

Sustainability Report 2019

“TGS is responsible to our customers, our employees, the communities in which we live and work, to the world community and to our shareholders. Living the TGS Values every day, in everything that we do, helps us to meet or exceed the expectations of our stakeholders both today and in the future, and is critical to delivering sustainable growth over the long term.”

– Hank Hamilton, Chairman



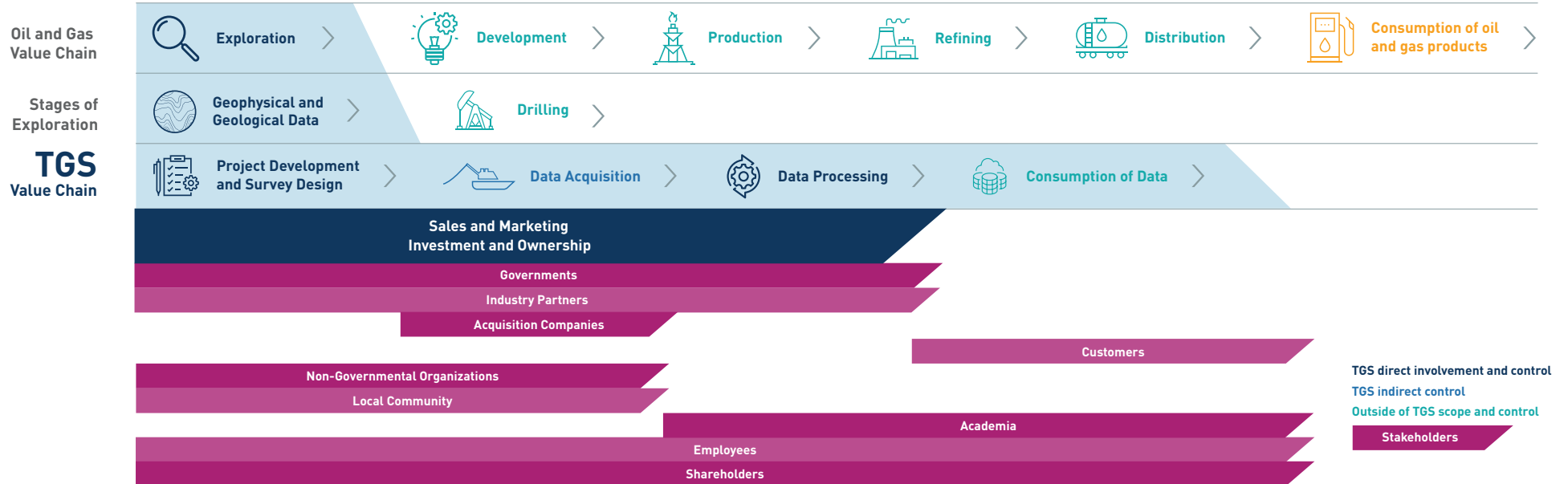
Sustainability Report

1. COMMITMENT TO SUSTAINABILITY

1.1 What TGS Believes

TGS believes that conducting our operations in a sustainable manner is not only essential to our success, but also to the prosperity of our customers, shareholders and the communities in which we live and work. Energy starts with us, and to be the leading energy information company with the best people, quality and service means our geoscientific data and solutions, including the multi-client model and data reprocessing, must help our customers be more sustainable when exploring energy opportunities. We must continue to take particular care to minimize and mitigate the impact our activities have on the marine and land environments and communities around them. TGS must continue to prioritize safety, ethics and human rights in our onshore and offshore projects. Finally, TGS must continue to give back to the communities in which we operate by providing educational opportunities and sharing geoscience and technological developments.

This sustainability report communicates to our investors, customers, suppliers and other stakeholders how TGS incorporates sustainable practices into our operations and strategy. It is the opinion of the Board of Directors that this report complies with Norwegian Accounting Act section 3-3c, and we view this report to be our Communication on Progress to the United Nations (UN). We have used recommendations from the Task Force on Climate-related Financial Disclosures. On August 14, 2019, TGS finalized its acquisition of Spectrum Geophysical and this report incorporates its relevant sustainability data from August 15, 2019 to December 31, 2019, in the calculations.



2019 Sustainability Highlights

- Zero lost-time injuries, medical treatment cases or restricted work cases in the office environment in 2019
- Decrease in the recordable case frequency for contractors between 2018 and 2019, despite logging over 2 million additional manhours
- Zero recordable spills or unplanned releases to the marine environment, and zero reportable spills to the land environments during seismic operations
- Zero human rights or modern slavery cases
- Upgraded TGS' Compliance Hotline to include web-intake form and add numbers for all countries where TGS employees reside

1.2 Stakeholder Engagement

1.2.1 Materiality

TGS impacts its surroundings both directly and indirectly through stakeholders, customers, vendors and partners. Understanding our role, and the role of our stakeholders in the value chain, helps TGS prioritize the sustainability topics that are significant to us and our stakeholders in 2019.

As part of our ordinary business practice, TGS engages with various stakeholders so that we clearly understand their priorities and the impact our business activities have upon them. In addition to the governments, customers and suppliers noted above, other key stakeholder groups include our employees, shareholders and the communities in which we operate, including non-governmental organizations and academia.

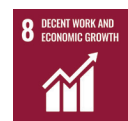
When ascertaining the impact of our activities on our stakeholders, we considered global sustainability issues, relevant reporting standards, feedback and dialogue from investors, media analysis, conversations with our customers and our participation in the International Association of Geophysical Contractors (IAGC). In addition, we engaged with our employees through global quarterly meetings, conducting TGS' annual risk assessment, and planning regular strategy sessions, which also assisted in our materiality determination include.



This chart helps TGS understand and prioritize the sustainability issues by identifying where there are strong synergies between TGS and stakeholders on certain issues, such as impact to marine and land environment, and which issues have a stronger impact to TGS, such as a safe and healthy working environment. In addition, there are some sustainability issues where TGS recognizes that its impact to TGS and ability to control is already fairly well mitigated and managed, such as office emissions.

1.2.2 TGS' Commitment to the UN Global Compact and Sustainable Development Goals

TGS remains committed to the UN Global Compact, its universal sustainability principles, and the Sustainable Development Goals (SDGs). TGS remains dedicated to incorporating the Global Compact's principles on human rights, labor, environment and anti-corruption into our strategy, culture, and operations. In addition, TGS has identified the following SDGs as being aligned with our business practices and key areas for TGS to prioritize and contribute.



- Safe & Healthy Office and Project Environments [\[3.2\]](#)
- Respecting Human Rights [\[3.3\]](#)
- Diversity & Equality in the Workforce [\[3.1\]](#)

- Zero lost -time injuries, medical treatment cases or restricted work cases in the office environment in 2019
- Despite logging over 2 million more man-hours, there was a decrease in the recordable case frequency for contractors between 2018 and 2019
- All employees trained on (i) anti-harassment and discrimination and (ii) diversity and inclusion in the workplace



- Community Engagement [\[4.1\]](#)
- Training & Development [\[3.1\]](#)
- Knowledge-sharing [\[4.2\]](#)

- Employees participated in over 1,854 hours of in-house geological and imaging courses and lunch-and-learn sessions
- Capitalized research & development spending corresponded to approximately 4.4% of the operating result and 1% of net revenues
- 103 weeks of training provided to governments as part of projects in Africa
- Participation in 23 academia and industry consortia to share technological developments and learnings



- Sustainable Business Model [\[2.2\]](#)
- Office & Project Emissions [\[2.3\]](#)
- Mitigate Environmental Impact in Land Operations [\[2.5\]](#)

- Multi-client business model reduces the demand for multiple operations sourcing the same geoscience data in an area, thus reducing emissions and mitigating environmental impact
- Scope 1 emissions: .02 ktonnes CO₂, .07 kg CH₄, and .25 kg N₂O
- Scope 2 emissions: 29,774,317 kwh and 21 ktonnes CO₂
- Average emissions on 2D marine surveys: .5mt CO₂, 3g CH₄, and 22g N₂O per km
- Average emissions on 3D marine surveys: 2.66mt CO₂, 16.55g CH₄, and 1118.73g N₂O per km²
- Average emissions on marine node surveys: 14.93mt CO₂, 87.76g CH₄, and 658.17g N₂O per km²
- Average emissions on multibeam marine surveys: .03mt CO₂, .15g CH₄, and 1g N₂O per km²
- Average emissions on 3D land surveys: 1.97mt CO₂, 92.24g CH₄, and 45g N₂O mt per km²



- Mitigate Environmental Impact in Marine Operations [\[2.4\]](#)

- Zero recordable spills or unplanned releases to the marine environment, and zero reportable spills to the land environments during seismic operations
- Committed to the IAGC's Ghost Net Initiative (marine seismic industry-wide effort to collect lost fishing lines and nets entangled in sea equipment)
- TGS commissions environmental impact assessments (EIAs) to understand potential impacts to the environment in which we operate
- TGS employs protected species observers (PSOs) and utilizes passive acoustic monitoring (PAM) in our operations to ensure we do not have a detrimental effect on the marine environment



- Business Ethics & Anti-corruption [\[1.3\]](#)
- Sustainable Business Model [\[2.2\]](#)
- Industry Contributions [\[2.6\]](#)

- Supporting initiatives to promote transparency and anti-corruption, e.g., UN Global Compact
- Participation in the IAGC to promote safe, environmentally sound, and sustainable practices in our industry
- Provide e-learning to key suppliers and third parties on anti-corruption

1.2.3 Integrating Sustainability into TGS

TGS' Board of Directors regularly review and monitor sustainability issues, including those related to business risks and opportunities, as well as investment decisions. In 2019, health and safety in both the workforce and our operations, cyber security, anti-corruption and business transparency, environmentally responsible offshore and onshore operations, and other climate-related risks were discussed extensively at board meetings. At the end of 2019, TGS' Board of Directors approved a 2020 sustainability strategy targeting carbon emissions, sustainability in the supply chain and gender diversity which will be implemented by the relevant departments. In addition, as set forth in our Declaration on Remunerations, TGS' long-term incentive plan (LTIP) for management includes sustainability and HSE goals.

Corporate level functions responsible for sustainability related issues include TGS' leadership, compliance, health, safety and environment (HSE), operations, and human resources. In addition to implementing TGS' 2020 sustainability strategy, each of these departments are responsible for setting goals and strategies, and reporting on the risk and performance of each, to TGS' executive and senior leadership teams and Board of Directors.

We believe that geoscience data, analytics and imaging processes will be useful for solving energy transition challenges, and TGS continues to look for opportunities for utilizing our core skills outside of traditional oil and gas exploration. For example, TGS leveraged our world-class basin evaluation expertise, subsurface data library, and geological knowledge in British Columbia and created a framework for carbon storage assessment with its Geological Carbon Storage Atlas for British Colombia, Canada. TGS' environmental, social and governance committee (ESG Committee) works directly with the CEO and heads of compliance and HSE to identify these types and other opportunities for TGS to diversify into other sustainable industries. The ESG Committee presents its findings to TGS' executive and senior leadership teams and the Board of Directors, who review those plans with promise for continued development, and potential implementation by the appropriate business group.

1.2.4 Managing Sustainability Risks and Opportunities in TGS' Value Chain

TGS evaluates sustainability risks as part of its annual enterprise risk management process, which is implemented by the Compliance Officer and overseen by the Board of Directors and CEO. This process includes feedback from key employees across the organization and offices to identify, evaluate and prioritize the risks TGS faces.

The standardized framework of the risk management process allows for year-over-year comparison of results to identify and understand risk trends. Through this process, we determine where further action may be needed if a risk's materiality, impact or probability of occurring increases (i.e., cybersecurity), and where our risk management efforts have been effective resulting in decreased materiality, impact or probability scores.

To address those risks that have been identified through this process, and embed sustainable solutions within our organization, TGS relies upon policies, procedures and guidelines, as well as targeted action plans with key performance indicators to measure progress. TGS uses key performance indicators on its sustainability efforts, for example, to measure safety performance and impact on marine environment.

This process, along with our corporate governance principles, provides the necessary underpinnings for monitoring risk and incorporating sustainability within our organization and operations.

TGS

Value Chain



Project Development
and Survey Design



Data Acquisition



Data Processing



Consumption of Data



Stakeholders

Sales and Marketing
Investment and Ownership

Governments

Industry Partners

Acquisition Companies

Customers

Non-Governmental Organizations

Local Community

Academia

Employees

Shareholders

Opportunities

Sustainable Business Model

Industry Competitors

Knowledge Sharing

Diversity & Equality in the Workforce

Training & Development of Workforce

Community Engagement

Business Ethics & Anticorruption

Safe & Healthy Office Environment

Office Emissions

Risks

Safe & Healthy Projects

Human Rights

Project Emissions

Impact to Marine & Land Environments

1.3 TGS' Commitment to Ethical and Transparent Behavior

1.3.1 Integrating Business Ethics into TGS

TGS is committed to complying with all applicable laws, including fair competition and antitrust, export controls and trade sanctions, anti-corruption and anti-bribery, 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 its employees, the Board of Directors, partners and any third parties retained on behalf of TGS. 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, which is publicly available at www.tgs.com, 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. TGS' compliance program attempts to foster an open, transparent and ethical environment centered around its Code of Conduct. The TGS Compliance Officer reports to the Board of Directors 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. TGS holds in-person workshops with various business groups to discuss the key compliance risks relevant to their departments to ensure understanding, build awareness and foster dialogue. In addition, there is mandatory e-learning of key topics within our Code of Conduct, including anti-corruption, that employees must complete each year. In 2019, TGS upgraded its e-learning tool to incorporate hypothetical situations and examples for employees to work through that are tailored to real-life TGS situations, as well as assessments that test the participant's understanding of the material. Due to the timeline of acquisition of Spectrum Geophysical and integration of the workforces, TGS decided to conduct the Code of Conduct e-training and anti-corruption e-training at the outset of 2020 to ensure all employees start off understanding TGS' policies and procedures. In 2019, Compliance workshops were conducted with TGS' offices and departments to go through TGS' compliance program, Code of Conduct, hotline, and key policies and procedures.

1.3.2 TGS' Anti-Corruption Efforts

TGS recognizes that preventing bribery and corruption in its operations is essential in today's business environment. TGS works to ensure that its employees, as well as our partners and third parties, understand and are sensitive to the legal requirements that apply to our 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 TGS employees and all third parties acting on behalf of TGS, 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 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. In 2019, TGS's efforts with respect to third 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. TGS also incorporates compliance provisions in the agreements that prohibit bribery and corruption and requires third parties to certify their compliance with TGS' anti-corruption policy and complete online anti-corruption training. All of TGS' international agents completed their certification and training in 2019. Finally, TGS conducts quarterly reviews of payments to third parties and reports any irregularities or concerns about payments to these third parties to the Board and the Audit Committee. TGS will remain focused on ensuring compliance with anti-corruption, anti-bribery laws, standards in its partner and third-party relationships to ensure its operations are conducted under the highest ethical standards.

Finally, TGS periodically conducts assessments of its policies, procedures, and guidelines to identify gaps and areas for improvements.

1.3.3 TGS' Compliance Reporting Process

TGS provides multiple avenues for TGS' internal and external stakeholders to discuss or report potential non-compliance. Employees are encouraged to report any violation of TGS' values or policies to their supervisor, the Compliance Officer, or through the TGS hotline, which allows employees to report suspected instances of non-compliance anonymously. 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. The number and types of cases are reported quarterly to the Board of Directors.

In 2019, TGS upgraded its compliance hotline, which is publicly available for employees and TGS' third parties at www.tgs.com, to now include a web-intake form and local numbers for all countries where TGS has employees. This new hotline was promoted to employees at company-wide quarterly meetings and through email communications and trainings throughout 2019. These efforts will continue in 2020.

TGS investigated and resolved 11 matters in 2019 that were raised either through the TGS hotline or directly or indirectly to the Compliance Officer. This is an

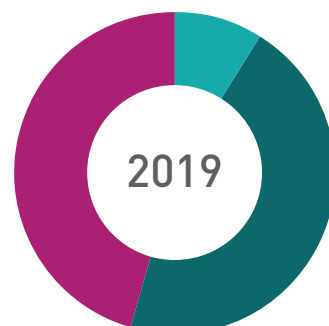
increase from 2018 (two matters) and contributing factors to this increase could be the promotion of the TGS hotline through training and communication efforts in 2019, and the integration of additional employees into the company as a result of the acquisition of Spectrum Geophysical.

Compliance Matters

Hotline / **1 matter**

Directly to compliance department / **5 matters**

Indirectly to compliance department
(via another department or manager) / **5 matters**



TGS Compliance Goals

TGS has set the following compliance-related goals for 2020 and beyond:

- Achieve 100% completion on assigned employee compliance training
- Conduct a company-wide assessment to measure (i) how well TGS' Code of Conduct and compliance program is understood and enacted by employees on a daily basis; (ii) how TGS' employees perceive the ethical leadership at TGS; (iii) what are the typical compliance challenges and strengths of TGS, as perceived by its employees; and (iv) how openly, and through what channels, are employees willing to report concerns, and whether employees feel comfortable reporting these concerns
- Create targeted action plans that may include training, round tables and/or updating policies to address any areas where improvement or further education is needed based upon the results of the compliance assessment
- Achieve 100% completion on assigned third-party anticorruption training

2. ENVIRONMENT

2.1 Integrating Environmental Sustainability into TGS

In 2019, TGS started to incorporate climate risk into its business and operational strategy by using the "Task Force on Climate-related Financial Disclosures" (TCFD, set up by the Financial Stability Board) so that it can be both a better supplier to its customers and a better contributor to the community. The following chart shows TGS' status and goals with respect to climate risk:

| Governance | Strategy | Risk Management | Metrics and Targets |
|--|---|--|---|
| TGS' Board of Directors oversees TGS' sustainability strategy, and in particular, TGS' efforts when it comes to mitigating our impact on climate. Corporate level functions responsible for implementing TGS' efforts include TGS' leadership, operations, sustainability and HSE departments. | Conducting our business while minimizing harm on the environment is essential for the long-term sustainability of the business. A business that is based on practices that have negative impacts on the environment runs the risk of increasing costs, loss of reputation, and declining business opportunities. For TGS, it is therefore important to take environmental impact into account during the decision-making process. | TGS maintains robust practices for minimizing impacts on the marine environment through its environmental policy, risk management procedures and the environmental management procedures. | Relative to its peers and the oil and gas industry, TGS' Scope 1 and Scope 2 carbon emissions are limited. Most of the emissions are indirect (Scope 3) and are accumulated through vendors providing a variety of services to TGS. |
| Action Plan | Action Plan | Action Plan | Action Plan |
| <p>a) In 2019, TGS' Board of Directors approved a 2020 sustainability strategy addressing carbon emissions, and will be updated on its progress throughout the year</p> <p>b) The responsibility for incorporating climate risk will lie with operations and sustainability departments, who will work in close collaboration with one another. TGS' board and executive team want to be close to this work and will receive periodic updates throughout the year in 2020.</p> | <p>a) TGS will develop a detailed business plan outlining how the ambition should be achieved, including the selection and definition of Key Performance Indicators (KPIs). This business plan will be implemented in 2020.</p> <p>b) TGS must work together with its vendors in order to devise more efficient ways of conducting the operations. Furthermore, contracts with the vendors should contain obligations to measure and report carbon emissions, as well as outline restrictions on maximum emission levels.</p> | <p>a) Climate-related risks are identified and assessed through environmental impact assessments (EIAs), site surveys, public or social consultations, engaging with environmental consultants, participation and membership in industry trade organizations (e.g. IAGC, IOGPI), project-specific hazard assessments, and consultation with regulators and permitting agencies.</p> <p>b) TGS commissions EIAs to understand potential impacts on the environment it may operate in. TGS also employs protected species observers (PSOs) and utilizes passive acoustic monitoring (PAM) on its operations in order to ensure our operations do not have a detrimental effect on the environment in which we operate. TGS employs various other environmental mitigation measures including conducting soft starts or ramp-ups and placing buffer zones around environmentally sensitive areas.</p> | <p>a) In 2018, TGS started tracking Scope 2 electricity consumption and Scope 1 vehicle emissions with the aim of establishing more robust and complete reporting, benchmarking and setting of appropriate targets in the coming years. In 2019, TGS is aiming to measure and track key Scope 3 emissions from business travel and operational vendors.</p> <p>b) For 2019, TGS was successful in gathering the same type of 2018 emission information for Scope's 1 and 2. Furthermore, through fuel consumption information for land and marine seismic projects, TGS was able to calculate the following carbon emissions: CO₂, CH₄, SO₂, NO_x, N₂O.</p> <p>c) When it comes to its Scope 1, Scope 2 and Scope 3 emissions, TGS is planning to determine what emission targets to set for managing climate-related risks and opportunities</p> |

2.2 Sustainable Business Model

TGS believes its multi-client business model not only benefits customers commercially, but also is a more sustainable, environmentally friendly business model than the alternative of proprietary acquisition. Allowing multiple companies to license the same set of data over a region decreases the need for each client to acquire 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 reduces the environmental impact to a region, it also has the potential to minimize the likelihood of health and safety or anti-corruption risks.

We are also working to leverage our imaging technology, data analytics and artificial intelligence to improve the quality of data we provide with minimal impact to the environment. By reprocessing older data sets using today's technology, TGS is able to provide a better product without having to impact the marine or land environments to acquire new data. In addition, TGS is using its data analytics and artificial intelligence, such as cloud computing, to make our processing of data faster and more efficient, which will minimize our emissions output. For example, in 2019, TGS announced a multi-year agreement with Google Cloud, which secures TGS access to cloud-based on-demand, compute power and complements TGS' on-premise compute capability. This solution enables TGS to help customers be more efficient and de-risk their exploration activities faster by allowing TGS to deliver on complex, compute-intensive projects and focus on cycle-time reduction while preserving superior data quality.

2.3 Climate

2.3.1 2019 Office Emissions

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, TGS started tracking Scope 1 and Scope 2 emissions for our offices with the aim of establishing more robust and complete reporting, benchmarking and setting of appropriate goals or targets in the coming years. For 2019, TGS was able to successfully repeat this level of reporting for all of its offices. Energy consumption for data processing and high-performance computing are responsible for the bulk of the emissions related to the generation of purchased energy [Scope 2].

| Scope 1 Emissions | 2019 | 2018 |
|---------------------------|------|------|
| CO ₂ (kTonnes) | 0.02 | 0.03 |
| CH ₄ (kg) | 0.07 | 1.8 |
| N ₂ O (kg) | 0.26 | 1 |

*TGS' scope 1 emissions are derived from one vehicle maintained by the company for deliveries in Houston

| Scope 2 Emissions | 2018 (kWh) | 2019 (kWh)* | 2018 (kTonnes) | 2019 (kTonnes)* |
|-------------------|-------------------|-------------------|----------------|-----------------|
| Offices | 4,380,081 | 4,131,468 | 3.1 | 2.9 |
| Data Centers | 21,676,330 | 25,642,849 | 15.3 | 18.1 |
| Total | 26,056,411 | 29,774,317 | 18.4 | 21 |

*2019 numbers include data from August 15, 2019 to December 31, 2019, related to the Spectrum Geophysical acquisition.

TGS continued to promote environmental awareness in office locations 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. In terms of environmental efforts by TGS offices and their employees, TGS encouraged sustainability through several initiatives. For instance, recycling bins for paper and cardboard, glass, plastic, batteries and print toner cartridges are available in TGS offices and employees were encouraged to follow proper recycling procedures, which are displayed above the associated recycling bins. TGS reduced energy consumption in its offices by utilizing light sensors to switch lights off when spaces are not in use. As another example, TGS' UK offices encouraged employees to cycle to work, unplug electricity-consuming devices when they are not in use, and use reusable bags (available on site) for shopping or transport needs in an effort to cut down on the use of plastic bags.

2.3.2 2019 Operations Emissions

TGS is committed to supporting the Protect the Planet SDG, where reduction of carbon emissions plays an essential role. Relative to its peers in the oil and gas industry, TGS' Scope 1 and Scope 2 carbon emissions are quite limited. Most of the emissions are indirect (Scope 3) and are accumulated through vendors providing a variety of services to TGS. The bulk of the Scope 3 emissions are related to the acquisition of seismic data, where TGS is indirectly responsible for emissions from vessels and land crews owned and operated by contractors.

As the world's largest buyer of seismic acquisition capacity, TGS has a unique opportunity to influence the industry in a positive manner and TGS aims to eventually reduce and/or offset the amount of carbon emissions per unit of seismic data that is acquired. In 2019, TGS took several important steps towards deriving Scope 3 carbon emission figures, from both fuel consumption and fuel type, so that we and our vendors may better understand and target the next steps in reducing our impact to climate change. As illustrated in the following charts and graphics, the emissions vary between land and marine surveys, and whether the survey is 2D, 3D or multibeam. Depending on client input, survey economics and geological/geophysical considerations, marine seismic surveys are acquired through varying vessel setups and configurations. 2D surveys generally involve a single, relatively smaller seismic vessel towing one cable and emissions are measured in units per kilometer. For 3D surveys, emissions are measured in units per square kilometers and generally involve one or more seismic vessels, which are typically larger than

2D vessels and towing a greater amount of equipment, resulting in a greater total emission output versus 2D operations. Ocean Bottom Node or Ocean Bottom Cable (OBN/OBC) surveys generate a higher quality 3D subsurface image that is similar to conventional 3D operations but are acquired with ocean bottom nodes and require a node layout vessel and seismic source vessels. Finally, multibeam and coring surveys involve relatively smaller boats than a 2D seismic operation and carry less equipment and gear, leading to less fuel consumption and lower emissions per square kilometer.

In 2020, this data will continue to be developed so that we both better understand and are transparent about the emissions used in our operations and are more informed when planning projects.

2019 Survey Emissions

| | CO ₂ (mt) | CH ₄ (mt) | N ₂ O (mt) |
|--------------------------|----------------------|----------------------|-----------------------|
| Total Marine Seismic | 212,392 | 1 | 9 |
| Total Land Seismic | 6,649 | 0.31 | 0.15 |
| Total All Seismic | 217,137 | 2 | 10 |

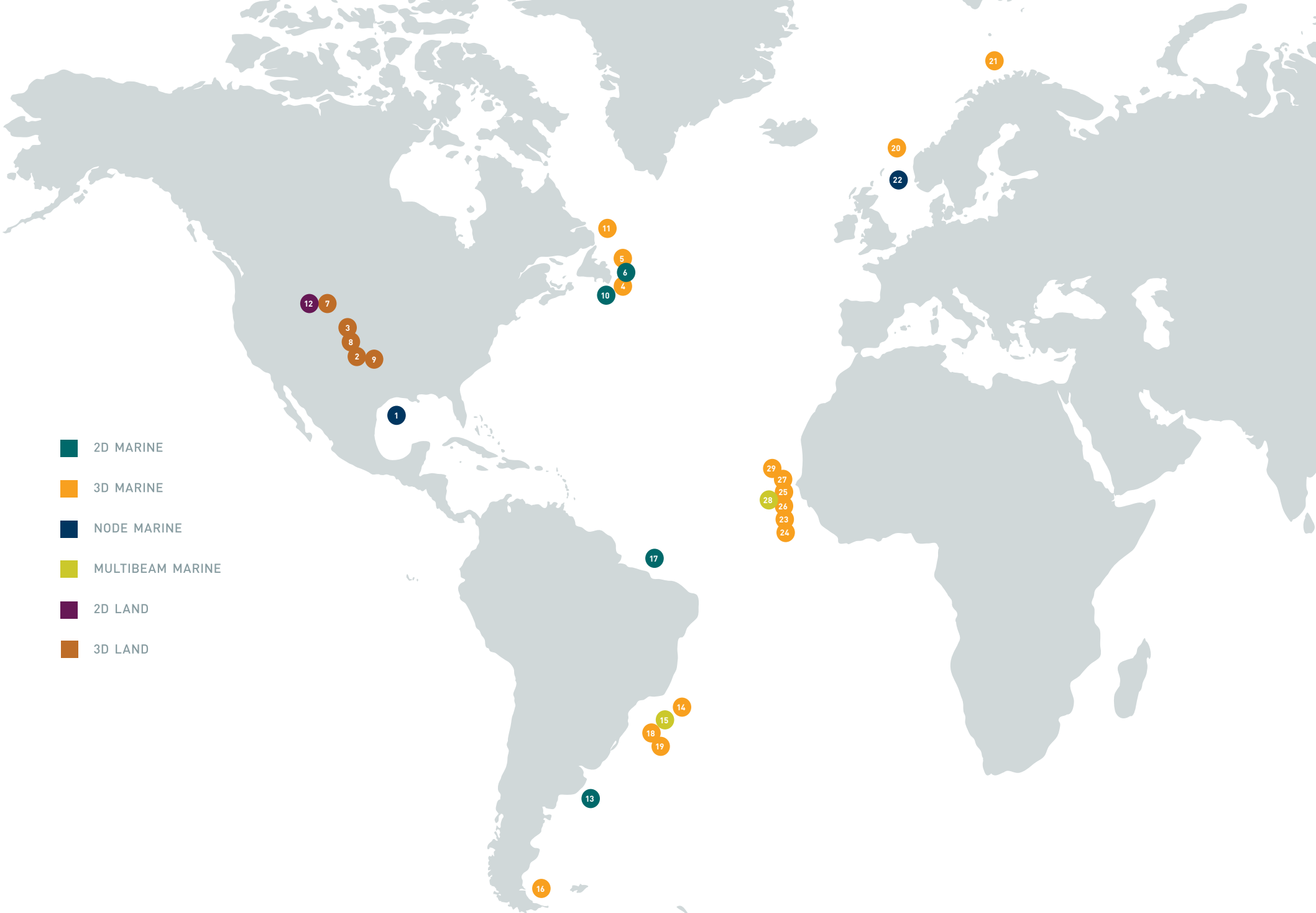
| | CO ₂ (mt/unit) | CH ₄ (g/unit) | N ₂ O (g/unit) | SO ₂ (tons/unit) | NO _x (tons/unit) |
|-----------------------------------|------------------------------|-----------------------------|------------------------------|--------------------------------|--------------------------------|
| Average 2D Survey – Marine | .51 | 3 | 22 | .007 | .015 |
| Average 3D Survey – Marine | 2.66 | 16.55 | 118.73 | .026 | .074 |
| Average Node Survey – Marine | 14.93 | 87.76 | 658.17 | .137 | .423 |
| Average Multibeam Survey – Marine | .03 | .15 | 1 | .39 | <0.01 |
| Average 3D Survey – Land | 1.97 | 92.24 | 45 | NA* | NA* |

*At this time TGS is unable to calculate the SO₂ and NO_x for land surveys due to the varying equipment used

Emissions calculations were done based upon guidance provided by an external environmental consultant using the following:

- For GHG: EPA Simplified GHG Emission Calculator, Version 5, EPA Center for Corporate Climate Leadership, March 2018
- For NO_x: EMEP/EEA Air Pollutant Emission Inventory Guidebook 2016, European Environment Agency. NO_x emission factors from Table 3-1 (Tier 1 Emission Factors for Ships Using Bunker Fuel Oil) and Table 3-2 (Tier 1 Emission Factors for Ships using Marine Diesel Oil (MDO) and Marine Gas Oil (MGO))
- For SO₂: Marine Fuel specification: Chevron Global Marine Products (June 2012) and Total HSFO and Distillate Fuel Characteristics (2020)

| | 2019 Marine and Land Seismic Projects | Study Size | CO ₂ (mt/unit) | CH ₄ (g/unit) | N ₂ O (g/unit) | SO ₂ (tons/unit) | NO _x (tons/unit) |
|----|---------------------------------------|---------------------------|---------------------------|--------------------------|---------------------------|-----------------------------|-----------------------------|
| 1 | AMENDMENT 3D PH I | 2,750.57 km ² | 7.90 | 46.41 | 348.09 | 0.12 | 0.24 |
| 2 | CANTON 3D | 1,404 km ² | 0.41 | 17.76 | 9.28 | NA* | NA* |
| 3 | GLOSS MOUNTAIN 3D | 901 km ² | 2.03 | 97.55 | 47.45 | NA* | NA* |
| 4 | JEANNE D' ARC 3D | 4,709.49 km ² | 3.63 | 21.31 | 159.82 | 0.03 | 0.10 |
| 5 | NORTH TABLELANDS 3D | 4,608.26 km ² | 2.29 | 19.24 | 110.51 | 0.03 | 0.04 |
| 6 | NORTHEAST NEWFOUNDLAND 2D | 575.68 km | 0.68 | 4.00 | 30.00 | 0.01 | 0.02 |
| 7 | RAILGUN 3D | 715 km ² | 2.52 | 123.43 | 56.22 | NA* | NA* |
| 8 | SOUTH GLOSS 3D | 606 km ² | 2.82 | 126.12 | 61.66 | NA* | NA* |
| 9 | SOUTH HACKBERRY 3D | 352 km ² | 2.05 | 96.37 | 48.44 | NA* | NA* |
| 10 | SOUTHEAST GRAND BANKS 2D | 10,518.66 km | 0.42 | 2.47 | 18.53 | 0.01 | 0.01 |
| 11 | TORNGAT 3D | 3,698.88 km ² | 3.44 | 20.23 | 151.73 | 0.02 | 0.10 |
| 12 | VOYAGER 2D TEST | 5.6 km | 0.53 | 8.39 | 2.50 | NA* | NA* |
| 13 | ARGENTINA BASIN 2D | 2395.3 km | 0.41 | 2.41 | 18.09 | 0.01 | 0.01 |
| 14 | CAMPOS 3D | 11,840.69 km ² | 2.62 | 15.41 | 115.60 | 0.04 | 0.08 |
| 15 | CAMPOS 2019 MULTIBEAM | 31,502 km ² | 0.03 | 0.20 | 1.52 | <0.01 | <0.01 |
| 16 | MALVINAS 3D | 1,854.77 km ² | 3.24 | 19.01 | 142.59 | 0.02 | 0.09 |
| 17 | PARA MARANHÃO 2D | 5,638.95 km ² | 0.53 | 3.13 | 23.51 | <0.01 | 0.01 |
| 18 | SANTOS 3D | 4,268.37 km ² | 2.72 | 15.97 | 119.79 | 0.04 | 0.08 |
| 19 | SANTOS 3D PH III | 4,794.8 km ² | 3.08 | 18.09 | 135.68 | 0.05 | 0.09 |
| 20 | ATLANTIC MARGINS 19 3D | 6,059.83 km ² | 2.28 | 20.76 | 112.67 | 0.04 | 0.07 |
| 21 | GREATER CASTBERG 19 3D | 5,168.46 km ² | 4.23 | 25.55 | 187.75 | 0.03 | 0.12 |
| 22 | UTSIRA OBN | 815 km ² | 21.97 | 129.10 | 968.26 | 0.15 | 0.61 |
| 23 | JAAN 4B5B18 3D | 4,682.84 km ² | 0.31 | 1.81 | 13.59 | <0.01 | 0.01 |
| 24 | JAAN 6B19 3D | 2,152.28 km ² | 2.36 | 13.89 | 104.15 | 0.02 | 0.07 |
| 25 | JAAN AGCP19 3D | 877.73 km ² | 2.55 | 14.97 | 112.28 | 0.02 | 0.07 |
| 26 | JAAN AGCS19 3D | 970.88 km ² | 3.16 | 18.57 | 139.30 | 0.02 | 0.09 |
| 27 | JAAN SO19 3D | 2,671.35 km ² | 2.17 | 12.73 | 95.50 | 0.02 | 0.06 |
| 28 | MSGBC 2019 MULTIBEAM | 11,4698 km ² | 0.02 | 0.10 | 0.73 | <0.01 | <0.01 |
| 29 | SENEGAL ULTRA-DEEP OFFSHORE 3D | 2,151.05 km ² | 1.81 | 10.66 | 79.93 | 0.01 | 0.05 |



TGS Climate Goals

TGS has set the following climate-related goals for 2020 and beyond:

- Work with our vendors to devise more efficient ways of measuring and reporting carbon emissions to be better informed when planning and conducting our survey operations. This will include selecting and defining Key Performance Indicators (KPIs) related to tracking, reporting and reducing or offsetting carbon emissions with the goal of outlining restrictions on maximum emission levels or offsetting emission
- Understand and track our emissions related to business travel and develop a plan to reduce or offset those emissions through better planning, more use of video conference systems, and offsetting the emissions generated from our business travel

2.4 Marine Operations

2.4.1 2019 Actions

TGS recognizes the importance of mitigating environmental impacts to the marine environment. As a proponent of the Life Below Water SDG, TGS is committed to protecting marine and coastal ecosystems. Since TGS utilizes contractors for its marine operations, it is important that TGS work closely and set clear requirements with our vessel providers on the environmental expectations for our marine operations. TGS requires that its contractors report all spills, regardless of quantity and whether it entered the marine environment or was contained onboard a vessel. TGS continually aims for zero recordable spills and unplanned releases to the marine environment on offshore operations and again met this goal in 2019. Through TGS' charters of the seismic vessels, TGS' contractors must comply with all applicable environmental laws and regulations. Seismic vessels chartered by TGS must undergo audits from the International Marine Contractors Association or Offshore Vessel Inspection Database (IMCA or OVID). These audits are conducted either by TGS, the vessel, or another third party that evaluates compliance with all applicable health, safety and environmental regulations and industry requirements, and ensures that all required health, safety and environmental permits and certificates are valid. In 2019, TGS chartered 26 vessels, including seismic, multibeam and coring, node layout and source vessels, and each of these vessels underwent the required audits.

When planning and conducting our marine operations, TGS assesses and reports on biologically important areas, which includes marine mammal migration paths, spawning grounds, sanctuary areas or other ecologically sensitive locations where TGS had activities. TGS commissions environmental impact assessments (EIAs) to understand potential impacts on the environment it may operate in and employs protected species observers (PSOs) and utilizes passive acoustic monitoring (PAM) on its operations to ensure our operations do not have a detrimental effect on

the environment. Other examples of environmental mitigation measures include socialization efforts with fisheries and local communities to minimize operational conflicts and ensure ongoing communication throughout the duration of the seismic surveys. In 2019, TGS initiated the practice of hiring and placing third-party HSE advisors onboard several of its operations, particularly in environmentally sensitive areas such as Brazil. Reporting to the marine project managers, the HSE advisors were tasked with managing all aspects of health, safety and the environment onboard their respective vessels.

Finally, TGS committed to supporting the IAGC's Ghost Net Initiative in 2019 by proposing to contractually require that all vessels acquiring seismic data for TGS report their ghost net catches. Led by the IAGC, the Ghost Net Initiative is a marine seismic industry-wide effort to collect lost fishing lines and nets that become entangled on the in-sea equipment. This fishing gear is removed from the marine environment to mitigate possible fishing gear entanglement with turtles, birds, mammals, fish, etc.

TGS Marine Operations Goals

TGS has set the following marine operations goals for 2020 and beyond:

- Develop contractual requirements for vessel providers and third parties to report Ghost Net Initiative-related marine debris as part of its 2020 sustainability strategy
- Continue to aim for zero spills and unplanned releases to the marine environment during seismic vessel operations
- Continue to require that each chartered vessel undergo an IMCA/OVID audit within six months of hire, and every twelve months thereafter
- Ensure that its marine contractors abide by TGS' environmental standards and, where appropriate, third-party HSE advisors will be placed onboard marine seismic operations to ensure that this is carried out appropriately in the field

2.5 Land Operations

2.5.1 2019 Actions

As with our marine operations, TGS is heavily dependent on contractors for its onshore acquisition projects and works with them to ensure alignment in our efforts to mitigate our impact to the land environment. This includes requiring documented audits of field equipment and HSE procedures for all new surveys to ensure that all equipment is in proper working order and that HSE procedures adequately mitigate potential environmental impacts. In addition, every spill, regardless of the amount spilled, must be reported, cleaned up and properly disposed of. All spills are tracked by TGS within its HSE management software system, there were no reportable spills or releases in 2019.

In Canada, TGS engaged extensively with First Nation Communities to understand all potential environmental impacts stemming from land seismic operations. Being the predominant indigenous community in Canada, TGS recognized the importance of sitting down with local communities to understand their concerns and ensure minimal disturbance to their land. In planning its onshore seismic operations in Canada, TGS often times took additional measures and precautions beyond those set by law or regulation, including:

- Choosing hand-cutting with chainsaws to further reduce the number and density of tree's cut over the survey area instead of utilizing mulching vehicles to cut travel paths for seismic acquisition
- Using minimal and single access routes to seismic acquisition lines, which limits the amount of traffic on these lines and allows the forest to naturally regenerate over time
- Avoiding riparian areas instead of just reducing line widths through, as required by permitting agencies
- Planning and designing land surveys utilizing Lidar imagery, which helps identify environmentally sensitive areas, chart routes of least or minimal impact, and avoid tree cutting and vegetation disturbance

Similar mitigation measures were implemented in the US land operations, where TGS worked with local farmers and ranchers in Oklahoma to better understand the local environment and minimize TGS' environmental footprint. In addition, TGS successfully carried out reclamation programs for rehabilitating areas that might have been disturbed by vehicles operating over the survey area.

TGS Land Operations Goals

TGS has set the following land operations goals for 2020 and beyond:

- Continue to aim for no recordable spills to the environment and efforts to contain all spills, regardless of how much was spilled, will continue in 2020 and beyond
- Require documented audits of field equipment and HSE procedures for all new surveys to ensure that all equipment is in proper working order and that HSE procedures adequately mitigate potential environmental impacts
- Ensure that land contractors and service providers participate in, and abide by, TGS' environmental standards.

2.6 Industry Contributions

TGS is a strong proponent of working with local governments, regulatory authorities and non-government organizations to understand its impacts on the environment. Therefore, TGS maintained positive communication with regulatory authorities and other governmental and non-governmental organizations in 2019 to help identify,

understand and mitigate environmental risks associated with geophysical activities. TGS supports the IAGC, both financially and through employee participation, by actively engaging in various committees, workgroups and projects throughout 2019. TGS fully supports the IAGC's efforts to create standards and protocols for seismic operations in frontier areas, liaise with stakeholders (including local fishing industry) and to plan seismic surveys so that environmental implications are appropriately mitigated. In 2019, TGS employees, including the EVP Onshore, General Counsel, Director Marine Acquisition and HSE Manager, actively served and participated in IAGC boards and committees. As the largest purchaser of seismic vessel capacity, TGS is well-positioned to support the IAGC's initiatives, like the Ghost Net Initiative, and aims to make a meaningful impact towards protecting marine life and ensuring marine debris is removed from that environment. TGS was also involved with the International Association of Oil & Gas Producers (IOGP) and supported its efforts to improve safety, environment and social performance, and promote responsible and sustainable operations within the oil and gas industry. As a long-standing leader in seismic industry, TGS will continue to work with the IAGC and IOGP to develop and ensure environmentally sound practices within the seismic industry.

3. PEOPLE

3.1 Investing in Human Capital

TGS' single greatest asset is our employee base. To that end, TGS creates and ensures we operate in an environment where our employees have the opportunity to achieve excellence every day. We do this by ensuring each individual is working in a business-like atmosphere that promotes equal employment opportunities and is free of unlawful bias or prejudice. In addition, we encourage our employees to constantly develop and improve their skills so that they may grow with the company.

In 2019, TGS acquired Spectrum Geophysical, and there was a significant focus on combining the workforce to recognize synergies and ensure we are a unified company sharing the same mindset, understanding and goals. This new combined workforce also affected the 2019 employee numbers, as evidenced, for example, by an increase in the total number of employees. The focus in 2019 following integration was making sure TGS was able to be one company both functionally and operationally, and TGS prioritized establishing a clear management structure and ensuring departments were fully integrated and operating on the same internal IT and communication systems. Going into 2020, the focus is continuing to ensure we are one unified organization culturally using the engagement survey and the One-TGS campaign by marketing and human resources.

3.1.1 Diversity and Equality

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

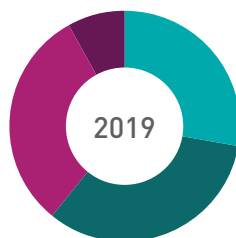
persons in the workplace will be business-like and free of unlawful bias, prejudice, and harassment. It is TGS' policy to ensure equal employment opportunity without discrimination or harassment on the basis of race, color, national origin, religion, sex, age, disability or any other status protected by law.

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

| Employee Statistics | 2019 | 2018 |
|----------------------------------|------|------|
| Total # of Employees at Year End | 666 | 547 |
| New Hires | 64 | 30 |
| Employee Turnover | 8% | 6% |

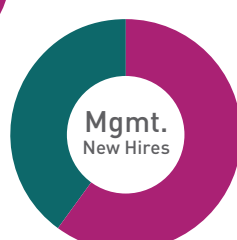
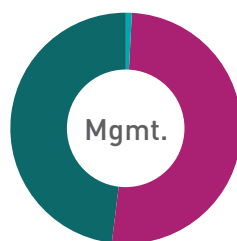
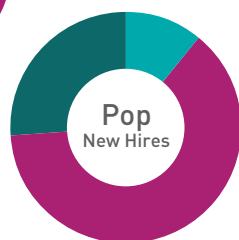
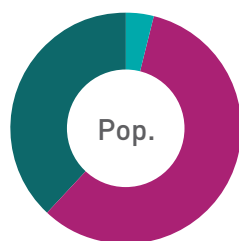
Tenure

| | | |
|---------------|------------|-------------------|
| 0 - 5 | 2018 / 21% | 2019 / 28% |
| 5 - 10 years | 2018 / 34% | 2019 / 33% |
| 10 - 20 years | 2018 / 36% | 2019 / 31% |
| +20 years | 2018 / 9% | 2019 / 8% |

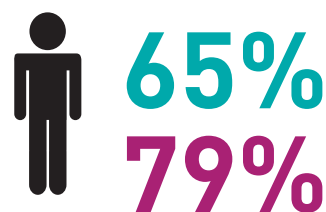


Age / 2019

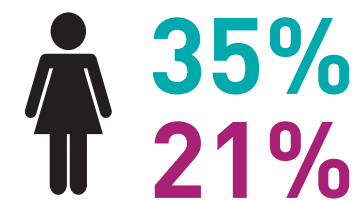
| | | | | |
|-------------|---------------------------|------------------------|--------------------|------------------------|
| - 30 y/o | Total Pop. / 3.5% | New Hires / 11% | Mgmt. / 1% | New Hires / 0% |
| 30 - 50 y/o | Total Pop. / 59% | New Hires / 63% | Mgmt. / 50% | New Hires / 60% |
| 50+ y/o | Total Pop. / 37.5% | New Hires / 26% | Mgmt. / 49% | New Hires / 40% |



Gender – Total Employee Population



2019 / Male **65%** New Hires **79%**
2018 / Male 63%



2019 / Female **35%** New Hires **21%**
2018 / Female 37%

Gender – Management



2019 / Male **72%** New Hires **70%**
2018 / Male 71%



2019 / Female **28%** New Hires **30%**
2018 / Female 29%

*2019 numbers include data related to Spectrum acquisition

TGS recognizes the heavier proportion of men to women in the industry, and TGS' workforce and new hires in 2019 reflect a higher male population than female. For this reason, as part of its 2020 sustainability strategy, TGS is developing a plan to focus on increasing gender diversity in the workforce, both in hiring and in promotions.

3.1.2 Training and Development

Employee engagement is critical to the long-term sustainability of TGS. TGS seeks to maintain high levels of employee engagement while complying with labor rights and providing favorable work conditions. In 2019, TGS continued the focus on improving employee engagement through communication and training and development.

In 2019, TGS focused on continued enhancement of digital communications, 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 2019 corporate goals, industry updates and company programs. ODIN was also used to highlight company events, introduce new hires and communicate any other relevant information to employees. In addition, ODIN played a critical role in the integration of Spectrum Geophysical by ensuring all employees were connected to the same platform and had access to the same information. Finally, TGS aims to conduct surveys on a biannual basis to understand

and assess employee engagement and to identify gaps in the global workforce and specific locations or departments.

Through the annual Performance Development Plan, individual employee goals were tied directly to the Company's corporate goals. This ensured alignment of employee incentives with TGS goals and drove a sense of common purpose in the work environment. As part of this process, each employee and his/her manager discuss the progress of 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. TGS also encourages managers and employees to meet quarterly to discuss these goals in an effort to foster more cohesion between employee and Company objectives. TGS recognizes that this process is critical to ensuring that its employees continue to develop the necessary skills to grow with the Company.

TGS recognizes the importance of having its workforce recognize the evolving global risks and issues relevant to TGS' operations, understand how to prevent or address them, and know what to do should they arise. In 2019, TGS provided company-wide training on key areas to ensure that all employees had baseline knowledge in areas globally relevant and critical to our success. TGS trained employees through our e-learning platform on diversity, inclusion, and workplace conduct, anti-harassment and discrimination, and information technology, which included a strong focus on cyber security, as well as provided the HSE and compliance training discussed elsewhere in this report.

Finally, TGS provides departmental cross-training opportunities to employees, and where possible, secondments in other departments. TGS continues to ensure its employees receive technical training and have opportunities to improve their imaging and geoscience skills. This year, employees participated in over 1,854 hours of in-house geological and imaging courses and lunch-and-learn sessions (compared to 1,950 hours in 2018). The decrease in courses is due in part to the focus on operationally integrating Spectrum with TGS.

TGS' Goals for Investing in Human Capital

TGS has set the following goals for investing in its human capital for 2020 and beyond:

- Develop a plan to increase the representation of women in the workforce, both in general population and in management positions that is aligned our diversity and inclusion initiatives and allows the Company to further stand out from peer groups
- Conduct an employee engagement survey in 2020 to identify areas for improvement and actions that can be taken at all levels in the organization to improve employee engagement
- 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

- Identify opportunities to improve engagement, provide professional development, encourage career discussions, and maintain open communication

3.2 Health and Safety

3.2.1 Integrating Health and Safety into TGS

TGS is committed to providing a safe, healthy and sustainable workplace for our employees, contractors, vendors and clients while protecting the environment in which we live and work. TGS management continually strives to eliminate risk and reduce hazards, but successful operations can only be achieved through the full cooperation and commitment of all TGS employees and contractors. To achieve this, TGS defines safe operating procedures and guidelines in its HSE Management System (HSE-MS). 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.

The HSE manager reports to senior management and updates both the management team and the Board of Directors on at least a quarterly basis. The HSE manager is responsible for implementing the HSE-MS and providing HSE information, training and resources to employees. TGS' HSE-MS is communicated to the company through regularly scheduled safety meetings, internal auditing, HSE review meetings and general company-wide communications. All employees and contractors are actively encouraged to participate in the conduct, management and continuous improvement of safety. TGS requires all employees and contractors to be accountable for, and committed to, their own health and safety, as well as for those 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.

3.2.2 2019 Actions

3.2.2.1 Employees

In 2019, TGS updated its corporate HSE policies, including the health and safety, drug and alcohol and environmental policies, all of which are publicly available at www.tgs.com. These updated policies were distributed to all employees and TGS continues to share them with all new TGS employees during the onboarding process.

TGS promotes a top-down message of health and safety by requiring that each member of TGS' executive management conduct at least one HSE facility inspection and one field visit. TGS' executive management and operations managers conducted 40 field visits during 2019 (compared to 30 in 2018) and performed 43 inspections at

TGS office locations. Finally, TGS achieved full compliance with vessel and land crew HSE audit requirements.

All employees completed one HSE training course during 2019 (100% training compliance) that included modules on healthy working, workplace safety, fire emergencies, evacuations and shelter-in-place, and sustainable environment. In addition, office locations performed at least two HSE-related lunch and learn activities, which included topics such as first aid and cardiopulmonary resuscitation (CPR) training, stress awareness, and office ergonomics.

At the end of 2019, TGS kicked-off a gap analysis of its entire HSE-MS. This process was commissioned to align TGS and Spectrum's post-integration HSE documentation and processes. TGS aims to update and modernize its entire HSE-MS by the end of 2020, ensuring that it's aligned with industry best practices and client HSE expectations.

|  Employee Health & Safety Statistics | 2019** | 2018 |
|--|-----------|---------|
| Man-hours | 1,056,825 | 937,044 |
| Fatalities | - | - |
| Lost Time Injuries (LTI) | - | - |
| Medical Treatment Cases | - | - |
| Restricted Work Cases | - | - |
| Recordable Case Frequency* | - | - |
| LTI Frequency* | - | - |
| Working Days Lost | 1,413 | 1,135 |
| Sickness Absence Frequency | 1.07% | 0.97% |

*Per million manhours

**2019 numbers include data related to Spectrum acquisition from August 15 to December 31, 2019

3.2.2.2 Contractors

At the outset of any project or operation, TGS engages with its subcontractors in reviewing a range of HSE-related documents, including HSE project plans, hazard assessments, crew HSE plans, and emergency preparedness documents. Furthermore, TGS monitors and assesses contractor performance by tracking and reviewing a range of leading and lagging HSE indicators. Project and HSE managers tracked all HSE incidents as well, ensuring that adequate and correct incident information was collected, and action items were properly closed out. Where necessary, TGS assists and participates in incident investigations. TGS encourages contractors to report all near miss and high-potential events to maximize lessons learned, ensure adequate mitigation measures were implemented and to safeguard project-related personnel and equipment.

Upon completion of a survey, TGS reviews all aspects of HSE performance internally

and with its contractors to identify and discuss areas for improvement, lessons learned and additional hazards identified during the acquisition phase. HSE performance is tracked and catalogued through TGS' health and safety management software application, allowing TGS to continuously monitor its contractor's performance over time. Lastly, as part of TGS' commitment to continuous HSE improvement, HSE statistics and performance are reviewed with the senior management team on a quarterly basis.

In 2019, TGS operated with several established land and marine seismic contractors, all of which were selected based on their experience, technology, sustainability, commitment to the environment, HSE performance and track record. TGS ensured that these contractors' HSE programs met proper industry standards, and when gaps were identified, TGS took additional steps to ensure adequate mitigation measures were implemented. For instance, in November 2019 TGS hosted an HSE workshop onboard a seismic vessel with the chiefs and other senior members of the crew to improve the overall HSE culture amongst the crew, align the contractor's HSE program with industry standards and promote TGS' commitment to strong operational HSE performance in the field.

|  Contractor Health & Safety Statistics | 2019** | 2018 |
|---|-----------|-----------|
| Man-hours | 4,693,364 | 2,607,162 |
| Fatalities | 1 | 0 |
| Lost Time Injuries (LTI) | 3 | 0 |
| Medical Treatment Cases | 7 | 9 |
| Restricted Work Cases | 1 | 3 |
| Recordable Case Frequency* | 2.55 | 4.6 |
| LTI Frequency* | 0.64 | 0 |

*Per million man-hours

**2019 numbers include data related to Spectrum acquisition from August 15 to December 31, 2019

Despite recording over 2,000,000 additional contractor man-hours, TGS' recordable case frequency, number of restricted work cases and medical treatment cases decreased from 2018. TGS' motor vehicle accident rate was under the 2019 target of <2.0 (per 1,000,000 miles) for land seismic operations (0.5 for 2019). TGS' 2019 total recordable incident rate (TRIR, per 200,000 man-hours) was less than the 2019 target of <2.0 (1.18 for 2019) and the TRIR for marine operations was less than the 2019 goal of <3.0 (.31 for 2019). TGS had no lost-time incidents (LTIs) in the office, but TGS' contractors did record one fatality and three LTIs. While these incidents did not involve any TGS employees or facilities, TGS worked closely with affected contractors to ensure that appropriate and adequate mitigation measures were implemented and actively participated through all phases of the incident investigation process.

TGS' Health & Safety Goals

TGS has set the following health and safety goals for 2020 and beyond:

- Review the existing contractor management system and ensure it is correctly implemented
- Ensure that all TGS land and marine contractors participate in our contractor management system, for both land and marine surveys and continue to monitor their HSE performance for each project
- Continue to have marine and land project managers, as well as the HSE Manager, attend on-site startup meetings and perform field inspections
- Require all TGS employees to complete a minimum of one HSE training course and have each TGS office location hold at least two HSE lunch-and-learn events
- Aim for: (i) zero lost-time injuries across all of our operations; (ii) a total recordable incident rate of < 2.5 for marine operations and <2.0 for land operations (per 200,000 manhours); and (iii) a motor vehicle accident rate goal of < 2.0 for land seismic operations in 2020 (per 1,000,000 miles)

3.3 Human Rights

TGS remains committed to the UN Universal Declaration of Human Rights and undertakes to operate in recognition of the freedom, the rights, the dignity and the worth of the human person and promotion of equality irrespective of gender, race or religion. As a signatory to the UN Global Compact, TGS incorporates into its strategy, culture and operations the UN principles on human rights, labor, environment and anti-corruption.

TGS' Statement of Values and Code of Conduct define the expectations of ethical behavior that is expected of TGS' Board of Directors, employees, vendors and suppliers. TGS embraces diversity and equality in its workforce and suppliers and will not use or tolerate child labor or slavery in any of its offices or operations. As set forth in TGS' Modern Slavery Act Transparency Statement on www.tgs.com, TGS sets policies at the group level and is committed to ensuring that there is no modern slavery or child labor used in its operations or by its supply chain.

TGS expects its supply chain to share its commitment to human rights and modern slavery laws and conducts risk-based due diligence on our supply chain to understand ownership and management structures, business relationships, and their human rights and modern slavery policies and procedures. In addition, TGS incorporates the necessary compliance provisions in the agreements and takes a zero-tolerance position with third parties who fail to understand and abide by their compliance obligations.

As noted above, TGS provides multiple avenues for TGS' internal and external stakeholders to report potential non-compliance with the law or TGS' Code of

Conduct, including modern slavery or human rights abuses including through the TGS hotline, which allows for anonymous reporting, directly to the compliance department or indirectly a manager. TGS prohibits retaliation and investigates all potential violations of the law or the Code of Conduct.

In 2019, TGS had zero incidents of child labor or forced labor. This is in part due to TGS' workforce being made up of highly skilled and highly trained employees, and also in part due to working with a small pool of known suppliers.

TGS' Human Rights Goals

TGS has set the following human rights goals for 2020 and beyond:

- Updating our human rights and modern slavery policies, procedures and practices, including developing a specific human rights and modern slavery policy
- Provide human rights and modern slavery training to our workforce
- Developing and implementing a formal supplier code of conduct, certification process and standard contract language

4. COMMUNITIES

4.1 Community Engagement

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 as well as encouraging employees to donate their time and energy to help those in society who are less fortunate. TGS is committed to supporting local, nonprofit community organizations and charities that focus their services on people and are dedicated to (i) providing access to healthcare, medical services and helping to fight disease; (ii) assisting underprivileged, underrepresented, or at-risk communities or groups; (iii) providing humanitarian aid or disaster relief; (iv) addressing environmental issues; or (v) promoting geophysics and geoscience educational experiences to children.

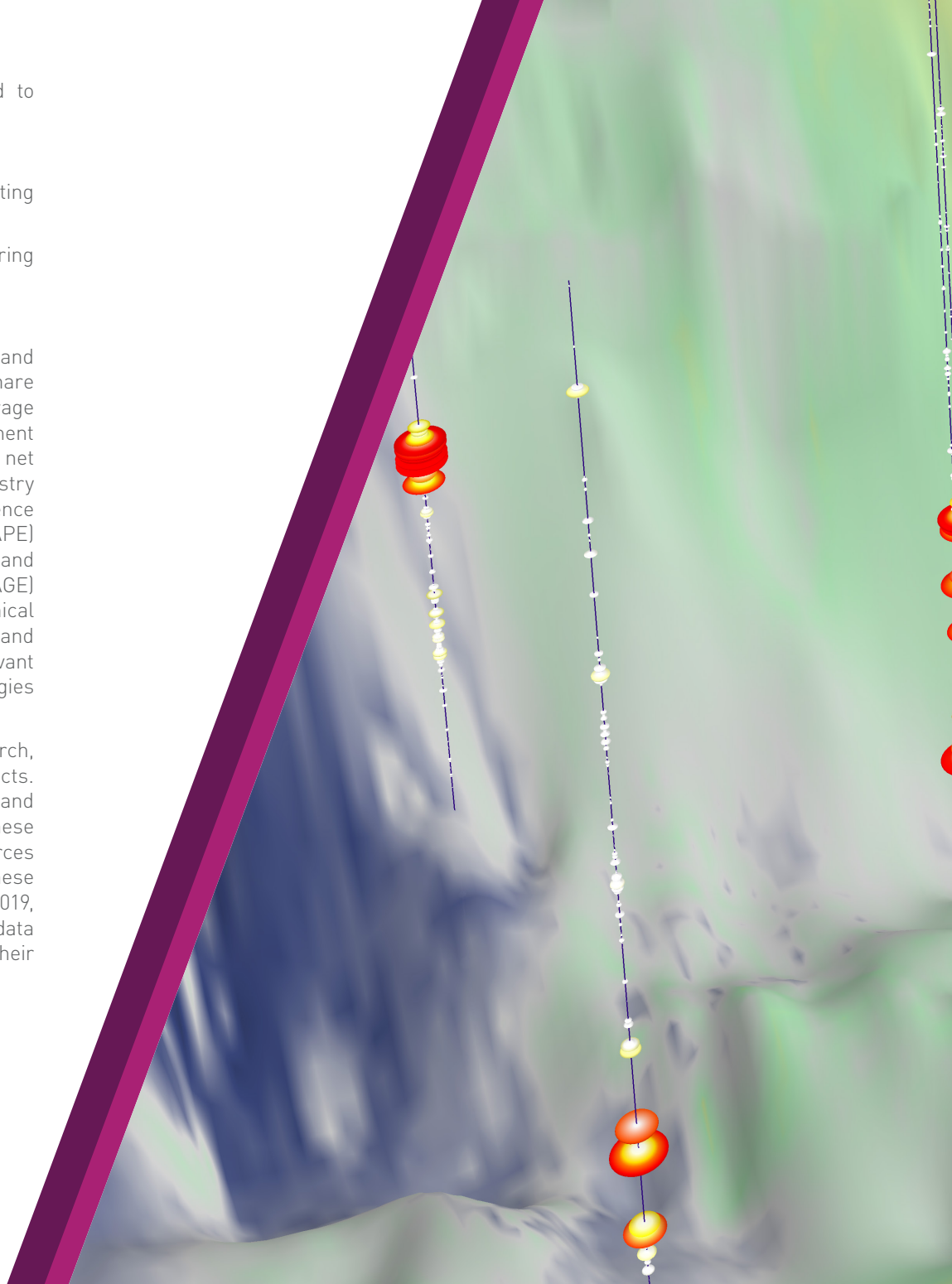
In 2019, TGS made charitable contributions to organizations that help underprivileged youth, fund medical research and access to healthcare, provide humanitarian aid and organizations promoting geophysics and geoscience educational experiences to children in Norway, the United States, Canada and the United Kingdom. To assist those devastated by the destructive bush fires in Australia, TGS made monetary donations to the Australian chapters of the Red Cross and Salvation Army. TGS also continued to recognize its employees' charitable spirit by matching employees' monetary donations or making monetary donations to charities in recognition of an employee's work with an organization, which includes:

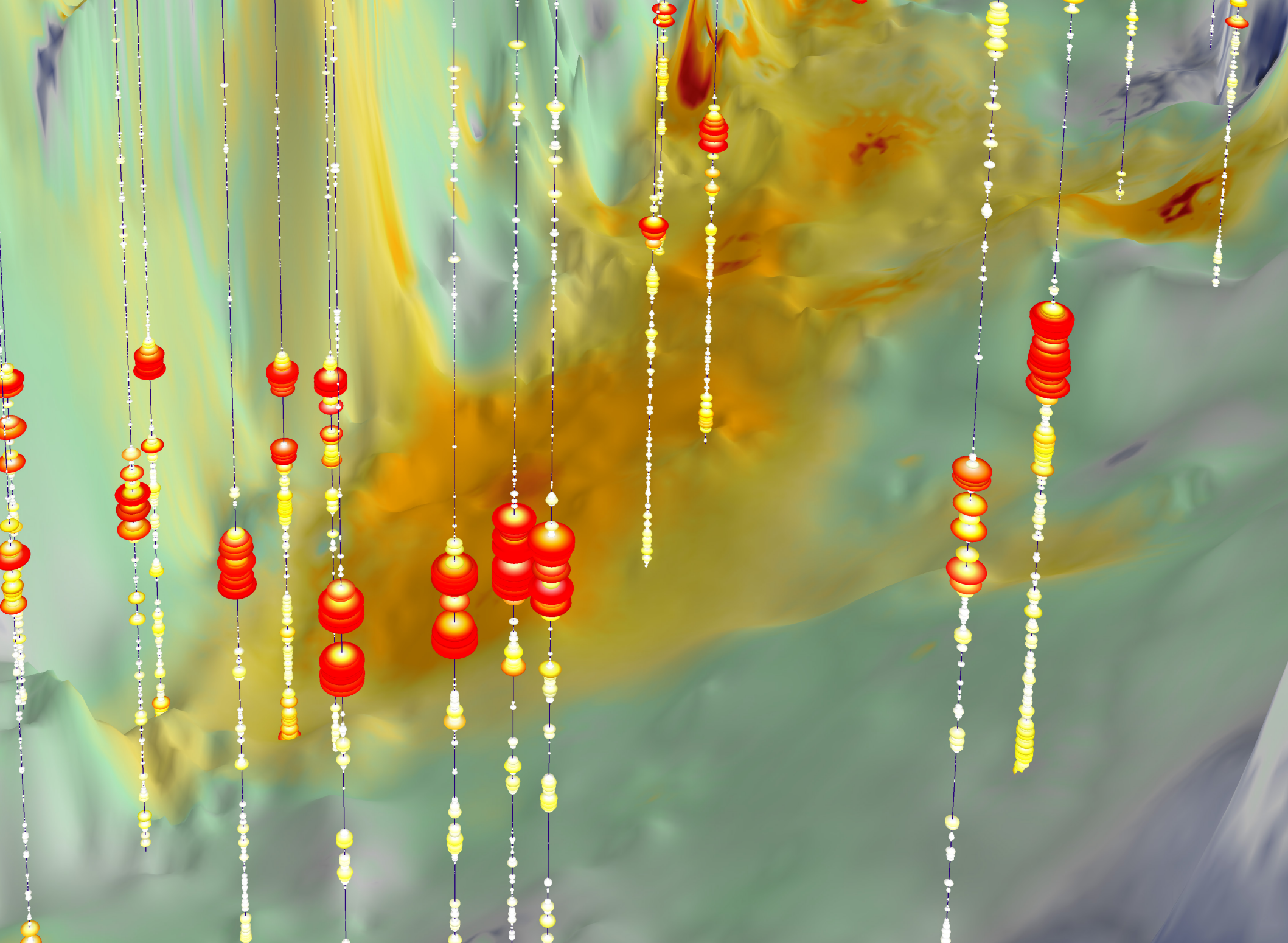
- Participating in fun runs to raise money for organizations dedicated to improving medical diagnostic research
- Donating their time to local food banks
- Holding board positions in charitable organizations aimed at assisting underprivileged and at-risk communities
- Providing learning experiences to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

4.2 Sharing Our Knowledge

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. In 2019, TGS' capitalized research and development spending corresponded to approximately 4.4% of the operating result and 1% of net revenues. TGS hosted, sponsored and/or presented at over 23 geoscience industry events designed to share advancements in imaging, data analytics, and geoscience technologies including the National Association of Petroleum Engineers (NAPE) Summit, Society of Exploration Geophysicists (SEG), International Exposition and Annual Meeting, and European Association of Geoscientists and Engineers (EAGE) Leadership Summit. In addition, TGS almost doubled the number of technical papers (42 papers in 2019 versus 22 papers in 2018) accepted at conferences and other industry publications in 2019. These papers covered a variety of topics relevant to the industry, including key developments in acquisition and imaging technologies and the use of these technologies in different basins or regions.

TGS recognizes that it has a social obligation to improve the existing research, development and technical capabilities in the areas in which we conduct projects. To that end, TGS has partnered 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 that include software and related equipment, for the purpose of ensuring these countries are equipped to manage and promote their oil and gas resources. In 2019, TGS provided over 103 weeks of training on imaging technologies and seismic data interpretation to African governments as part of our projects and to advance their in-country geoscience knowledge.







www.TGS.com