty and the minority finding no guilt. The Parent Company has appealed the decision. The appellate court granted the appeal in March 2019, and the appellate trial is expected to commence in late 2019/early 2020. I

Despite the District Court's decision, the Company maintains that it acted diligently in connection with the transactions with Skeie and did not commit the alleged violations of the law. The Company believes the court's reasoning in the case is both legally and factually inaccurate and is not reflective of the evidence presented at trial.The Company does not consider it probable that an outflow of resources embodying economic benefits will be required in connection with these criminal charges. However, in compliance with Norwegian GAAP, the Company has made a provision in these financials for the corporate fine of NOK 90 million which was assessed by the court in October 2018.

TGS has also been notified of various claims or potential claims, asserting liability on TGS' part in relation to the 2009 transaction with Skeie. The claims are generally predicated on whether the parties making the claims are ultimately held responsible for all or any part of unwarranted tax refunds and suffer damages that can be attributed to TGS. The following summarizes the claims and potential claims:

- Skeie and two affiliated parties have notified TGS of potential claims of joint responsibility for losses arising from the tax refunds received by Skeie.
- In May 2016, the Norwegian Government notified TGS of a claim of compensation in connection with the Government's alleged losses arising from tax benefits received by Skeie under the Petroleum Tax Act for the purchase of seismic data from TGS. The Government alleges TGS aided and

abetted Skeie in obtaining unwarranted tax refunds and claims the amount of the unwarranted tax refunds plus interest, which totaled approximately NOK 326 million at the time of the notice. TGS has granted the Government a three-year extension of the statute of limitations for legal actions relating to the claim. Similar claims were made by the Government against other parties involved with Skeie.

- 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 Norwegian Government has claimed that Skeie Technology is liable for the tax refunds obtained by Skeie under a parent guarantee issued by Skeie Technology on behalf of Skeie. These claims were unsuccessful in the trial court, and the Government has appealed, which will likely be decided in mid-2019, although the matter is subject to further appeal to the Supreme Court. The proceedings in the case brought by Skeie Technology against TGS (and others) have been stayed pending the resolution of the guarantee dispute between Skeie Technology and the Government. No specific damages have been asserted in the writ.
- In March 2017, TGS received notice from DNB that it will hold TGS responsible for any amounts payable by DNB to the Norwegian Government. DNB received notice from the Norwegian Government in December 2016, claiming liability for repayment of the tax refunds under a provision in the Tax Payment Act due to DNB's status as a pledgee of the tax refunds. In April 2017, the parties entered into a mutual standstill agreement to stop the tolling of the statute of limitations for three years. In November 2017, TGS received notification that, notwithstanding the standstill, DNB had filed a claim against TGS and various other parties for responsibility for any amounts that DNB may owe in relation to this matter. This claim initially arose out of the claims against Skeie Technology by the Norwegian Government in connection with Skeie Technology's parental guarantee, but the DNB claim has now been severed as a separate case. In March 2018, the court stayed the proceedings by DNB pending the resolution of the guarantee dispute between Skeie Technology and the Government.

The civil matters that 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 appeal proceedings will confirm that TGS did nothing wrong, the Company also believes these civil claims of liability are not well-founded, and it intends to challenge the claims vigorously.

### **21.** Events after the Balance Sheet Date

On 6 February 2018, the Board of Directors resolved to pay a quarterly dividend of the NOK equivalent of USD 0.27 per share (NOK 2.30) to the shareholders. The dividend payments of USD 27.4 million, were made on 28 February 2019.

In October 2018, the Parent Company entered into a revolving credit facility of USD 100 million. The facility, which closed on 25 January 2019, has a three-year maturity with a non-amortizing profile. It remains undrawn as of the date of this report.

On 27 March 2019, the Borgarting Court of Appeal notified the Parent Company that it granted the appeal of the decision of the Oslo District Court issued in October 2018.

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 2018 that would impact the financial statements as presented for 2018.



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

#### Independent auditor's report

#### Report on the Audit of the Financial Statements

#### Opinion

We have audited the financial statements of TGS-NOPEC Geophysical Company ASA. The financial statements comprise:

- The financial statements of the parent company TGS-NOPEC Geophysical Company ASA (the Company), which comprise the balance sheet as at 31 December 2018, and the income statement and cash flow statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies, and
- The consolidated financial statements of TGS-NOPEC Geophysical Company ASA and its subsidiaries (the Group), which comprise the balance sheet as at 31 December 2018, and the statement of comprehensive income, statement of changes in equity and cash flow statement 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 accompanying financial statements give a true and fair view of the financial position of the Company as at 31 December 2018, and 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 accompanying consolidated financial statements give a true and fair view of the financial position of the Group as at 31 December 2018, and 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 and the Group as required by laws and regulations, and we have fulfilled our other ethical responsibilities 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.

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#### Auditor's Report - 2018 TGS-NOPEC Geophysical Company ASA

#### Revenue recognition under IFRS 15 Revenue from Contracts with Customers (IFRS 15)

Refer to Note 1 General Accounting Policies and Note 4 Revenue from Contracts with Customers

#### The key audit matter

In 2018, approximately 30% of the Group's revenues were derived from prefunding contracts and contracts for late sales of unfinished data. Under these contracts customers commit to purchasing licenses from TGS prior to the acquisition and processing of data or after commencement of a survey but prior to data being ready for delivery.

Prior to IFRS 15 implementation on 1 January 2018, these contracts were recorded on a percentage of completion basis according to the progress of the multi-client survey. Under IFRS 15, revenue from these contracts is recorded at a point in time upon delivery of the finished multiclient data license to the customer.

The assessment of these contracts under IFRS 15 was considered to be a key audit matter due to the significant judgment and assessments applied by management, as well as the degree of complexity of these contract arrangements.

- How the matter was addressed in our audit We applied professional skepticism and critically assessed the accounting judgments against the requirements of IFRS 15. Our audit procedures in this area included:
- Challenging management's assumptions in determining if relevant contracts contain single or multiple performance obligations, and meet the 'point in time' revenue recognition criteria by obtaining, reading, and critically assessing the terms and conditions of relevant contracts compared to IFRS 15 requirements;
- Assessing the implementation of IFRS 15, including the Group's updated accounting policies;
- Assessing the appropriateness of the timing of revenue recognition based on the deliveries of finished multi-client data;
- Evaluating the adequacy and appropriateness of the disclosures in the financial statements related to IFRS 15 transition effects and revenues from contracts with customers.

### KPMG

#### Impairment assessment of the multi-client library

Refer to Note 1 General Accounting Policies, Note 2 Estimates and Assumptions, Note 7 Intangible Assets and Note 8 Impairment Evaluation of Multi-Client Library, Goodwill and Other Intangible Assets

The key audit matter	How the matter was addressed in our audit
As at 31 December 2018 the Group has reported a multi-client library balance of USD 870 million. Management uses judgment in determining whether or not the carrying amount of the multi- client library exceeds the recoverable amount by making assumptions related to expected discounted future cash flows. There is significant inherent uncertainty in forecasting future sales on the multi-client library which is impacted by the overall exploration and production spending within the oil and gas industry, interest in specific regions, whether licenses to perform exploration in the various regions exist or will be given in the future and other factors. Changes can impact the cash flow forecasts. These factors together with the discount rate applied can materially affect impairment assessments and conclusions. Due to the potential impact on the financial statements given the significance of the multi- client library balance and the auditor judgment required when evaluating whether management's assumptions are reasonable and supportable, the assessment of the carrying amount of the multi- client library was considered to be a key audit matter. An impairment of USD 21 million was recorded in 2018.	<ul> <li>Our audit procedures in this area included:</li> <li>Evaluating management's overall impairment assessment process;</li> <li>Evaluating, with assistance from our valuation specialists, the discount rates and the accuracy of the models used to assess the recoverable amount;</li> <li>Performing retrospective reviews of the accuracy of management's estimates and assumptions;</li> <li>Testing the sensitivity of movements in key assumptions for selected multi-client libraries based on our risk assessment, and evaluating and challenging management on the forecasted cash flows, approved budgets, and other factors which could affect forecasts;</li> <li>Evaluating the adequacy and appropriateness of the disclosures in the financial statements.</li> </ul>

#### Other information

Management is responsible for the other information. The other information comprises information in the annual report, except the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon, with the exception of our report on Other Legal and Regulatory Requirements below.

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.



#### Auditor's Report - 2018 TGS-NOPEC Geophysical Company ASA

#### Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director (Management) are responsible for the preparation in accordance with law and regulations, including fair presentation of the financial statements of the Company in accordance with the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway, and for the preparation and fair presentation of the financial statements of the Group in accordance with International Financial Reporting Standards as adopted by the EU, 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 and the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern. The financial statements of the Company use the going concern basis of accounting insofar as it is not likely that the enterprise will cease operations. The financial statements of the Group use the going concern basis of accounting unless management either intends to liquidate the Group 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 laws, regulations, and auditing standards and practices generally accepted in Norway, including 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 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 laws, regulations, and auditing standards and practices generally accepted 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. We 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 or the Group'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 and the
  Group'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 and the Group 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.
- 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



Auditor's Report - 2018 TGS-NOPEC Geophysical Company ASA

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 the Board of Directors 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 the Board of Directors with a statement that we have complied with relevant ethical requirements regarding independence, and to 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 the Board of Directors, 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

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 in the statements on Corporate Governance and Corporate Social Responsibility concerning the financial statements, the going concern assumption, and the proposal for the allocation of the profit 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 produce a proper and clearly set out registration and documentation of the Company's accounting information in accordance with the law and bookkeeping standards and practices generally accepted in Norway.

Oslo, 21 March 2019 KPMG AS

Lars Inge Pettersen State Authorized Public Accountant





# **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 welldeveloped system of controls and policies, and a compliance program.

It is the opinion of the Board of Directors that TGS complies with the Norwegian Code of Practice of Corporate Governance, dated 17 October 2018, found at www. nues.no. This Report on Corporate Governance details how TGS operates in accordance with each of the topics covered by the Code of Practice, including any deviations. Furthermore, in accordance with the Norwegian Accounting Act section 3-3b, an account of the principles and practices related to corporate governance is included in the Board of Directors' Report 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.

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.

### Code of Conduct

TGS' Statement of Values and a Code of Conduct, available on the TGS website at www.tgs.com, define the expectations of ethical behavior and fair business conduct that is expected of TGS' Board Members and employees. These documents form the foundation of TGS' compliance program, which is managed by a compliance officer appointed by the Board. TGS' compliance program continually informs and educates employees on ethical issues. Each employee of the Company must read and acknowledge our Code of Conduct, Statement of Values and Policy on Insider Trading on an annual basis and complete a related training course. In addition, all high-risk third parties, officers and key employees working for the Company must complete an annual anti-corruption compliance training and certification program.

It is important for the Company to be aware of potential problems as early as possible and the Code requires employees to report any known or suspected ethical irregularities. TGS has in place appropriate whistleblower procedures for individuals to report concerns of non-compliance, including a hotline that allows for anonymous reporting and that ensures no retaliation will be levied against employees who file reports or cooperate in investigations into misconduct. A more detailed description of our compliance program is also included in our Corporate Social Responsibility Report in the Annual Report and on the TGS website.

### Corporate Social Responsibility

TGS believes that corporate social responsibility is a fully compatible and integrated part of conducting business successfully. Our long-standing Statement of Values recognize that the Company is responsible to a number of stakeholders and describes the principles to which the Company adheres. A more detailed description of TGS' Corporate Social Responsibility efforts is included as a separate section in the Annual Report and on the TGS website.

### **2.** Business

TGS provides global sub-surface data products and services to the energy industry through investments in multi-client data projects in frontier, emerging and mature markets worldwide. Our extensive onshore and offshore libraries include seismic data, magnetic and gravity data, multi-beam and coring data, digital well logs and production data from deep water offshore to conventional and unconventional onshore plays worldwide. Additionally, TGS offers advanced processing and imaging services, interpretation products and data integration solutions.

The business objective of TGS 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 of the TGS website, and further information about TGS' operations may be found in the Board of Directors Report and the Annual Report for 2018, as well as the TGS website.

### **3.** Equity and Dividends

As of 31 December 2018, total equity amounted to USD 1,251.7 million (including a share capital of USD 3.7 million). This corresponds to an equity ratio of 77%, 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.

Because of the highly cyclical nature of the oil services industry, the Board of Directors remains convinced that the Company's unique business model, strong balance sheet and cash position are essential to its financial health, risk management and future growth. It is the ambition of TGS to pay a quarterly cash dividend in line with its long-term underlying cash flow. When deciding the quarterly dividend amount, the Board of Directors will consider factors such as expected cash flow, investment plans, financing requirements and a level of financial flexibility that is appropriate for the TGS business model. The aim is 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.

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.

TGS has paid quarterly dividends since 2016, based on authorization from the General Meeting.

The Board of Directors is currently authorized to buy back up to 10% of the nominal value of the Company's share capital. In addition, the Board of Directors has authorization to increase the Company's share capital by up to NOK 2,250,000,000 for the purposes of potential acquisitions, organic growth and to strengthen the Company's balance sheet. The authorizations are valid until the 2019 AGM, but no later than 30 June 2019.

For further information on these shareholder authorizations, please refer to Note 12 of the Consolidated Financial Statements.

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

The Company has only one class of shares. All shares have one vote each and otherwise equal rights in all respects.

TGS may, from time to time, buy back shares under authorizations given by the General Meeting. Such shares may *inter alia* be held in treasury or cancelled, used as transaction consideration or to settle employees' long-term incentive programs. The Company held 104,630 treasury shares on 31 December 2018.

Although there have been no share capital increases in the Company in recent years, except for shares issued in connection with the Company's long-term incentive programs, the Board may, from time to time, issue new shares under authorizations given by the General Meeting. For such issuances, the Board may depart from the pre-emptive right of existing shareholders, if justified by the interest of the Company and the shareholders. A justification will be publicly disclosed should the Board choose to authorize a waiver of its preemptive rights in connection with a share issue.

Any transaction with close associates is required to be conducted on market terms. Information about transactions with related parties is also disclosed in Note 14 of the Consolidated Financial Statements. The Board has implemented guidelines 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

All TGS shares carry equal rights and are freely transferable. No special limitations on transactions are described in TGS' Articles of Association.

### **6.** General Meetings

The General Meeting is the Company's ultimate corporate body. The Board of Directors, the Nomination Committee and the Chief Executive Officer are all present at the AGMs, as along with the Company's auditor. The minutes are made available on the Company's website shortly after the date of the general meeting and are also available for inspection at the Company's offices in Asker, Norway.

The 2019 AGM will be held on 8 May. The notice for the AGM and any Extraordinary General Meeting and all supporting documentation are made available on the Company's website no later than three weeks in advance of the meeting. The notice is also mailed (post or email) to registered shareholders.

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 no later than three days before the day of the meeting.

Each General Meeting appoints a chairperson for the meeting. The Board seeks to facilitate the appointment of an independent chairperson.

The General Meeting is open to all shareholders, and any shareholder not in attendance can have a proxy to vote on his/her behalf. Proxy forms are made available together with the notice and allow for separate voting instructions to be given for each matter to be considered.

Shareholders are given the opportunity to vote separately, either in person or by proxy, for each candidate nominated for election to the Board. The Board of Directors may also resolve that the shareholders, within a limited time period prior to the General Meeting, deliver their votes in writing and delivery shall include the use of electronic means. The right to vote in writing prior to the General Meeting is conditional upon the existence of an adequately secure method to authenticate the sender and will be subject to guidelines specified by the Board. The notice to the shareholders' meeting will 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. 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 Corporate Governance Report.

The last AGM was on 8 May 2018, the minutes from which are available on the Company's website.

Any other matters to be dealt with at a General Meeting will follow from the notice.

### 7. Nomination Committee

The Nomination Committee is responsible for the nomination of Directors to the Board and the recommended remuneration payable to the Directors. The AGM stipulates guidelines for the duties of the Nomination Committee.

The Nomination Committee consists of a Chairperson 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 Company posts an invitation to shareholders on the TGS website prior to the AGM 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. The committee also consults relevant shareholders to ensure that its recommendations have their support. 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, all of whom are deemed independent of TGS' Management, major shareholders and counterparties.

The members of the Board of Directors are proposed by the Nomination Committee and elected by the AGM for a term of one year. The Chairman of the Board is also elected by the AGM.

The members of the Board balance experience from the geoscience industry and the general oil & gas industry, with broader industrial, financial and management experience.

All Directors are shareholders of TGS and information on shares in TGS held by members of the Board may be found in Note 9 of the Consolidated Financial Statements. A biography of each board member can be found in the Annual Report and on the TGS website.

### **9.** The Work of the Board Of Directors

The Board of Directors is responsible for 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 and TGS' Statement of Values and Code of Conduct. The Board emphasizes the safeguarding of the interests of all shareholders, as well as 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.The Board also states guidelines for the CEO's work and duties of the Board of Directors.

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.

The Board conducted a total of nine meetings in 2018. Torstein Sanness and Elisabeth Grieg were each unable to attend one of the meetings. All other Directors attended all meetings.

### **Board Committees**

The following committees have been established by the Board to monitor and guide certain activities. Each committee operates under a defined charter that may be viewed at: https://www.tgs.com/investor-center/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 and true picture of the financial results and financial condition of the Company in accordance with generally accepted accounting practices. The Audit Committee receives reports on the work of the external auditor and the results of the audit.

With effect from the 2018 AGM, the members of the Audit Committee are:

- Tor Magne Lønnum, Chairman
- Vicki Messer
- Nils Peter Dyvik

The Audit Committee conducted a total of five meetings in 2018 and all members attended all meetings.

### 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 members of the Compensation Committee with effect from the 2018 AGM are:

- Mark Leonard, Chairman
- Elisabeth Grieg
- Wenche Agerup
- Torstein Sanness

The Compensation Committee conducted a total of six meetings in 2018. Wenche Agerup and Elisabeth Grieg were each unable to attend one of the meetings. All other members attended all meetings.

### **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.

The Executive Management carries out an annual risk evaluation process to assess total enterprise risk in the Company. Through risk workshops involving key TGS employees, the Executive Management identifies strategic and operational risk factors and prioritizes these risks based upon their likelihood of occurrence, probability, year-over-year trends, and current mitigation factors. Action plans are developed to manage those significant risk factors where further action may be needed, and quarterly and annual updates are provided to the Board of Directors. The key risk factors and related action plans are part of the Board's annual 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 oversees the Company's routines for financial risk management and internal control which include 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 2018.

TGS has a separate legal department, managed by the corporate General Counsel, which 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 fair business conduct and compliance with all legal and ethical requirements and standards of the geoscientific industry and the communities in which TGS employees live and work. TGS considers its values, culture and environment a key element in its continued success as a company.

### **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. The Directors' compensation is recommended by the Nomination Committee and determined by the shareholders at the AGM each year.

In recent years, the Directors' compensation has comprised both a fixed fee and a number of restricted TGS shares. The remuneration is not related to the Company's financial result. Note 9 of the Consolidated Financial Statements details the Directors' remuneration for 2018. 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

TGS has prepared a Declaration on Executive Remuneration which is released

alongside the Annual Report and is available for download at the TGS website.

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 2018 AGM.

The Declaration describes:

- TGS' Executive Remuneration Policy Statement
- 2019 Executive Remuneration including proposals and implementation
- 2018 Remuneration results and assessment

The aforementioned Compensation Committee is responsible for reviewing Executive remuneration and making recommendations to the Board.

The CEO proposes the compensation packages (excluding his own) for all Executives for Compensation Committee review and Board approval. The CEO's proposal will be based on performance assessed against pre-defined goals.

The Compensation Committee proposes 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.

### **13.** Information And Communications

TGS' investor relations (IR) policy is designed to inform the stock market and stakeholders of the Company's activities and status in a timely and accurate manner, in compliance with applicable listing rules. The Company submits quarterly and annual financial reports to the Oslo Stock Exchange. 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 on the Company's website.

The Company uses the Code of Practice for reporting of IR information issued by Oslo Stock Exchange and the Norwegian Investor Relations Association (NIRA) as a guideline for IR reporting. Announcements 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 presentations and conducts roadshows throughout the year to inform existing and potential investors about TGS.

The financial calendar displaying the dates for the coming year's interim reports and General Meetings for shareholders is posted on the TGS website.

# 14. Take-Overs

The Board of Directors has established guiding principles for how it will act in the event that a takeover bid is received.

During the course of a takeover process, the Board of Directors and Management of both the party making the offer and the target company are responsible for ensuring that shareholders in the target company are treated equally and that the target company's business activities are not disrupted unnecessarily. The Board is particularly responsible for ensuring that shareholders are given both sufficient information and time to assess the offer.

The Board of Directors will not hinder or obstruct takeover bids for the Company's activities or shares.

In the event of a takeover bid for the Company's shares, the Board of Directors will not exercise mandates or pass any resolutions with the intention of obstructing the takeover bid unless this is approved by the General Meeting following announcement of the bid.

Any agreement with the bidder that limits the Company's ability to arrange other bids for TGS shares will only be entered into where such agreement is considered to be in the common interest of TGS and its shareholders. This also applies to any agreement for the payment of financial compensation to the bidder if the bid does not proceed.

If an offer is made for TGS' shares, the Board of Directors will issue a statement evaluating the offer and, where appropriate, make a recommendation as to whether shareholders should accept the offer. The Board's statement will set out whether the views expressed are unanimous. The Board may arrange for a valuation of TGS from an independent expert, the conclusion of which 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, 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 2018, the auditor participated in all Audit Committee meetings.

The Company's external auditor presents to the Audit Committee the primary features of the plan for the execution of the audit 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 any internal control weaknesses and improvement opportunities to the Audit Committee and the Board.

TGS has established guidelines for use of 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 AGM, including details of the fee paid for audit work and any fees paid for other assignments.

The auditor's fee is determined at the AGM. Refer to Note 9 of the Consolidated Financial Statements for auditor's compensation for 2018.

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.



# **NVESTOR RELATIONS**

TGS has a proven track record of generating healthy free cash flow through both up and down cycles in our industry. As a result, TGS has been one of a few oil services companies worldwide that has kept up dividends through the severe cyclical downturn experienced over the past few years.

# 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: 16 firms; for list see <a href="https://www.tgs.com/investor-center/investor-relations/shareholder-information">https://www.tgs.com/investor-center/investor-relations/shareholder-information</a>

Average daily trading volume in 2018: 449,892 shares

Shareholder Facts	2018	2017	2016	2015	2014
Market Value at 31 December (USD 1000s)	2,466,807	2,421,840	2,271,400	1,637,076	2,236,444
Shareholder Equity at 31 December (USD 1000s)*	1,265,465	1,200,102	1,169,124	1,198,088	1,339,201
Shares Outstanding 31 December	102,647,790	102,345,890	102,135,990	102,135,990	103,184,288
of which Treasury Shares 31 December	104,630	116,180	533,500	673,600	1,843,512
Volume Traded on the OSE	112,023,226	95,527,192	119,425,966	146,884,972	155,149,403
Average Daily Trading volume	449,892	380,586	472,039	585,199	620,598
Share Price at 31 December (NOK)	208.80	194.2	191.7	141.40	161.70
Share Price High (NOK at close)	350.10	208.5	193.8	201.70	209.70
Share Price Low (NOK at close)	184.95	157.7	107.0	136.20	145.40
Earnings per Share (Fully Diluted)*	1.33	0.73	0.28	(0.28)	2.09
Dividend per Share (Paid in Year)	USD 0.80	USD 0.60	USD 0.60	NOK 8.5	NOK 8.5
Yield (% closing price at day of announcement)	3.2%	2.7%	3.6%	5.2%	4.9%
Market Price/Earnings per Share (P/E)*	17.93	32.04	82.14	(57.75)	10.37
Market Price/Equity per Share (P/B)	1.95	2.02	1.94	1.67	2.12
Enterprise Value/Operating profit (EV/EBIT)*	12.77	22.29	39.23	(69.45)	6.72

\* Segment reporting for 2018

#### **Distribution of Share Holdings\***

**TGS Shareholder Composition** 



#### TGS Institutional Shareholder Composition



\*Based on location of beneficial owners of TGS shares rather than location of nominee accounts at 31/12/2018. *Source: Nasdaq Advisory Services.* 

#### **Stock Performance and Total Return to Shareholders**

TGS is listed on the Oslo Stock Exchange and also has an American Depository 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.

During 2018, the TGS share price increased by NOK 14.60 (7.5%), closing at NOK 208.80 (28 December 2018).

#### TGS Share Price and Volume



#### TGS Share 15 Year Total Return vs. Benchmarks



The total return from TGS stock has proven attractive over the long- term. The Total Return chart (above) shows the 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 16.5% which is significantly above the total return from the S&P 500 (+7.7%) and Brent oil (+3.9%).

#### **Capital Distribution to Shareholders**

TGS is constantly evaluating the best use of its cash flow from operations for continued shareholder growth. The company uses cash for organic investments in its 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 adds value to the TGS offering.

#### Dividend Paid\* (2010-2019)



\* 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.

#### Dividend Yield (2010-2019)



\*2016 - 2019 Dividend Yield annualized based on the weighted yield at the time of announcement of quarterly dividends

From 2016, TGS began paying quarterly dividends in accordance with the resolution made by the Annual General Meeting on 6 May 2015 and renewed on 9 May 2018. The aim is 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.

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

The TGS Board of Directors resolved to increase the quarterly dividend by 35% to USD 0.27 per share in Q1 2019. The share traded ex-dividend on 14 February 2019 and the dividend was paid on 28 February 2019.

#### **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. Each quarter TGS pre-announces the quarterly revenues no

later than the sixth trading day after quarter close, at the Oslo Stock Exchange. The full quarterly financial statements are typically released 4-6 weeks after quarter close and on the same day the results are presented and webcast live in Oslo, Norway. There is a question and answer session following each presentation where the CEO and CFO respond to both live questions and questions asked through the webcast. 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 up to the pre-announcement of revenues for that financial period.

The general shareholders meeting for TGS are held in Oslo, Norway. All shareholders are invited to attend. Shareholders who wish to attend shareholder meetings must notify the Company of 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 shareholder meetings. Documents concerning matters to be considered at the general shareholder 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 www.tgs.com/ presentations/tag/earning-releases.

For more information regarding TGS, contact Sven Børre Larsen.



**Sven Børre Larsen** CFO Asker, Norway



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# TGS 2018 DECLARATION ON EXECUTIVE REMUNERATION

# TGS 2018 Declaration on Executive Remuneration

## From the Compensation Committee

It is the Board's belief that attracting and retaining highly engaged executives with great vision, global experience, a passion for business and a strong drive for results is critical to TGS' continued success. Consistent with this belief, the Board has adopted a total compensation philosophy for executives that aligns compensation with a passion for business, teamwork and a drive for results. While base salaries are targeted at a relatively low level versus peers, our remuneration is heavily weighted in variable, performance-linked pay, which reflects our "results-driven" approach. All employees, at all levels in the organization, participate in the same Short-Term Incentive Plan, which is directly linked to the Company's operating profit. This alignment of reward fits well with the "teamwork" culture of the Company. Our total rewards package is designed to attract and retain talented people who have a passion for business and consistently demonstrate the highest levels of performance.

Although the seismic industry continues to be challenged, market conditions have improved and TGS delivered increased revenues and operating profit in 2018. Once again, the Company demonstrated its industry-leading ability to generate cash flow and returns, outperforming expectations. This improved performance resulted in strong payouts from the Short-Term Incentive Plan, which is directly linked to operating profit. The strong payouts in 2017 and 2018 offset significantly lower payouts that occurred in 2015 and 2016 during the downturn. In addition, the three-year measurement period for the 2016 Long-Term Incentive Plan was completed on 31 December 2018, with a preliminary determination of payout at approximately 39% of the maximum payout under the plan. The 2015 Long-Term Incentive Plan, which vested in August 2018, resulted in a zero payout, with none of the performance thresholds being achieved. Performance on the 2017 and 2018 Long Term Incentive Plans are tracking favourably.

For 2019, following consultation with some of the Company's largest shareholders, the Board proposes to keep the structure of the 2019 Long-Term Incentive Plan generally unchanged from the 2018 plan. However, following the improved return on average capital employed performance in 2018, the threshold, target and stretch target metrics will be increased. In addition, the Board has added a metric relating to sustainability initiatives. The Board has also implemented a broad-based Employee Stock Purchase Plan to facilitate greater TGS share ownership for all employees.

#### Mark Leonard

Director and Chair of the Compensation Committee 21 March 2019

Pursuant to the Norwegian Public Limited Liability Companies Act, section 6-16a, the Board will present the following declaration regarding remuneration of TGS' executive team to the 2019 annual general meeting.

# **1.** Executive Remuneration Policy Statement

#### 1.1. Total Compensation Philosophy

TGS is an international company operating in the global geoscience industry with operations world-wide. As a result, the Company's employment base, including its executive team, is and needs to be largely international. To attract and retain talented people, the total compensation package for the Company's employees must be competitive within the markets TGS operates.

As its total compensation philosophy, TGS uses a blend of components: base salary, incentive compensation (short-term and long-term awards) and non-financial benefits. TGS targets base salaries at the 25th percentile of the compensation peer group, with total actual cash compensation, defined as base salary and a variable cash bonus directly linked to TGS' operating profit, targeted between the 50th and 75th percentile of the market average in years where the Company performs above market. This mix of base salary and cash bonus for executives is heavily weighted to variable pay so that they share in the same risk and rewards as its shareholders.

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.

#### 1.2. 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 solely of independent directors: Mark Leonard (Chair), Wenche Agerup, Torstein Sanness and Elisabeth Grieg.

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 CEO is responsible for proposing the compensation packages (excluding his own) for all executives for Compensation Committee review and Board approval. His proposal is based on each executive's performance assessed against pre-defined goals, including goals that support the corporate goals as described in section 2.2.

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, seven of which are U.S. and five Norwegian). The peer group is determined by considering a combination of relative factors that include annual revenue, profit, market capitalization, return on equity (ROE) and return on average capital employed (ROACE). This independent executive compensation analysis is conducted annually.

The table to the right shows the peer group for executive remuneration in 2018. The peer group is assessed annually in connection with the benchmarking process on the basis of the factors referenced above. The peer group for 2018 was the same as that used in 2017.

#### 1.3. Components of 2018 Executive Remuneration

The following table summarizes the primary elements of remuneration to TGS' executives in 2018:

Aker Solutions	Fred Olsen Energy	Kvaerner
CARBO Ceramics	Fugro N.V.	Oil States International
CGG Veritas	Helix Energy Solutions	Pason Systems
Core Laboratories	Hunting PLC	Petroleum Geo-Services
Dril-Quip	ION Geophysical	Prosafe
Forum Energy Technologies	James Fisher & Sons	Shawcor

Remuneration Element	Objective	Award Level	Performance Criteria
Base Salary (cash component)	Base salary in combination with STI and LTI should attract and retain executives	Around 25 <sup>th</sup> percentile of our peer group	Base salary is subject to annual review with performance assessed based on fulfilment of pre-defined goals
Short Term Incentive (STI) (cash component)	Drive and reward individuals for annual achievement of business objectives and maintain a strong link between compensation and the Company's financial performance	Target Total Cash Compensation (Base Salary + STI) above 50th and up to 75th percentile of the market in years where the Company performs above market	Target STI is set based on individual level of responsibility, individual contribution and performance. Actual payout is a direct function of the Company's operating profit.
Long Term Incentive (LTI) (equity component)	Strengthen the alignment of top management and shareholder interests and retain key employees	Target award at 2x base salary for CEO and 1x to 1.5x average of base salary for CFO and other executives	Participation in the LTI Plan and the size of the award is reflective of the level and impact of the position. Performance criteria for payout based on ROACE target, Relative ROACE, and HSE performance.
Benefits	Industry competitive pension and insurance plans	U.S: 6% 401k matching Norway: 5.6%/15% below/above 7G (12G cap) UK: 7%	N/A

#### 1.4. Review of Results of 2018 AGM Remuneration Proposals

The TGS total compensation philosophy and the specific structure and metrics of the Long-Term Incentive Plan are reviewed annually with the Company's largest shareholders. At the 2018 annual general meeting, the Company's shareholders were requested to provide a non-binding advisory vote to approve the remuneration principles for executives and a binding vote to approve the 2018 Long-Term Incentive Plan together with the issuance of free-standing warrants to fund the plan. Both motions were approved with 99.4% and 98.6%, respectively, of votes cast in favor.

# 2. Executive Remuneration in 2019

#### 2.1. Overview

Consistent with the TGS total compensation philosophy, executive compensation for 2019 consists of base salary, Short-Term Incentives, Long-Term Incentives and health and retirement benefits. These components are consistent with the primary elements of executive compensation in 2018, as detailed in the chart in section 1.3 above.

TGS executive remuneration is heavily weighted in variable, performance-linked pay. While base salaries are targeted at around the 25th percentile versus peers, the Short-Term Incentive Plan (see section 2.3 below) is intended to bring total cash compensation above the market average in years where the Company performs above market (target above 50th and up to 75th percentile of the market). Target total cash compensation for 2019 for the executive team averages slightly below the 50th percentile based on the third-party benchmarking data.

The Long-Term Incentive Plan for executives (see section 2.4 below) is intended to strengthen the alignment of executive and shareholder interests and aid retention in a competitive marketplace. Third-party compensation benchmarking indicates that the target award level for 2019 is slightly below the 50th percentile for the CEO and CFO and slightly above the 50th percentile, on average, for the remaining executives. In 2019, the aggregate number of share units to be issued under the Long-Term Incentive Plan (performance share units and restricted share units) was reduced to 360,000 as a result of the increase in the TGS share price during 2018. In line with the overall reduction, the total number of share units that may be issued to the executive team was reduced to 231,000 (from 300,000).

The following charts highlight the distribution of the various 2019 compensation components at target levels for the CEO, CFO and a Senior Vice President (SVP). The 2019 Long-Term Incentive is valued based on performance at the target level and a beginning-of-the year share price of NOK 211 with a NOK:USD exchange rate of 0.115. For illustrative purposes, one SVP was selected.



#### Executive Pay Overview 2015 - 2019

The table to the right reflects the target total compensation for the CEO, CFO and a Senior Vice President (SVP) from 2015 to 2019. The purpose of the table is to allow a simple comparison of the total targeted compensation that is established for executives each year, removing variances caused by the timing of actual payments from the Short- and Long-Term Incentive Plans. The Short-Term Incentive numbers shown are based on what can be earned (accrued) for the full plan year. This will differ from actual bonus payments made in the year (as reflected in Note 9 of the

2018 Consolidated Financial Statements) as bonus payments are made approximately two months after the end of the relevant quarter (i.e., a proportion of the Short-Term Incentive will be paid in the following year). The Long-Term Incentive targets shown in each year reflect the three-year plan that is implemented in that year with payout, if any, occurring three years later, although the expected payout, if any, is shown for the year the plan was implemented to allow comparability of target versus payout. For example, the Long-Term Incentive target shown for 2016 is scheduled to payout during 2019, but the expected payout is shown for 2016. For Long-Term Incentives, it should be noted that comparability of the target award to the expected payout is affected by variations in stock price and exchange rate between different dates.

	Year	Base salary as of 1st January (USD) <sup>1]</sup>	Annual target STI (USD) <sup>2)</sup>	Actual plan year STI (USD) <sup>3)</sup>	Annual LTI target to vest in 3 yrs 4	Actual LTI Pay-out after 3-yrs (USD) <sup>5)</sup>	Total target compensation (USD)
	2015	506,000	961,302	263,751	574,231	-	2,041,533
	2016	506,000	400,000	614,065	588,475	649,695	1,494,475
CE0	2017	500,000	450,000	959,130	877,636	TBD	1,827,636
CLU	2018	550,000	785,250	1,631,592	1,320,843	TBD	2,656,093
	2019	565,000	850,000	TBD	831,610	TBD	2,246,610
	2015	301,880	550,020	136,330	287,115	-	1,139,015
	2016	354,819	125,751	197,874	276,929	305,739	757,500
000	2017	348,701	134,796	287,304	413,005	TBD	896,502
CF0	2018	383,850	248,978	475,953	621,573	TBD	1,254,400
	2019	362,863	251,972	TBD	391,346	TBD	1,006,181
	2015	308,000	342,847	94,066	172,269	-	823,116
	2016	336,000	120,000	132,537	225,005	248,413	681,005
SVP	2017	342,000	131,000	279,208	335,567	TBD	808,567
SVF	2018	346,968	226,404	470,416	485,604	TBD	1,058,976
	2019	353,040	237,724	TBD	305,739	TBD	896,503

Notes:

<sup>1)</sup> Base Salary as of 1st January of each year for the executive holding the position on that date.

<sup>21</sup> Amount reflected is for a plan year and not actual amounts received during a year; bonus amounts are paid quarterly two months after quarter end (ex: Q4 bonus paid in Q1 of following year).

<sup>31</sup> Amounts in 2016 include STI earned plus a special executive team share-matching bonus paid in Q1 2017 from unallocated STI bonus funds. This bonus represented up to 25% of each executive's 2016 Short-Term Incentive target and was conditioned upon the executive's purchase from personal funds, on a one-for-one matching basis with the bonus funds, TGS common shares in the open market. The Company has no plans to continue this special bonus in the future.

<sup>41</sup> Based on achievement of metrics at mid-level targets. Exchange rates and stock price calculated at date of AGMs, except for 2019 where stock price of NOK 211 and exchange rate of 0.115 was applied.

<sup>51</sup> Amounts reflected are the actual payout of the plan following vesting to allow some comparability of target to payout (ex: 2015 plan had no payout upon vesting in 2018 and is reflected by "--" in the 2015 row). For the 2016 LTI, actual payout is estimated using preliminary reported results, a beginning-of-the-year share price of NOK 211 and exchange rate of 0.115.

#### 2.2. Performance Criteria for Base Salary and Short Term Incentive Awards

Salary increases and target Short-Term Incentive awards for all employees, including executives, are based upon a review of performance against individual goals. Individual goals include goals that are intended to support TGS corporate goals, as well as performance goals specific to the individual. TGS establishes its corporate goals at the start of each year and shares these across the organization. The goals for 2019 include specific targets relative to financial performance, customer engagement, employee engagement and delivery of milestones relative to the TGS three-year strategic plan.

The table below describes in further detail the corporate goals that have been set for 2019, with examples of individual executive goals that support the corporate goals.

Corporate Goal	Target	Example Executive Goals
Financial Performance	ROACE higher than 17%	Revenue targets Operating cost savings Project ROI Contract terms Cash management
Customer Engagement	40-45% prefunding of new investments Grow late sales versus 2018	Customer interaction (meetings/events) Marketing efforts Product quality and delivery Customer services Customer feedback
Employee Engagement	Improve Employee Engagement Capital versus 2018 (>62% as measured by third party, CEB)	Interaction between teams Communications around market conditions, ongoing projects, industry challenges, etc. Training and development
Strategic Initiatives	Implement action plans for initiatives relating to Imaging, Data & Analytics, and profitable growth	Improve Imaging reputation through R&D, proprietary opportunities Further develop Data & Analytics toward profitability Increase presence in South Atlantic Apply new technologies (OBN) in mature basins Establish new core basis onshore

The CEO's goals for 2019 are aligned with the corporate goals and the targets described above, emphasizing ROACE, cash flow, revenue, strategic initiatives in imaging and data & analytics, and employee engagement. In addition, the CEO has set goals relating to sustainability initiatives and HSE.

#### 2.3. Short Term Incentives 2019

The TGS Short-Term Incentive Plan provides a cash bonus for employees that is directly proportional to the actual operating profit of TGS. This plan has been successfully used by TGS for over 20 years to focus all employees on generating operating profit. The 2019 plan will be funded by allocating 9.5% of TGS operating profit (reduced from 12.75% in 2018) to be shared among all eligible employees (approximately 1.3% designated for executives and the remaining 8.2% designated for all other employees). The percentage of operating profit designated is determined by the amount of operating profit in the budget and the amount of bonus needed to compensate employees in line with the TGS total compensation philosophy and peer group comparison.

Short-Term Incentive target awards were low in 2016 through 2018 due to the market downturn. However, with improving conditions, targets for 2019 are more in line with, although still slightly below, pre-2016 targets. As a result, target total cash compensation for executives in 2019 is on average only slightly below the market 50th percentile based on third-party benchmark data (versus the aspiration of 50th to 75th percentile).

Individual Short-Term Incentive bonus targets are set at the beginning of each plan year. The target for each executive is based on the individual's level of responsibility in the organization, individual contribution, performance versus previous year goals and benchmark data. In 2019, the CEO bonus target is set at approximately 150% of base salary. The other executives have bonus targets between 56% and 94% of base salary.

The actual bonus amounts paid over a plan year, representing the designated percentage of operating profit, are paid quarterly following announcement of quarterly financial results. If the Board anticipates that the upcoming quarter(s) will result in a negative operating profit, the plan includes a withholding provision that may be instituted at the Board's discretion. The actual payout is limited to a multiple of two times (2x) target bonus. This cap has been reduced from three times (3x) target bonus in 2017, and two and one-half times (2.5x) target bonus in 2018. The reduction in the cap reflects that target bonuses are beginning to return toward historical levels. Since 2000, the average payout has been 108% of target with the lowest payout being 27% of target (2015) and the highest payout being 213% of target (2017).

For executives, TGS reserves the right to demand the repayment of any cash performance bonus that has been paid on the basis of facts that were self-evidently incorrect or as the result of misleading information supplied by the individual in question.

#### 2.4. Long Term Incentives 2019 Long-Term Incentives Generally

Since 2015, the Company has issued Long-Term Incentives through an annual equity-based Performance Share Unit (PSU) Plan, with performance against various metrics measured over a three-year period. A limited number of share-based Long-Term Incentive awards are usually issued each year upon authorization from shareholders at the annual general meeting. For 2019, TGS is seeking approval from the AGM for a total of 360,000 shares under the Long-Term Incentive Plan, with 278,040 allocated to the 2019 PSU Plan and the remaining 81,960 allocated to the Restricted Share Unit (RSU) Plan. Assuming all 360,000 shares were earned under the Long-Term Incentive Plan, this would create less than 0.36% dilution.

Prior to 2014, the Company generally issued stock options as long-term incentives. Stock options were issued at market price when granted, vested over a four-year period starting on the third anniversary of the grant and expired five years after the stock option pool was approved by shareholders at the AGM. In June 2018, the stock options granted in 2013 expired, and no other stock options remain outstanding at 31 December 2018. In 2014, the Company issued cash-based Long-Term Incentives providing for cash bonuses linked to performance against defined metrics, measured over a three-year period. The shift from stock options in 2014 reflected the Board's goal to provide a system that is both more performance-based and more closely aligned with long-term shareholder interests.

#### Share Ownership Guidelines

In 2014, the Board implemented share ownership guidelines for executives. These guidelines are designed to encourage long-term share ownership by requiring each executive to retain the equity granted through the Long-Term Incentive Plans, such that the awarded equity (once vested), together with any other shares that may be held by the executive, meet certain ownership levels. The following are the required levels: CEO – three times (3x) base salary, CFO – two times (2x) base salary, and all other executives – one times (1x) base salary. An executive has five years from the date the executive is first subject to the guidelines to meet the required level of ownership. If an executive does not meet the share ownership guidelines, the executive must retain all shares awarded from any Long-Term Incentive Plan until the requirement is satisfied. In 2018, the Board expanded the guidelines to include certain non-executive senior management, with the level set at one times (1x) base salary.

#### 2019 PSU Plan

In 2019, the executive team members (currently nine staff) will be eligible to participate in the 2019 PSU Plan, as well as eight non-executive senior managers with substantial responsibility at the business unit level. It is proposed that the seventeen participants will be granted PSUs based on his or her individual performance, span of responsibility and ability to execute the TGS business plan. The

PSUs will vest three years after the date of grant (anticipated to be August 2022) and will be converted to a number of TGS shares depending on the achievement of certain metrics.

A threshold, target and stretch (cap) is set for each metric, and no shares will be earned in each category if final values are below the performance threshold. A cash bonus in an amount equivalent to dividends paid on TGS common shares will accrue on PSUs that are ultimately awarded.

In 2019, following consultation with some of the Company's largest shareholders representing over 34% of issued stock, the Board proposes maintaining a similar plan structure as 2018, with the exception of an added sustainability metric. The 2019 plan will therefore comprise an absolute ROACE metric, a relative ROACE metric and a mix of leading and lagging HSE and sustainability metrics. The absolute ROACE threshold, target and stretch target metrics will be increased from last year such that an average ROACE of more than 17% will be required for any payout to occur. Target ROACE will be set at 24% and stretch will be set at 31%. In 2018, ROACE achieved by TGS was 17%.

The following table describes the specific metrics with target payout set at 60% of the PSU grant and stretch target set at 100% of the PSU grant.

2019 PSU Plan	Performance	Percentage Payout	
Metric 1: Relative ROACE	Below 50 <sup>th</sup> percentile	0%	Below Threshold
TGS ROACE relative to seismic peer group (11 companies: TGS, CGG, PGS, Schlumberger, ION, Spectrum, Polarcus, Shearwater (Rieber	50 <sup>th</sup> to 75 <sup>th</sup> percentile but not top 3	20%	Target
Shipping), Seabird, EMGS, Seitel)	3rd	30%	
	2nd	35%	
	1st	40%	Stretch (Max)
Metric 2: Absolute ROACE	17%	0%	Below Threshold
EBIT/Avg capital employed (2019+2020+2021) / 3	24%	20%	Target
	31%	40%	Stretch (Max)
Metric 3: HSE and Sustainability	Zero Lost Time Injuries	6.66%	Target
HSE: 2 Leading, 1 Lagging Sustainability: Leading	Crew Safety Visits and Safety Inspections	6.66%	Target
	Achievement of Metrics in relation to Sustainability Goals	6.66%	Target

With respect to Absolute ROACE, where actual performance falls between the threshold and target or between the target and stretch, the actual payout will be based on a linear calculation.

The Board believes that the proposed target metrics are sufficiently challenging and should align with shareholder expectations. Historical performance is provided in the following table.

Metric	2019 Threshold	2019 Target	2019 Stretch	2018	2017	2016	2015
Relative ROACE	50 <sup>th</sup> percentile	$50^{\text{th}}$ to $75^{\text{th}}$	1st	1st	1st	1st	3rd
Absolute ROACE	17%	24%	31%	17%	10%	5%	-2%
Lost Time Injuries	Zero	Zero	Zero	Zero	Zero	1 – Fail	Zero

For 2019, TGS proposes the following grant amounts: (i) CEO, up to 57,120 PSUs, (ii) CFO, up to 26,880 PSUs, (iii) remaining seven executives, an average of 21,000 PSUs each, and (iv) the eight senior managers, an average of 5,880 PSUs each (278,040 maximum combined grant to executive team and senior leaders). At a stock price of 211 NOK and currency exchange rate of 0.115 USD/NOK, the PSU Plan is worth USD 4.0 million at the target level and USD 6.7 million if all stretch targets are achieved.

#### 2019 RSU Plan

TGS is also proposing that 81,960 units are allocated to the RSU Plan for other key employees (around 60 staff or 10% of the workforce). Executives will not quality for RSUs. Key employees in the RSU plan must achieve satisfactory performance against their goals over the three-year plan period to earn the RSUs. The individual performance goals will be based on the performance criteria described in section 2.2 above with a focus on goals that support the corporate targets for ROACE, customer engagement, employee engagement and strategic initiatives.

#### 2.5. Employee Share Purchase Plan

In February 2019, TGS implemented an Employee Share Purchase Plan (ESPP) pursuant to which eligible employees are allowed to purchase common shares of the Company at a discount through payroll deductions. The intent of the ESPP is to encourage broader share ownership among TGS employees to further increase alignment with shareholders.

Under the ESPP, participating employees will save money through voluntary, after-tax payroll deductions over a period of six months (the Offer Period). Upon completion of the Offer Period, employees will have the option to use the savings to purchase TGS stock at a 15% discount to the market price at the time of purchase. The plan sets a maximum amount of savings that can be accumulated during each Offer Period, resulting in a maximum purchase of approximately 100 shares per employee per Offer Period (approximately 200 shares per participant per year). The ESPP is limited to 1,000,000 shares that may be acquired during the life of the plan. Shares will be purchased from the open market, and no shares will be issued by TGS; therefore, there will be no dilution of existing shareholders. The cost for TGS to administer this plan and fund the discount is expected to be approximately USD 250,000 per annum based on industry average rates of employee participation.

All employees (other than a small number of employees in a foreign subsidiary) may participate in the ESPP, subject to meeting a short service requirement for eligibility. All executives are permitted to participate in the ESPP.

The ESPP is submitted to the 2019 AGM for approval for the sole purpose of meeting certain U.S. tax regulations. Under 423 of the United States Internal Revenue Code, U.S.-based employees will receive a tax benefit that defers the recognition of income on the discount amount if the ESPP meets certain criteria. One of the criteria requires that the ESPP be approved by the Company's shareholders within twelve months of implementation. The Company has structured the plan to meet all other criteria necessary to allow the tax benefit, including allowing participation by all U.S.-based employees who meet the short service eligibility requirement.

#### 2.6. Pension and Insurance Plans

The TGS executive team is part of the TGS general pension plan (401k in U.S) as administered in accordance with local custom and policy in Norway, U.S. and U.K. The pension plan is assessed annually based on a review of market and peers in each geography, and no special or additional pension contributions are given to executives. In 2019, TGS will make the following maximum pension contributions (as a percentage of cash compensation) to executives depending on location:

- 6% 401k matching (cap at USD 19,000) in U.S.;
- 5.6%/15% below/above 7G (12G cap) pension in Norway; and
- 7% contribution in U.K.

The TGS executive team and their dependents are also provided with the option to participate in health and death insurance benefits as generally available to employees of TGS and in accordance with local custom and policy. In addition, executives are offered an annual medical / health assessment.

#### 2.7. Severance Pay Arrangements

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 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 conditional upon his continued compliance with restrictive covenants.

The amount payable to the CEO or CFO 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 team have employment agreements providing termination benefits.

# **3.** 2018 Remuneration Results and Assessment

#### 3.1. Results from the 2018 AGM

In accordance with section 6-16a of the Norwegian Public Limited Companies Act, the Board prepared a statement during 2018 with respect to the principles for remuneration of executives of the Company, which was noted and approved at the annual general meeting. In addition, the Board presented the 2018 Long-Term Incentive Plan to the annual general meeting, which was also approved.

The Board of Directors believes that the compensation awarded to executives in 2018 fully complies with the statements, proposals and approvals from the 2018 annual general meeting.

Approved at 2018 AGM	Status	2018 Actual
Executive base salaries are consciously set low (around 25 <sup>th</sup> percentile of our peer group)	Compliant	Third party benchmark data from October 2018 indicated that actual base salaries are slightly below the 25 <sup>th</sup> percentile
12.75% of operating profit allocated to Short Term Incentive bonus pool	Compliant	Actual payout was below 12.75% of operating profit (due to employee turnover)
Long Term Incentive Plan with Relative ROACE, Absolute ROACE and HSE metrics	Compliant	Long Term Incentive Plan implemented as proposed to AGM
Issue maximum of 444,200 free-standing warrants to fund Long Term Incentive Plan	Compliant	433,900 free-standing warrants issued relating to 2018 Long Term Incentive Plan (290,000 PSUs and 143,900 RSUs (49,000 of the RSUs included the same performance metrics as the PSUs))
Stock Ownership Guidelines	Compliant	Executives have five years to meet Guidelines

#### 3.2. Performance in 2018

In its assessment of the CEO and executive performance in 2018, and consequently their annual base salary and Short-Term Incentive awards, the Board put emphasis on financial goals (including specific targets for cash flow, revenue, operating profit and ROACE), strategic goals (including development of technology initiatives), employee engagement, customer engagement and cost control. Performance against these goals was either at or ahead of target.

#### 3.3. Total Executive Compensation for 2017 and 2018 (IFRS Basis)

Reference is made to Note 9 of the Consolidated Annual Financial Statements as of and for the year ended 31 December 2018 for certain information regarding historical cash compensation and Long-Term Incentives for executives, presented in accordance with IFRS standards.





# TGS 2018 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

# Corporate Social Responsibility

## Our Commitment to 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 anti-corruption, health & safety, and environmental efforts within the Company and towards our stakeholders. Our commitments, activities and performance on the priorities we have identified are set out in the case studies, facts and figures 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.

## Our Commitment to Our Stakeholders

TGS believes that corporate social responsibility is a fully compatible, integrated, and necessary part of conducting business successfully. TGS has been a member of the UN Global Compact since 2016 and we continue to incorporate its ten principles on human rights, labor, environment and anti-corruption into our strategy, culture and operations. Competition is integral to our success and we commit to a lawful, principled and ethically justifiable approach when dealing with our clients, partners, and other third-parties with whom we do business. Our success is contingent upon engaging in ethical and fair business practices across all our activities.

The foundation of the Company's superior business performance is built on TGS' fair business conduct and 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

#### TGS' Multi-client Business Model Supports Sustainability

TGS believes its multi-client business model not only benefits customers commercially but is a more sustainable, environmentally-friendly business model than proprietary acquisition. Allowing multiple companies to license the same set of data over a region decreases the need for each client to acquire the same or similar data on a proprietary basis. By reducing the demand for multiple operations sourcing the same geoscience data in an area, the multi-client approach not only has the potential to lessen the environmental impact to a region, it also has the potential to minimize the likelihood of health & safety or compliance risks.



developed and refined these values over time. The purpose of 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 of our activities in every market that TGS serves.

#### 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.

Our single greatest asset is our employee

base. The Company considers each employee as an individual and recognizes and respects the dignity, culture and merit of each employee. We aim 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 (HSE) Management System (HSE-MS) is designed to ensure that all Company operations are conducted in a manner that eliminates 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 its operations. TGS works with its suppliers to ensure that their HSE 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. In addition, TGS has implemented a program that encourages employees to donate their time and energy to help those in society who are less fortunate. 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 when we operate according to our principles, they should realize a fair return over the long term. 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.

As reflected in the aforementioned values, honesty, integrity and fairness form the cornerstones of TGS' relationships inside and outside the Company.

## **Our Social Responsibility Priorities**

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, managing HSE risks on geophysical operations and in TGS offices, and ensuring compliance with the TGS Code of Conduct and anti-corruption program by our employees and in dealings with third parties. TGS seeks feedback and input through regular meetings with shareholders, customers and other stakeholders. We participate in bettering the industry through, in part, our activities and support of the International Association of Geophysical Contractors (IAGC).

TGS conducts an annual risk assessment process, whereby risks from across the business (including risks related to sustainability) are assessed by a pool of key TGS employees across all offices and departments. These individuals rank the top ten risks they perceive the Company will face in the coming year, taking into account the current mitigation measures TGS has in place, and score these risks based on their impact to TGS and probability of occurring. From these responses,

the TGS Board of Directors and the Management Team are able to identify risk trends year-on-year and prioritize the top risks to TGS where further action may be needed. TGS, through the Management Team, then implements action plans to address these risks and evaluates the success of its action plan in the following year's risk assessment. In addition, all TGS departments - including Human Resources, Compliance, and HSE - set annual goals for each year and TGS' Management Team and Board of Directors participate in reviews of compliance and HSE performance on at least a quarterly basis.

From these inter-related processes, we identified our CSR priority areas and set the CSR goals, plans and actions for 2018, as detailed below.

- **People:** Engaging our workforce so that employees feel passionate about their work, are committed to the organization and demonstrate a willingness to provide discretionary effort when needed
- **Human Rights:** Ensuring responsible labor practices for our employees and encouraging our vendors and suppliers to do the same
- Health, Safety & Environment: Ensuring safe, healthy and environmentally sustainable and sound practices, both within the company and by our vendors and suppliers
- Anti-Corruption: Employing best practices to ensure anti-corruption compliance in all our operations, including anti-corruption compliance by third parties in our operations

#### TGS' Commitment to the UN Global Compact

TGS is committed to the UN Global Compact and its universal sustainability principles. In 2018, TGS established an Environmental, Social & Governance Committee ("ESG Committee") that includes the CEO, the Compliance and HSE departments, and employees from various departments and offices around the globe, for the purpose of developing and defining sustainability-related initiatives and strategies. One of the key objectives of the ESG Committee includes identifying sustainable development goals (SDGs) relevant to TGS' business. It then proposes strategies for TGS to implement that address these goals. Following an analysis of TGS' strengths, weaknesses, opportunities and threats, the ESG Committee identified the following SDGs:

- Industry, Innovation & Infrastructure
- Climate Action
- Life Below Water

In the coming years, TGS, with the help of the ESG Committee, will develop and implement strategies to address these SDGs and report on its progress.

### Our Commitment to Our People

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.

The TGS Code of Conduct prohibits discrimination and harassment in the workplace, and all TGS employees receive annual training on TGS' antidiscrimination and anti-harassment policies.

#### What We Do

Employee engagement is critical to the long-term sustainability of TGS. We seek to maintain high levels of employee engagement while complying with labor rights

and providing favorable working conditions. Following analysis of the results of our 2017 Employee Engagement survey, TGS identified the following focus areas to help improve engagement and develop action plans to target those areas: (i) communication, (ii) training & development, and (iii) compensation & rewards.

In 2018, TGS focused on enhancing its employees' digital communication experience, primarily through ODIN, the Company's intranet site which serves as a platform to communicate globally with all employees. Through this platform, TGS' CEO announced the Company's 2018 corporate goals, industry updates and company programs. In addition, we implemented a new approach to goal-setting with the ambition to set annual goals for all employees that tie into the Company's communicated corporate goals, thereby driving greater alignment and a common purpose in the work environment.

Employee S	Statistics			2018 2017	1
Total # of Em New Hires Internal Job F Employee Tur		End		547       597         30       31         54%       47%         6%       6%	1
Tenure				Gender – Management	
0 - 5	2017 / 29%	2018 / <b>21%</b>			
5 - 10 years	2017 / 29%	2018 / <b>34%</b>	2018		
10 - 20 years	2017/35%	2018 / <b>36%</b>	2010		
+20 years	2017 / 7%	2018 / <b>9%</b>		2018 / Male 71%       2018 / Female 29%         2017 / Male 71%       2017 / Female 29%	
Gender – Tot	tal Employee	e Population		Age / 2018	
	00		<b><b>070</b>/</b>	- 30 y/o Total Pop. / 3.5% Mgmt. / 1%	
	57		37%	30 – 50 y/o Total Pop. / 59% Mgmt. / 50%	
2018 / Male 63º 2017 / Male 59º			Female 37% Female 41%	50+ y/o Total Pop. / <b>37.5%</b> Mgmt. / <b>49%</b>	

#### **Compensation & Rewards**

TGS is committed to ensuring fair and equitable compensation for all employees. In 2018, TGS:

- Re-benchmarked all positions using a calibrated and more thorough benchmarking process, which involved applying best practice and the use of multiple benchmarking database subscriptions. This provided us with a better understanding of compensation trends within the industry and will now allow the Company to better identify and prioritize compensation issues
- Improved manager and employee understanding of TGS' compensation approach by providing director compensation training, employee lunch-and-learns, and ensuring employees had access to the terms of TGS' bonus plan
- Approved an Employee Share Purchase Plan, which was implemented in early 2019 for four countries
- Revamped our employee reward program to incorporate recognition of culture and team-work, in addition to exceptional performance

#### **Training and Professional Development**

TGS is committed to strengthening its employee base through a number of employee development initiatives, including providing professional development opportunities and training, talent development, and an executive mentoring program.

TGS employees participate in an annual Performance Development Program, whereby each employee and his/her manager discuss the progress of the last year's goals, establish goals for the upcoming year, evaluate the employee's performance over the past year, review the employee's career aspirations and identify opportunities for further development. We also encourage managers and employees to meet quarterly to discuss these goals in order to foster more cohesion between employees and the Company objectives. TGS recognizes that this process is critical to ensuring that our employees continue to develop the necessary skills to grow along with the Company.

In 2018, the Company's training and development efforts for employees focused on the development and improvement of management skills through the continuation of our DiSC assessments for employees (a tool used to facilitate discussions based on understanding people's behavioral differences in the workplace, especially within teams and business units). By the end of 2018, 70% of employees had received a DiSC assessment, providing information to both managers and employees so they can work together more effectively. Further efforts have focused on enhancing the performance development process which concentrates on an employee's performance and includes quarterly feedback from managers. The Company also provided situational leadership training to emerging leaders in the Company. In an effort to expand employee's understanding of the company, TGS provides departmental cross-training opportunities to employees and, where possible, secondments to other departments. TGS continues to ensure our employees receive technical training and have opportunities to improve their imaging and geoscience skills. This year employees participated in over 1,950 hours of inhouse geological and imaging courses and lunch-and-learn sessions (compared to 1,124 hours in 2017).

# TGS' Commitment to Enhancing Scientific & Technological Research

It is imperative that our employees not only understand the latest data and technological developments within geoscience and data analytics, but also share and collaborate with other geologists, geoscientists and engineers to encourage innovation within our industry. TGS hosts, sponsors, and/or presents at numerous, collective geoscience events designed to share advancements in imaging, data analytics, and geoscience technologies at major industry events such as the National Association of Petroleum Engineers (NAPE) Summit, the Society of Exploration Geophysicists (SEG) International Exposition and Annual Meeting, and the European Association of Geoscientists & Engineers (EAGE) Leadership Summit. Some other key highlights of TGS' collaborations in 2018 include:

- TGS' Salt Identification Challenge, to pinpoint salt deposits beneath the Earth's surface, hosted on Kaggle, a data science platform for predictive modeling and analytics competitions
- Exclusive unveiling of the MSGBC Basin Petroleum System Studies on behalf of the authors of the First Exchange Corporation MSGBC Studies
- Sponsoring and presenting at the first European Associate of Geoscientists and Engineers (EAGE) / Sociedade Brasileira de Geofísica (SBFG) Workshop on Least Squares Migration in Rio de Janeiro
- Hosting the Lower Paleozoic Reservoirs in the Delaware Basin and Leveraging Cloud and Machine Learning to Transform How Geoscientists Work seminars in Midland, Denver and Oklahoma City
- Participating in university consortia such as the Applied Geodynamics Laboratory (AGL) Salt Tectonics Consortium; the Center for Subsurface Imaging and Fluid Modeling, with King Abdallah University of Science and Technology; the Center for Wave Phenomena at Colorado School of Mines; the Microseismic Industry Consortium, Signal Analysis and Imaging

#### Looking to the Future

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 2019. TGS will use the results of the 2018 Employee Engagement Survey to identify areas for improvement and actions that can be taken at all levels in the organization to improve employee engagement. In 2019, our ambition is to enhance our Human Resources Information System (HRIS) to be able to provide better data and improve productivity. Additionally, we will incorporate employee feedback and continue to enhance our internal communication platform, ODIN, to enable employees to better communicate with each other, provide timely feedback and allow for more project collaboration - both vertically and horizontally throughout the organization.

### Our Commitment to Human Rights

TGS supports the UN Universal Declaration of Human Rights and aims to apply its principles throughout its business operations. These principles include recognition of the freedom, rights, dignity and worth of the human person and promotion of equality irrespective of gender, race or religion. We will not use or support child labor or slavery in any of our offices or operations. TGS also works with contractors and vendors to ensure that field and seismic vessel operators abide by the UN Universal Declaration of Human Rights and that they do not use or support child labor or slavery in their operations for TGS. To that end, TGS requires vendors, contractors and suppliers to provide TGS with their policies regarding human rights and labor practices so that we may review and ensure that they maintain the same commitment to human rights as ourselves.

## Our Commitment to Healthy and Safe Operations

#### What We Believe

TGS is dedicated to the continuous improvement of health, safety and security standards for its employees and insists that its contractors have similar, satisfactory standards. The company has defined safe operating procedures and guidelines in its HSE Management System. These procedures are designed to meet or exceed all appropriate legal requirements and, in the absence of any defined standards, to meet or exceed industry-wide 'best operating practices'. TGS actively engages with relevant trade associations and authorities to develop, implement, and update our HSE standards.

TGS maintains a high level of safety awareness through regularly scheduled

safety meetings, internal auditing, HSE review meetings and general companywide 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 & safety, as well as for those they work with. 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 TGS' HSE Managers and Senior Management are responsible for the communication and implementation of TGS health & safety policies, including the provision of information, training and resources to employees.

#### What We Do

TGS conducts quarterly and end-of year-HSE reviews with the Executive Team. We continue to promote a top-down message of health & safety by making all TGS Executive Team members conduct at least one HSE facility inspection and they were responsible for ensuring that all employees completed at least two HSE training modules during 2018 (100% training compliance in 2018 by TGS employees). In addition, all office locations performed two HSE-related lunchand-learn activities, which included topics such as first aid / cardiopulmonary resuscitation (CPR) training, stress awareness, and Home Safety.

There were no lost-time incidents (LTIs) for TGS' contractor field crews or employees in 2018. The total recordable incident rate (TRIR) for employees for 2018 was 0.00 and the combined rate with contractors was 0.68 (per 200,000 man hours). The 2018 motor vehicle accident rate (per 1,000,000 miles) was 1.32.

There were 30 field visits by senior management and operations managers during 2018, and we also achieved full compliance with vessel and land crew against audit requirements. Additionally, 43 inspections were performed at TGS office locations globally.

Comparing contractor HSE statistics between 2017 and 2018, man-hours or exposure hours were slightly lower (214,025 less) in 2018 and there was also a reduction in LTIs and LTI frequency. With respect to the contractor medical treatment cases, five additional cases were recorded in 2018 for a total of nine cases (five for marine- and four for land-based projects). This 2018 increase in contractor medical treatment cases resulted in an increase in the recordable frequency rate for contractors. When examined over an extended time frame, the overall statistics are still within the HSE targets and parameters set by TGS. Nevertheless, we continue to monitor our operations and our contractors for each project and year-on-year to identify any trends and work with contractors to ensure all operations are conducted in a safe and healthy manner.

Ruployee Health & Safety Statistics	2018	2017
Man-hours	937,044	991,765
Fatalities	0	0
Lost Time Injuries (LTI)	0	0
Medical Treatment Cases	0	0
Restricted Work Cases	0	0
Recordable Case Frequency*	0.0	0.0
LTI Frequency*	0.00	0.00
Working Days Lost	1,135	1,421
Sickness Absence Frequency	0.97%	1.15%

\*Per million man-hours

#### Looking to the Future

TGS management will continue to champion TGS' HSE training initiatives by increasing management's on-site presence, for both land and marine operations and by conducting facility inspections at TGS' offices. All TGS land and marine contractors will participate in our Contractor Management System for both land and marine surveys and we will monitor their HSE performance for each project. Additionally, during 2019, all TGS employees will be required to complete one HSE training course and each office location will host two HSE lunch-and-learn events. Finally, regarding HSE targets for 2019, we have set a goal of recording zero lost-time injuries across all of our operations; a total recordable incident rate of less than 2.0; a motor vehicle accident rate of less than 3.0 for marine operations.

## Our Commitment to the Environment

#### What We Believe

TGS is committed to leading the industry in minimizing the impact of its activities on the environment. To achieve this, we continually assess our potential effect on the environment and endeavor to plan operations which minimize their environmental impacts. Prior to initiating seismic data acquisition, TGS typically conducts environmental impact assessments as part of the permitting process. The company monitors its environmental performance against plans and we are dedicated to the continuous improvement of our environmental programs and standards for all of our operations.

TGS strives for zero spills or unplanned releases to the marine environment

Rontractor Health & Safety Statistics	2018	2017
Man-hours	2,607,162	2,821,187
Fatalities	0	0
Lost Time Injuries (LTI)	0	1
Medical Treatment Cases	9	4
Restricted Work Cases	3	3
Recordable Case Frequency*	4.60	2.84
LTI Frequency*	0.00	0.35

\*Per million man-hours

on offshore operations, and zero reportable spills in the onshore environment. Through TGS's charters of seismic vessels, we require that contractors comply with all applicable environmental laws and regulations. Seismic vessels chartered by TGS undergo audits by the International Marine Contractors Association/ Offshore Vessel Inspection Database (IMCA/OVID), either conducted by TGS, the vessel, or another third-party, that evaluates compliance with all applicable HSE regulations and industry requirements, and ensures that all necessary HSE 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 promote environmental awareness across our offices by encouraging employees to minimize waste and manage waste output, minimize carbon emissions by survey design, guard against accidental and operational pollution, and mitigate any active or operational pollution.

#### What We Do

TGS continues to monitor environmental issues by capturing data on the topic through IMCA/OVID accredited audits on all chartered seismic vessel and monitors spills and unplanned releases during seismic operations. We assess and report on biologically-important areas, including marine mammal migration paths, spawning grounds, sanctuary areas, or other ecologically sensitive locations where TGS has activities. No recordable spills or unplanned releases to the marine environment and no reportable spills or releases to the onshore environment occurred in TGS operations in 2018.

TGS actively supports the IAGC, both financially and through employee participation, in committees and projects to positively influence sensible and sustainable legislation and address environmental misconceptions associated with the geophysical industry. We also support the IAGC's efforts to create standards and protocols for seismic operations in frontier areas. We continue to liaise with stakeholders (including local fishing industries) and plan seismic surveys so that environmental implications are appropriately mitigated. In 2018, TGS employees, including the SVP Onshore, General Counsel, Director Marine Acquisition and HSE Director actively served and participated in IAGC boards and committees. 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 & gas industry. Each year, TGS participates in IOGP's global forum - which includes both clients and competitors - to share best practices and to troubleshoot issues that may arise in the industry.

In terms of environmental efforts by TGS offices and their employees, we encourage sustainability through several initiatives. For example, recycling bins for paper and cardboard, glass, plastic, batteries and print toner cartridges are available, and employees are encouraged to follow proper recycling procedures, which are displayed above the associated recycling bins. TGS reduces energy consumption in its offices by utilizing light sensors when spaces are not in use. TGS' UK offices encourages employees to cycle to work, unplug electricityconsuming devices when they are not in use, and use reusable bags (available on site) for shopping or transport needs to cut down on the use of plastic bags.

#### Looking to the Future

TGS intends to continue its work with the IAGC and IOGP in an effort to develop and ensure environmentally sound practices in the seismic industry. As a longstanding goal from year to year, TGS will aim for zero spills and unplanned releases to the marine environment during seismic vessel operations, and zero reportable spills in the onshore environment. TGS will require that each chartered vessel undergoes an IMCA/OVID audit within six months of hire, and every twelve months thereafter. For onshore operations, an audit is to be completed within four weeks of the start of recording activities. Finally, TGS will continue to ensure that its marine and land contractors participate in and abide by the environmental standards set forth in TGS' Contractor Management System.

#### **TGS' Energy Consumption**

TGS is an office-based company that does not operate or own vessels, manufacturing plants, or factories. Nevertheless, TGS is committed to working towards understanding the energy consumption and greenhouse gas emissions in its operations and finding ways to reduce its impact. In 2018, we started tracking our electricity usage and vehicle emissions with the aim of establishing more robust and complete reporting and goal-setting of our scope 1 and scope 2 emissions in the coming years.

2018 Electricity Usage		(kWh)	(kTonnes)
Offices		4,380,081	3.1
Data Centers		21,676,330	15.3
Total		26,056,411	18.4
2018 Vehicle Emissions	CO <sub>2</sub> (kTonnes))	CH₄ (kg)	N <sub>2</sub> O (kg)
	.03	1.8	1

\* Calculations based upon the United States Environmental Protection Agency's Greenhouse Gas Equivalencies

#### TGS' Commitment to Environmentally-Sound Operations

TGS is committed to working with stakeholders - including regulatory authorities and other governmental and non-governmental organizations - to identify, understand and mitigate environmental risks associated with its geophysical activities. Some examples of TGS' efforts in 2018 included:

- During the 2018 summer season in the Norwegian Sea, TGS (i) worked in close cooperation with the Ocean Research Institute to avoid seismic operations within sensitive spawning areas; (ii) coordinated its activities with the Norwegian Fishery Directorate and Norwegian Coast Guard; and (iii) adopted and applied Norwegian Oil & Gas recommended guidelines for co-existence with the fishing sector while conducting seismic surveys. As a result of TGS' cooperation with these entities, a No-Go fishing zone was introduced and TGS accommodated and amended its plans in order to avoid any potential conflict with spawning areas, fishermen and authorities.
- In Australia, TGS received approval from the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for the NW Shelf Renaissance North multi-client marine seismic survey Environment Plan (EP). TGS agreed to (i) meticulously consulting with stakeholders; (iii) react positively and proactively on the regulator's feedback and concerns; (iii) reduce the scale (survey area reduced by 70%) and duration (validity reduced by 60%, from five years down to two years); (iv) reposition the coastal-side perimeter so acquisition would not occur in waters shallower than 200m (previously 150m); and (v) restrict the size of individual surveys to further reduce any potential environmental impacts. This EP gave TGS additional agility and flexibility

in the competitive Australian market and will allow 3D surveys to be positioned within the EP polygon in a cost- efficient and environmentally sound manner.

In Canada, TGS and its partners liaised with the authorities and fishing unions to minimize
operational conflicts and to ensure ongoing communication throughout the duration of
the seismic surveys. This included time area closures, accommodating a Fishing Liaison
Officer on board all vessels and ensuring that all reporting requirements were fulfilled on
time.

### **Our Commitment to Business Ethics**

#### What We Believe

TGS is committed to complying with all applicable laws, including fair competition and antitrust, export controls and trade sanctions, anti-corruption and antibribery, and insider trading. We engage in ethical and fair business practices with our clients, partners, suppliers and other third-parties. In return, TGS expects the highest levels of personal conduct and fair dealing from all of our employees, the Board of Directors, partners, and any third-parties retained on behalf of the Company. TGS believes in competition and endeavors to not take an unfair advantage in a business situation by acting illegally, unethically, or by abusing or misusing confidential information.

The TGS Code of Conduct sets the standard of responsible conduct and fair business practices 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. In 2018, TGS updated its Code of Conduct to ensure that it continues to address key ethical and legal concerns in today's operations, including conflicts of interest, anti-corruption and anti-bribery, antitrust and fair competition, insider trading, data security and data privacy, trade controls and sanctions. Following this update, 100% of TGS employees completed an annual certification that reinforced each employee's personal pledge that he or she has read, understood and will uphold the Code of Conduct in his or her business activities and participated in live Code of Conduct trainings – either held in-person or via video link.

TGS' Compliance Program endeavors to foster an open, transparent and ethical environment centered around our 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 outlines the company's expectations regarding business ethics across our operations.

#### Doing Things The Right Way is the TGS Way

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 the law and its Code of Conduct, such as insider trading, conflicts of interest, financial fraud, and corruption issues. TGS will also engage internal or external legal counsel as needed in dealing with possible violations of its corporate policies.

TGS provides multiple avenues for 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 anonymously suspected instances of non-compliance.

In 2019, TGS will be updating its hotline system to allow for both telephone and web reporting of incidents, allow those who file a report to track its progress, and better manage reported incidents.

#### Anti-Corruption and Anti-Bribery Efforts

TGS recognizes that preventing bribery and corruption in its operations is essential in today's business environment. TGS works to ensure that all employees - as well as our partners and third-parties - understand and are sensitive to the legal requirements that apply to the Company's operations, including the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, the OECD Convention on Combating Bribery of Foreign Public Officials in International Business, and the anti-bribery and anti-corruption laws of the various countries in which TGS operates or conducts projects.

TGS' Anti-Corruption policy, which applies to both TGS employees and all thirdparties acting on our behalf, 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 are 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 requires that key employees and managers who interact with government officials or work on high-risk projects complete annually an online anti-corruption training and certification program. In 2018, every active TGS employee completed the online anti-corruption training and certification (same as 2017). Finally, TGS periodically conducts assessments of its policies, procedures, and guidelines to identify weaknesses and areas for improvements.

#### TGS' Commitment to Working with Ethical Third Parties

TGS expects its partners and third-parties (suppliers, vendors, agents and consultants) to share its commitment to ethical, lawful conduct and takes a zero-tolerance position with third-parties who fail to understand and abide by their compliance obligations. To that end, TGS works with its partners and third-parties, particularly those assessed as presenting a higher compliance risk, to stress the importance of operating ethically and in compliance with international anti-corruption laws and anti-bribery laws. In 2018, TGS's efforts with respect to such higher risk parties included:

- Conducting due diligence on partner and third-party relationships based upon various risk factors (geographic location and nature of services) at the outset of the relationship and updating that information on a regular basis throughout the relationship
- Incorporating compliance provisions in agreements to prohibit bribery and corruption
- Requiring TGS's third-parties to certify their compliance with TGS's Anti-Corruption
  policy and complete online anti-corruption training. All but one of TGS's international
  agents completed their certification and training in 2018 (100% compliance in 2017),
  and TGS terminated the relationship with the agent who failed to comply with this
  requirement
- Conducting quarterly reviews of payments to third-parties
- Reporting regularly to the Board and the Audit Committee about the status of and payments to these third-parties

TGS will remain focused on ensuring compliance with anti-corruption and anti-bribery laws and standards in its partner and third-party relationships to ensure its operations are conducted under the highest ethical standards.

#### Looking to the Future

TGS will remain active in monitoring the international developments and best practice in anti-corruption compliance. In addition, TGS will conduct a policy review of key compliance policies - including the anti-corruption policy - to ensure it continues to address the key areas and best practices in anti-corruption compliance. TGS will aim for 100% compliance by both key TGS employees and international consultants with TGS' anti-corruption training and certification requirements. Finally, TGS will conduct an internal compliance assessment and survey of its operations to evaluate each business group's understanding and implementation of TGS' compliance policies and procedures, and implement action plans as needed within those groups to address any identified weaknesses or areas for improvement.

## Our Commitment to Supporting Our Communities

TGS actively supports reputable charitable programs and organizations that serve people in need in countries where TGS has offices or projects by providing ongoing financial donations. We also encourage employees to donate their time and energy to help those in society who are less fortunate. TGS is committed to supporting local, non-profit 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 recognizes that it has a social obligation to advance the research, development and technical capabilities in areas in which we conduct projects. As an example, TGS partners with several African governments to promote and advance their geoscience knowledge and technical capabilities. Through these partnerships, TGS provides geoscience training as well as technological resources - including software and related equipment - for the purpose of ensuring these countries are equipped to manage and promote their oil and gas resources.

#### **TGS Giving Back**

In 2018, TGS made charitable contributions to organizations that help underprivileged youth, fund medical research and access to healthcare, provide humanitarian aid and organizations promoting geophysics and geoscience educational experiences to children in Norway, the United States, Canada, and the United Kingdom. TGS continued to recognize its employees' charitable spirit by matching employee's monetary donations or making monetary donations in recognition of an employee's work with an organization. In 2018, TGS employees:

- Participated in fun-runs to raise money for organizations dedicated to improving medical diagnostic research
- Donated their time to local food banks
- Held board positions in charitable organizations aimed at assisting underprivileged and at-risk communities
- Provided learning experiences to students and children interested in furthering their geoscience and geophysical knowledge







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