

## **Leaving a Fond Memory**

2012

Sustainable Development Report



### **OUR MISSION**

To create value by optimizing the discovery and the development of natural resources

### **OUR VISION**

To be the geoscience partner of choice

### **OUR VALUES**

Powered by people around the world, we

...have a passion for innovation

...operate safely and with integrity

in order to deliver sustainable performance



### LETTER FROM THE CHIEF EXECUTIVE OFFICER

### Leaving a Fond Memory

At CGG, we believe that sustainability can be achieved through a balanced approach to economic growth, social responsibility and sound environmental management. Together they will ensure a livable, fair and viable present and future for people and for our planet.

CGG's goal is to create value by optimizing the discovery and development of natural resources. We are 'in the field' carrying out our mission in over 70 locations worldwide. The environments in which we work are often remote and sometimes harsh. Working around the world, we are exposed to the most diverse cultures and societies, challenging our ability to develop and maintain good relationships. Our projects are often technically complex yet located far away from established communication networks and logistic infrastructure.

So how can we meet our commitment to sustainable development in such a challenging environment? Experience has taught us that we must rely on our people, on strong values and on sound risk management.

In this report we will share how our people, our values and our risk management come together to create a culture of performance and safety. We will also describe how our Corporate Governance provides a vital foundation for our sustainable development program.

We feel naturally bound to responsible business practices. CGG's approach to sustainable development is founded on our values. We are proud to support the United Nations Global Compact and to reassert our continued support for and ongoing commitment to promoting human and labor rights, protecting the environment and fighting all forms of corruption.

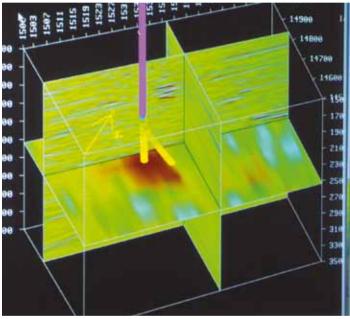
In this report we explain our approach to sustainable development, our areas of focus and we report on performance indicators. We also include case studies that illustrate how we implement our sustainability policy.

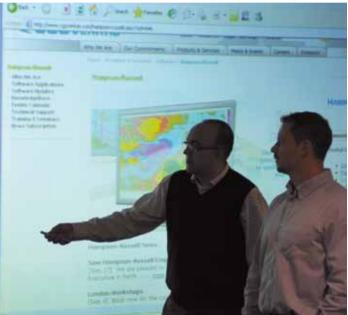
The greatest challenges facing the world today are collective stakes in which each one of us has a role to play. Our global presence and the nature of our activity give us an exciting opportunity to make a difference. By optimizing the discovery and development of natural resources, we aim to create value that benefits all of our stakeholders and to leave only a fond memory wherever we work.

Jales

Jean-Georges MALCOR
Chief Executive Officer







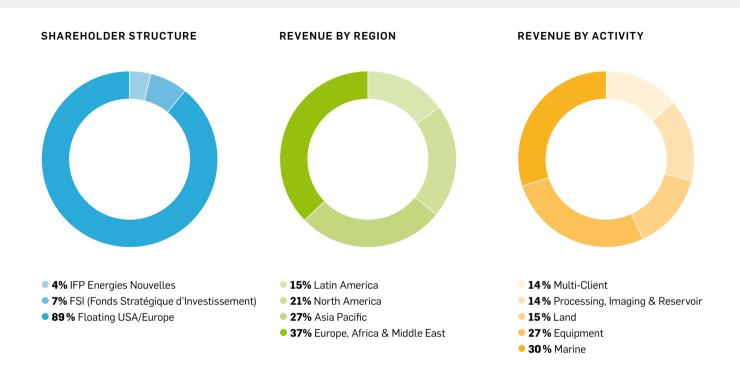


## **PROFILE**

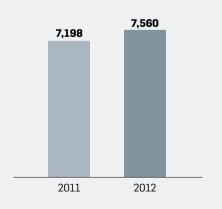
CGG is a leader in cutting-edge geoscience. We have built our leadership on a commitment to innovation and a sustained effort to develop our markets both locally and globally. We bring our clients a unique range of technologies, services and equipment designed to acquire extremely precise data and images of the Earth's subsurface as well as the state-of-the-art interpretive software and services required to develop a deeper understanding of the subsurface for exploration, production and optimization of natural resources including potential and existing oil and gas reservoirs. As of 2013, CGG employs over 9,800 people around the world; they share a passion for geoscience and work together safely and with integrity to deliver the best sustainable solutions to our clients' energy challenges.

CGG is listed on the Euronext Paris Stock Exchange and the New York Stock Exchange.

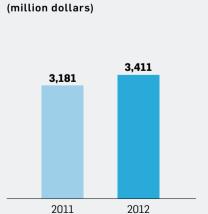
### 2012 KEY FIGURES





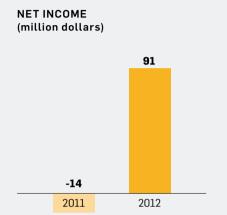


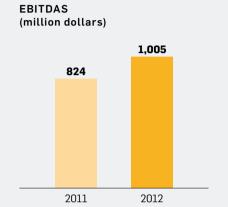
**NUMBER OF EMPLOYEES** 

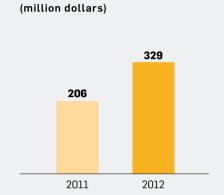


**CONSOLIDATED OPERATING** 

REVENUE

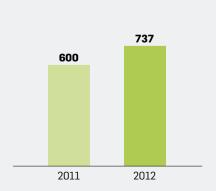






OPERATING INCOME





### NET DEBT TO EQUITY RATIO: 17%\* IN 2012



<sup>\*</sup> Before payment of \$1.32 billion for the Fugro Geoscience acquisition

### **CGG WORLDWIDE**

## Close to our clients across the globe

With over 70 locations worldwide, CGG works closely with its clients, wherever their location, to bring them the best solutions to meet their business needs.

### CGG has a worldwide presence with strong local roots.

Our Equipment division, Sercel, operates via an independent network of production facilities and offices.

The industry-recognized expertise of our Geology, Geophysics & Reservoir activities are available to clients through 30 open and 12 client-dedicated centers. These centers offer a unique platform for research, cooperation and interaction with our clients. They are also our way of investing locally in knowledge-sharing and people development.

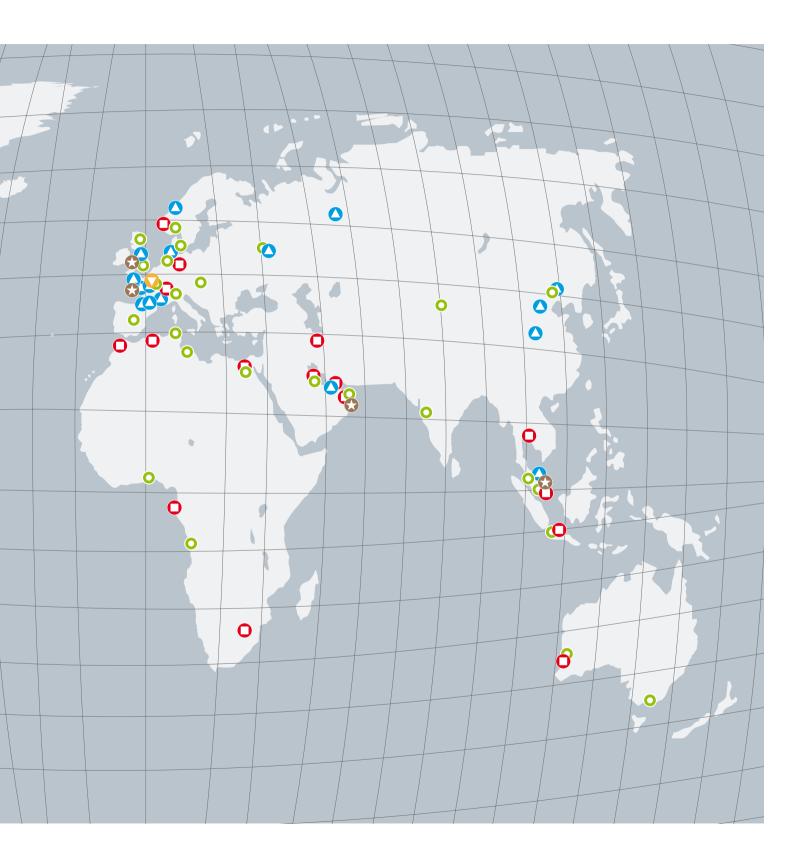
As one of the world's leading land seismic acquisition contractors, CGG is present in North America and the Middle East, and in areas requiring specific technologies, HSE excellence and operational expertise, such as the Arctic or other environmentally sensitive regions.

With our leading fleet, CGG delivers a complete range of marine seismic services all around the world from mature basins to frontier areas such as the Arctic basin, offshore Eastern Africa and in the Black Sea.

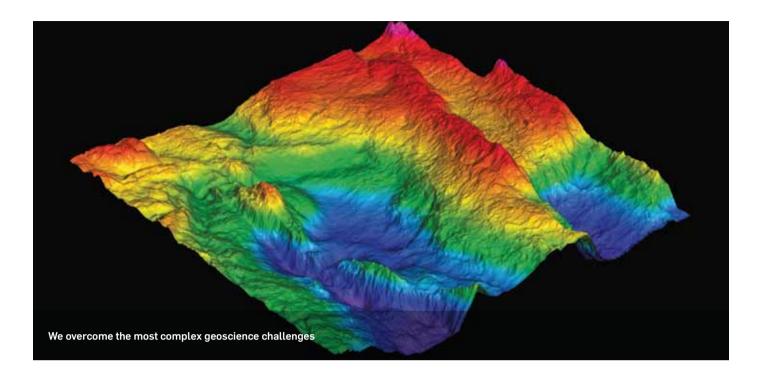
CGG provides world-class geophysical training and encourages performance and innovation via its CGG University centers in Paris, London, Houston, Singapore and Villahermosa. This worldwide network gives us the flexibility and scope to ensure we bring targeted, local solutions backed by global resources.

- Headquarters
- Regional office
- Equipment
- Geology, Geophysics & Reservoir
- CGG University





### **OUR ACTIVITIES**



## Forerunner and Leader in Geoscience

Building on an 80-year legacy and our proven track record of delivering successful seismic imaging solutions to the worldwide oil, gas and mineral industry, CGG makes a difference at every stage of the Exploration & Production (E&P) value chain from frontier exploration to assisted recovery.

Through our three complementary business divisions, Equipment, Acquisition and Geology, Geophysics & Reservoir (GGR), we offer a full range of geoscience solutions and services: from prospecting, exploration, appraisal and development to maximizing production.

### Equipment: innovative seismic and reservoir monitoring instruments

Sercel is the world's leading designer and manufacturer of innovative seismic equipment and reservoir monitoring

instruments used by oilfield service companies and geophysical contractors for seismic exploration and reservoir monitoring in land, marine, ocean bottom, transition zone and downhole environments.

### Acquisition: all types of geophysical surveys in the most challenging zones

CGG has the full range of data acquisition capabilities required to conduct all types of geophysical surveys, large or small. We are unique in being able to provide seamless coverage with a wide portfolio of seismic and other geophysical methods for any environment.

**Land:** From seismic acquisition to reservoir monitoring, our highly experienced crews operate with the latest geophysical technology.

**Marine:** We have the largest high-end marine fleet in the industry with vessels specially designed and fully equipped to record marine seismic, magnetic and gravity data.

**Airborne:** Our fleet of specialized aircraft acquires electromagnetic, magnetic, gravity and radiometric data for all types of oil and gas, mining and government clients worldwide.

**Seabed Geosolutions:** Our joint venture with Fugro is the world leader in seabed solutions, offering Ocean Bottom Cable and Node (OBC and OBN), shallow water and permanent reservoir monitoring acquisition services.





## Geology, Geophysics & Reservoir: cross disciplinary expertise from exploration to reservoir optimization

As leaders in **Subsurface Imaging**, we provide game-changing solutions, using our industry-leading *geovation* software.

Through **Robertson**, we deliver geological data analysis, well site services, reservoir engineering, economic modeling, advisory services and training programs in petroleum geology, geophysics, reservoir engineering, economics and management for the international petroleum industry.

Our advanced **Multi-Client library** offers high-end seismic, gravity, magnetic and well data in the world's key locations.

Through **Hampson-Russell** and **Jason**, we offer a full spectrum of software and services for seismic reservoir characterization, petrophysics, structural interpretation and reservoir modeling.

Through **NPA Satellite Mapping**, we process, interpret and distribute satellite imagery to provide mapping solutions, including a unique global hydrocarbon seep database.

We also deliver **the most advanced data management services** from physical asset management to national data repositories and bid round management.

## Innovation Powered by People

Our business landscape is becoming increasingly challenging as exploration and production move into more complex environments. Innovation is one of our core values; CGG is committed to pursuing excellence in innovation and aims to be a driving force in the technological advancement of the geoscience industry. Talented and dedicated teams of scientists, engineers and software programmers working in CGG centers around the world tailor technological advances to meet our clients' needs. This time-honored commitment has made us a leader in pioneering valuable new technologies.





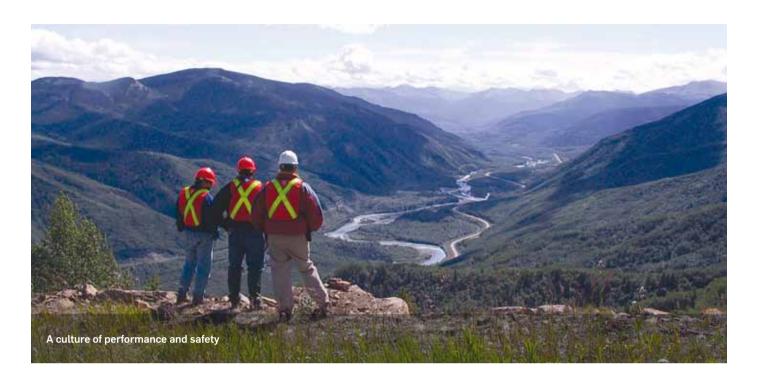


## SUSTAINABLE DEVELOPMENT STRATEGY

For CGG, sustainability means the ability to successfully deliver geoscience services and products to the market in the long term while preserving the environment and caring for our employees and the communities in which we have the privilege to operate.

We help our clients gain access to today's energy resources while preserving the ability of future generations to meet their energy needs.

### SUSTAINABLE DEVELOPMENT STRATEGY



## A Focused Sustainable Development Strategy

In 2012, CGG took a fresh look at its approach to sustainable development in order to identify the most important success factors in achieving sustainable performance in its business.

Our first goal was to better focus our sustainable development efforts after years of steady growth and expansion into new areas; secondly, we hoped to improve our transparency and accountability on sustainable development issues by identifying the themes most pertinent to our business and stakeholders.

Our analysis was based on a sustainable development materiality study. Our references were the Global Reporting Initiative (GRI) and the French Grenelle II regulatory framework. We carried out a broad-based internal consultation with CGG executives, managers, staff and social partners and an external consultation with third-party stakeholders including clients, investors, an NGO and our industry association. The consultations were designed to identify the sustainable development issues and themes that pose the greatest risk to CGG and to our right to

continue operating in the future. We also used the consultations to determine areas where we have the greatest opportunity to innovate by calling upon our talented people and our technology. The Materiality Analysis Chart on the following page illustrates the sustainability themes considered most important to our business.

### Using the results

The results of the materiality study provided us with an important foundation for developing a focused sustainable development strategy. Based on the study and on-going consultations with our stakeholders, we have focused our sustainable development efforts on the following themes:

#### **Governance and Conduct**

• Implementing governance structures and initiatives to ensure that our ethics, codes and standards are widely adhered to throughout the organization.

#### Our People

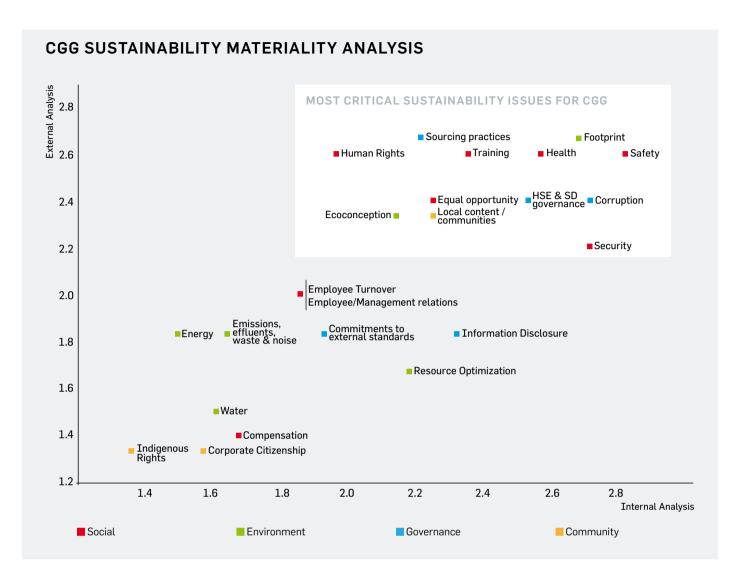
- Ensuring the Health, Safety and Security of our employees and subcontractors.
- Furthering the training and personal development of our employees.

#### **Environment**

• Preventing and/or minimizing the **footprint** of our operations on the environment.

#### Communities

• Managing **community relations** in the areas where we operate.



#### **Innovation**

We are a people and technology business. The materiality study highlighted the following areas where we can have a significant positive impact through innovation:

#### **Optimizing Natural Resources**

 Innovation in geoscience will be critical to better imaging the subsurface, optimizing field development and achieving more efficient oil and gas production. This will have a positive impact on the availability of resources for future generations.

#### **Eco-conception**

• Developing new geophysical equipment and methods with a reduced impact on the environment.

#### Training

 Our workforce is spread across the globe and represents a wide range of cultures making it challenging to develop common training programs and to foster shared values and best practices. Our diversity gives us the opportunity to develop innovative methodologies and new technologies for training, awareness-raising and knowledge-sharing.

Taking into account the results of the materiality study, we have decided to focus our sustainable development efforts on the above-mentioned themes. We will work closely with our R&D and Business Units to foster innovation and continue strengthening CGG's capacity to deliver sustainable services and equipment.

#### Assurance statement of reported information

This is the first time that CGG has submitted HSE and sustainable development reporting to third-party verification.

This independent assessment process provides an objective

evaluation of the pertinence of the themes and the sincerity of the information we disclose. The assurance team's report can be consulted at the end of the *Facts and Figures* section, pages 45-46.







# CORPORATE GOVERNANCE

"The CGG Group was built on a foundation of values and ethics. The Group has made a commitment to its clients, its shareholders, its employees and its partners to comply with the laws and regulations of the territories where it operates and to respect the principles of its Business Code of Conduct." Robert Brunck, Chairman of the Board.

### CORPORATE GOVERNANCE

## Applying the Principles of Good Governance

Good governance is one of the pillars of sustainable development at CGG. A solid governance structure and clear governance practices ensure that CGG has strong strategic focus, manages its risks effectively, complies with laws and regulations, is transparent in its external reporting and develops constructive relationships with its stakeholders. The diagram on the following page provides a brief overview of the company's governance structure.

CGG is listed on both the Paris and New York stock exchanges and accordingly follows the recommendations of the AFEP-MEDEF Code and the Sarbanes-Oxley Act. Since 2010, CGG has dissociated the functions of CEO and Chairman.

#### **Board of Directors**

The Board of Directors relies on the work of specialized committees to oversee the company's good conduct. The Committees oversee Group activities in their area of competency, guarantee that high-level risks are identified and managed and maintain a close collaboration with General Management.

The Board of Directors' Internal Rules and Regulations define the composition, duties and operating procedures of the Committees, with the exception of the Audit Committee and the Appointment & Remuneration Committee that have each had their own operating charter since March 8th, 2005 and July 30th, 2008 respectively.

The Board of Directors organizes an annual evaluation of its activities and those of its committees. This is a self-evaluation, supplemented every third year by a more in-depth assessment, including individual interviews, with an outside consultant. The results of the self-evaluations are analyzed once a year and reported on by the external consultant. They result in action plans that are monitored annually, in particular by the Appointment and Remuneration Committee.

### **Executive leadership**

CGG is under the management responsibility of Jean-Georges Malcor, Chief Executive Officer, to whom the Board has given broad management authority. He is seconded by two Corporate Officers, Stephane-Paul Frydman and Pascal Rouiller. As CEO, Jean-Georges Malcor manages the Group with support from three management committees, the C COM, the E COM and the M COM whose functions are described in the diagram on the following page.

# The Business Code of Conduct & the Ethics Committee

The Group's commitments and expectations are described in the Code of Ethics, the Group Values, the Business Code of Conduct and in the policies that guide their implementation.

To support the Business Code of Conduct, CGG created the Ethics Committee. The committee meets several times per year and reports to the Audit Committee and to the Chief Executive Officer.

To further encourage compliance, CGG has established an Independent Ethics Alert system to report irregularities to or violations of the CGG Code of Conduct. An Ethics Alert hot-line, managed by an independent third-party, is open to employees 24-hours-a-day in all countries where we operate.

In 2012, the Ethics Committee focused its efforts on increasing internal visibility of the Business Code of Conduct, training to support our commitments and developing practical guidelines to help our employees understand and apply our Code of Conduct.

We updated Business Code of Conduct inductions for new hires and translated the Code into additional languages, bringing the total to eight languages. We issued Guidelines on Gifts and Entertainment to help managers and their employees implement the Code and avoid conflicts of interest. We strengthened our ethics training program with an eLearning course on Ethics that targets all CGG employees. Since its launch in 2012, 80% of office-based employees have completed the course.

We also launched a classroom based Anti-Corruption training program with a strong focus on anti-bribery regulations; training was conducted at major operation sites around the world.

### **Group Governance Structure**

#### **BOARD OF DIRECTORS**

Thirteen members of which nine are independent.

Of the thirteen members, eight are French, three are American, one is Norwegian and one is Canadian. Four members are women.

### APPOINTMENT & REMUNERATION COMMITTEE

- Prepares and makes recommendations to the Board on senior executive compensation and benefits and on company equity-based plans
- Oversees appointments to the Board and key executive positions

## HSE & SUSTAINABLE DEVELOPMENT COMMITTEE

- Oversees and informs the Board on the company's sustainable development and HSE programs
- Oversees and informs the Board on sustainable development and HSE high-level risks

### AUDIT COMMITTEE

- Oversees the effectiveness of the company's Internal Control and Risk Management
- Reviews the organization, operation and results of internal audits
- Oversees external audits and their results
- Oversees the Group's plans, budgets and financial operations

### STRATEGIC COMMITTEE

 Assists the Board in setting strategic goals and overseeing their implementation

### **TECHNOLOGY COMMITTEE**

- Assists the Board concerning the company's technology development strategy
- Oversees technology risks including competitor offers and intellectual property

### CORPORATE COMMITTEE (C COM)

C COM is chaired by the CEO. It is a decision-making body that meets monthly to review the general conduct of business. Its members interface regularly with the Board and the market and participate in the Group's financial and business roadshows.

### **EXECUTIVE COMMITTEE (E COM)**

E COM meets monthly and acts as a support structure for the C COM. It's principal function is to serve as a the Group's platform for discussion and proposals between Divisions and Functions. It also serves as the validating body for all projects and decisions with cross-division or cross-function impact. More specifically it:

- Monitors the implementation of C COM executive decisions
- Insures coherency for group-wide initiatives across the three Divisions
- Monitors the management of support functions and shared services

### MANAGEMENT COMMITTEE (M COM)

M COM meets twice quarterly to review and discuss Group performance, business and budget information and specific topics of interest to the Group as required. One of the two quarterly meetings is scheduled at the same time as the quarterly business review in order to prepare external financial communications.

### **DIVISIONS**

- Manage operations in their respective areas of activity
- Develop markets and technologies in their areas

### **FUNCTIONS**

- Provide functional support to operations
- Develop policy and guidance in functional areas
- Assure the overall coherence of Group activities

### **DEPARTMENTS**

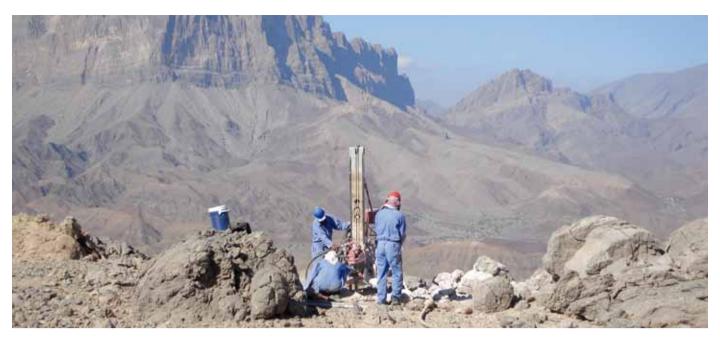
 Provide support to operations and General Management in Internal Audit, Risk Management, HSE, Sustainable Development, Strategy, Investor Relations and Communication

### ETHICS COMMITTEE

- Oversees the dissemination of our Business Code of Conduct and related training
- Reviews and makes recommendations concerning ethical issues and situations
- Maintains an 'ethics alert' hotline

### SUSTAINABLE DEVELOPMENT COMMITTEE

- Pilots our sustainable development program
- Reports on progress in sustainable development to General Management and the Board's HSE & SD Committee







## **OUR PEOPLE**

Since our company was founded in 1931, our people and their pioneering spirit have been the driving force behind our enduring success and the innovation and excellence we provide to our customers.

### **OUR PEOPLE**



## Health, Safety and Security

CGG is committed to providing a healthy, safe and secure work environment for its employees and sub-contractors. This commitment runs deep in our company culture and conduct.

Our management of health, safety and security is based on fundamentals: a proactive approach in all of our operations and the relentless pursuit of improvement through learning from incidents and near misses.

### Our Management System

CGG has a structured approach to Health, Safety and Security, built on our HSE Management System (HSE MS). The HSE Management System is implemented across our activities; its broad scope includes the health, safety and security of our permanent employees, our seasonal employees and subcontractors under our management as well as the environmental impact of all of our projects and facilities. Our HSE MS is consistent with the Oil & Gas Producers (OGP) Guidelines for the Development and Application of Health, Safety and Environment Management Systems, the de facto industry standard. We take a structured approach to identifying, assessing and controlling risks based on a common methodology and a common risk matrix worldwide. Risk assessments are conducted for each project or each permanent facility; they integrate our historical incident databases as well as industry data from the International Association of Geophysical Contractors (IAGC) shared incident database going back several decades.

### Audit

A strong audit program verifies that our HSE and SD policies and key processes are implemented and being complied with across our activities. Audits are supplemented by operational cross-audits and inspections at project and facility level. In 2012, 145 HSE audits were conducted; they were supplemented by over 110,000 local inspections.





### Focus on high risks

We focus on high-risk areas in our operations with specific programs and initiatives:

- Road Transport: in 2012, we pursued our road transport program focusing on driver competency and behavior, reinforced by consequence management. Through these efforts and the use of In Vehicle Monitoring systems (IVMS), Speed Limiting Devices (SLDs), roll-over protection and permanent on-site defensive driver trainers on our crews, our Motor Vehicle Crash Rate continued to decline, from 0.92 in 2010 to 0.45 in 2012, while drivers on our operations drove over 35 million kilometers.
- Helicopter Operations: following a helicopter accident
  in Gabon, in early 2012, we reviewed and updated our
  standards and procedures for operations using helicopter
  support. Our helicopter audit and inspection program,
  managed by in-house aviation experts, further strengthened
  our program.
- **Crane Operations:** we reinforced procedures and training concerning crane and lifting operations offshore.
- **Small Boat Operations:** we reviewed and updated equipment and subcontractor selection procedures, operating procedures and training programs.

In addition to these specific focus areas, we relentlessly pursued the identification, investigation of and learning from High Potential Incidents and Near Misses. These HPIs receive high visibility in CGG with regular review up to the CEO.

**The Health component** of CGG's HSE MS covers operational health risks and monitors/enhances health-related performance criteria:

- CGG has a robust health and wellness program worldwide for its personnel, backed up by local health insurance programs and cross-national programs for its expatriate and field personnel.
   The programs address wellness and fitness to work as well as on-site medical care.
- CGG must also meet the challenge of providing emergency medical support to our operations, whether offshore or onshore, even in the most remote environments. Emergency response is addressed in project plans and is built up as required from first responders in the field to full medical clinics for large remote operations.
- Our vessels and remote crew camps are staffed with doctors who benefit from specialist support via telemedicine centers. Our project preparation also addresses medical evacuation (Medevac) and the resources needed for this, such as ambulances and helicopters. We have secured the services of a global provider for international medical transport and repatriation.

### **OUR PEOPLE**



#### Our security system relies on prevention and deterrence.

Our intelligence system provides regular updates that allow us to assess the security risk in maritime piracy and potentially unstable areas onshore. Geophysical surveys in these areas are reviewed at the Group's highest management level. Security experts provide support for these evaluations. Preparedness audits and drills are conducted to measure the efficiency of such plans.

All CGG travelers receive security information and advice about their country of destination. When necessary, these individuals are integrated in the local security plan.

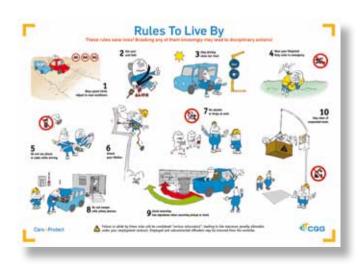
### Nurturing our HSE culture

Individual risk awareness and responsibility are essential elements of our HSE Management System. Our behavioural programs "Rules to Live By" and "Things We All Must Know", focusing on our major safety risks, are deployed across all activities and in a variety of languages. The rules are backed up by clear procedures, a consequence management program and visible signage for worksites.

CGG HSE training programs are delivered across the organization at all sites, at CGG University facilities and in the field. In 2012, we launched focused programs to strengthen risk management in the areas of support vessel management, offshore crane

use and manual lifting and handling. CGG provided over 128,000 hours of HSE training in 2012.

CGG continues to play an active role in the International Association of Geophysical Contractors' (IAGC) HSE Committee and participates in numerous Oil and Gas Producers (OGP) workgroups.



CGG '10 Rules To Live By' poster

### Safety on Oman crew OMN52

### Challenge

Sustain excellent HSE performance over time.

### **Background**

Our OMN52 crew has a staff of approximately 400 on site, that work in difficult, remote and frequently changing terrain. The crew drivers average over 220,000 km per month, exposing them to one of the highest-risk activities in seismic operations.

#### Solution

The OMN52 crew has tackled the challenge with a proactive HSE approach. As a cornerstone, the crew implemented a crew-wide HSE training program and a top-to-bottom commitment to HSE objectives. All new hires receive 2.5 days of HSE training before they are deployed to the field. Within three months of deployment they are assessed to determine if they have retained what they learned. The crew also has two full-time driving assessors, ensuring that at least one of them is on crew at all times.

The crew's annual HSE Plan is a one-page poster that is easy to read and follow. It includes a comprehensive list of Key Performance Indicators and Objectives for the year. Indicators are monitored on a monthly basis.

OMN52 submits nearly three times more Hazard Observations than other desert crews. All supervisory staff members, for crews of 150 or more, have HSE objectives that include hazard reporting, inspection participation, field visits and participation in the safety task observation program.

#### Results

The staff regularly meets 99% of their HSE targets. In addition, Crew OMN52 is one of eight Petroleum Development Oman (PDO) contractors out of more than 100 approved to deliver in-house training to its employees; the crew includes two full-time NEBOSH-certified HSE trainers fluent in Arabic and English.

The OMN52 crew has operated for eight years since their last LTI (lost time injury). Our joint venture Ardiseis received the PDO 2012 Gold Excellence Award for Commitment to Safety. They were selected by PDO for this top award from over 140 contractors under consideration.



### **OUR PEOPLE**



# Developing and Protecting our Human Capital

Powered by people, CGG has built its reputation on the ingenuity and expertise of its employees. CGG offers an environment in which they can learn and develop their talents, receive the recognition they deserve and always have something new and challenging to do.

### Attracting talent

Our industry will be enjoying a growth cycle in the coming years while also having to face natural personnel attrition. In response, CGG has implemented an ambitious hiring program for office geophysicists, R&D scientists, maritime managers and specialists. In addition, we launched a program to recruit marine field staff to strengthen our skills in the field of navigation and geophysics.

Our *Georise* hiring program targets high-potential young people from all over the world. Combining theory and practice, it covers all aspects of the geophysical industry from acquisition to data processing. The program consists of three phases: a core unit of general training in geophysics and its environment, several on-site training sessions and a final specialization in each participant's future field of activity. In 2012, several *Georise* recruits joined the Land and Marine divisions. The *Georise* program was supplemented by targeted hiring to complement the Group's existing expertise in reservoir characterization.

CGG maintains close relationships with schools and universities. Through our student outreach activities we participate actively in academic programs and contribute to improving the knowledge of geosciences. Outreach programs are typically organized by professional associations, such as the SEG (Society of Exploration Geophysicists) and the EAGE (European Association of Geoscientists & Engineers).

### **Developing competence**

Promoting individual and professional development is a CGG priority. That is why we began developing our own corporate university in 2005. In keeping with our goal of Learning for Development, CGG University delivered a total of approximately 20,000 training days in 2012 in Singapore, Rio, Calgary, Houston, Bergen and Massy, of which 1,140 days were dedicated to HSE and sustainable development. The other training sessions focused





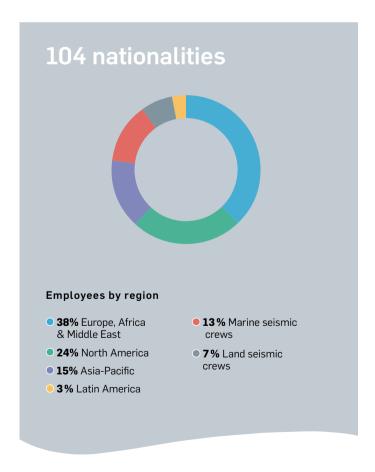
on integrating new hires, delivering technical training programs to employees and clients and offering continuing education opportunities in management, personal development, purchasing, project management and ethics.

### **Equal opportunity**

CGG's Human Resources policy is explicit on non-discrimination and equality of opportunity and treatment in employment. Specific efforts have been made to achieve greater gender parity at the management level through promotions and targeted external hiring.

### Respecting and promoting labor and human rights

CGG adheres to the principles and rules laid down by the International Labor Organization (ILO) and the United Nations Universal Declaration of Human Rights. Our Human Resources policy prohibits the employment of children under 16 years of age.









## **ENVIRONMENT**

Concern for the environment is an integral part of the way in which we conduct our business.

Our public commitment, defined within our environmental policy, strives to prevent or reduce our environmental footprint and to continually improve our environmental performance.

### **ENVIRONMENT**



## **Environmental Management System**

CGG's environmental stewardship is embedded in the Group's HSE MS. Dedicated environmental specialists also support line management in our operations.

At the project level, clients often provide an Environmental Impact Assessment (EIA) for the area of operations; we then work with the client to develop a corresponding Environmental Management Plan. The Project Risk Assessment (PRA) includes an environmental section in which mitigation measures are set to alleviate or minimize the risk of environmental disturbance.

Site or project-specific Emergency Response Plans (ERP) are designed to deal with a wide range of possible scenarios and emergency drills are conducted regularly. Every environmental incident or near miss is recorded and rated on its risk level, providing a basis for analysis and triggering corrective actions at the field level. Information-sharing helps to ensure that the same incident will not happen elsewhere.

Training delivered to employees and subcontractors in the field or to line management and the HSE community at CGG University continues to raise environmental awareness and expertise. This is visible from the HSE MS audit results analyzed throughout the year.

## Minimizing the Footprint of our Products

Environmental considerations are most effective when taken into account directly from the product development stage. That is what we did over the last two years with the latest purpose-built marine seismic vessels – the Oceanic Vega and the Oceanic Sirius - featuring a X-BOW hull design to reduce hydrodynamic drag and enhance fuel efficiency. Their engines are compatible with low-emission fuel. Bilge and ballast water benefit from state-of-the-art treatment systems. A 'green passport' carries an inventory of all materials so as to recycle the vessel more effectively at the end of her life. In recognition of their low environmental impact, these vessels received a DNV 'Clean Design' class certification.

In 2012, five new purpose-built vessels were introduced and deployed in acquisition surveys in Alaska's environmentally sensitive shallow water and transition zones. Pollution prevention specifications were agreed on with the shipyard at the design stage. Hydraulic systems on these vessels operate with biodegradable oil. Customized waste management systems allow CGG to operate through the season applying a zero overboard discharge policy. The Resolution, the largest vessel among these shallow water new-builds, received the Bureau Veritas cleanship rating.

### Marine Seismic Equipment Ecodesign

### Challenge

Raise marine seismic acquisition productivity while minimizing its environmental footprint.

### Background - Pioneer in true solid streamer technology

Prior to the introduction of the Sentinel® most streamer sections were filled with Isopar fluid, which is potentially harmful to the environment in the event of streamer damage. A typical 3D survey towes about 80 km of streamers filled with 100,000 liters of oil. In addition to the hazard inherent to any flammable material, Isopar-filled sections also presented a recycling challenge for customers as well as for CGG.

To address this issue, Sentinel® was the first true solid streamer made available to geophysical contractors by CGG, providing the most advanced data quality while reducing the environmental impact of geophysical surveys.

#### Solution

Sercel has implemented a waste minimization strategy (reduce, re-use and recycle).

It has adopted an ecodesign approach that takes the environment into account right from the design stage through

to production and the product's end-of life. This method defines the product's environmental objectives, its impact in the field, and the product's composition and specifications. Four sites currently manage the disposal of all marine seismic equipment in Europe, Asia and the Americas. All of them actively participate in recycling materials through local companies.

Launched in 2005, Sentinel® was quickly adopted by all major industries. It is now the system of choice for complex operations including operations in very sensitive zones such as the Arctic. In June of 2012, Sercel launched a new generation solid streamer, the Sentinel RD, adding the advantages of reduced weight and diameter to Sentinel's unmatched reliability and outstanding data quality.

#### Results

The Sentinel RD reduces cable drag by 7%, allowing seismic vessels to lower fuel consumption during operations. The 15% weight reduction also reduces associated greenhouse gases and shipping costs. In conjunction with the all-in-one Nautilus® streamer positioning and control system, the Sercel marine seismic portfolio significantly reduces in-fill and thereby overall survey time and energy consumption.



### **ENVIRONMENT**



## Minimizing the Footprint of our Services

### Seismic Acquisition - Preventing impact on flora and fauna

CGG's main footprint in land acquisition relates to line clearing and the construction of helipads and drop zones. The width of seismic lines has greatly decreased over the past 20 years, from eight-meter-wide lines in the past to what is now commonly referred to as low-impact seismic. Typical receiver lines are 1.75m wide while source lines range between 2.5 and 5.5m. In tropical environments where vibrators cannot be used, lines are cleared to a bare minimum for advance crews to safely pass through the dense vegetation. When surveys end, timber damage assessments and decommissioning reports inform the client and the authorities about the surface that had to be cleared.

In areas presenting a risk of fauna disturbance, biologists scout the survey area prior to operations and may displace lines so as to avoid direct interaction with vulnerable species, among others protected birds, ungulates, elephants and turtles.

Marine seismic acquisition has evolved with respect to a growing concern over the potential impact of man-made sound on marine life. We have implemented preventive and mitigation measures

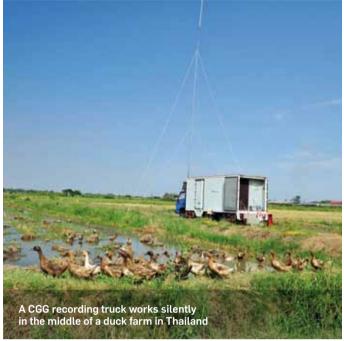
on marine surveys for over a decade. Onboard our vessels, teams of Marine Mammal Observers (MMO) ensure compliance with applicable regulations and client EIAs. Soft-starts are used as a standard mitigation measure to warn marine mammals and sea turtles of our presence before surveying begins, giving the animals time to leave the immediate vicinity of our operation prior to our vessels reaching full power. After risk assessment and depending on the applicable regulations, MMOs monitor a 500m to 3,000m exclusion zone around the energy source. In areas not governed by specific regulations, CGG follows the IAGC recommended mitigation measures for cetaceans issued in June 2011.

### **Energy consumption - Reducing our impact on the atmosphere**

Two thirds of the total greenhouse gases emitted by CGG are the result of fuel consumed on marine seismic surveys. Our fleet uses high-quality Marine Diesel Oil (MDO) offering significant environmental advantages compared to the cheaper Heavy Fuel Oil (HFO) used in most of the ocean industry. In 2012, fuel consumption in our Marine division was 94% MDO and only 6% HFO.

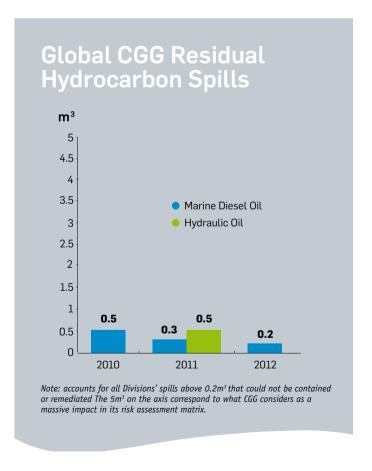
Marine fuel consumption efficiency is measured and monitored per vessel and per area of acquisition taking into account the quantity of linear seismic data acquired per cubic meter of fuel consumed. Programs are designed by our Maritime department as





well as our Joint Venture partners to improve fuel efficiency. They address voyage performance, ship performance, fuel management, main and auxiliary engines and other hotspots such as incinerators, Heating Ventilation and Air Conditioning (HVAC), water production or compressors.

The footprint of Geology, Geophysics & Reservoir (GGR) activity is limited mainly to the waste generated in an office environment and the electricity needed to power computer workstations and data centers. GGR is steadily reducing its energy consumption by adopting breakthrough solutions for its data centers such as evaporative cooling and oil cooling systems.



### **ENVIRONMENT**



### **Promoting Research**

As a member of the IAGC, CGG supports the *Sound and Marine Life* Joint Industry Project (JIP), addressing priority knowledge gaps and research needs to better evaluate and mitigate the potential impact of man-made sound on marine animals.

Since 2006, this program has awarded 32 million USD in research grants focusing on sound source characterization and propagation, physiological effects, behavioral reactions and mitigation and monitoring measures. The results of this research are disclosed in various specialist peer-reviewed publications and on the JIP website www.soundandmarinelife.org.

### Stakeholder dialogue

The open-source Passive Acoustic Monitoring (PAM) software Pan Guard was an early JIP product. As it holds promise to help the industry better detect the presence of marine mammals in low-visibility conditions, CGG has engaged in field testing since 2010 to enhance the technology and better adapt it to operational constraints. A comprehensive trial was conducted onboard the Oceanic Phoenix and Viking in Brazil from December 2011 to July 2012. CGG shared the results with the Brazilian Ministry of the Environment (IBAMA), which is currently seeking to better understand PAM capabilities before mandating it in future regulations.

In 2012, CGG participated in a series of international regulatory and scientific workshops and actively contributed to sound and marine life workgroups at the IAGC and the Cluster Maritime Français (CMF). In May of 2012, following an invitation from the French Defense Ministry, CGG presented its approach in a public conference in Paris addressing the effect of sound on cetaceans. The conference gave us the opportunity to directly answer questions from regulators, scientists and conservation NGOs.

### **Cooling with Oil**

### Challenge

Meet CGG's high-intensity computing demand while effectively managing overall power usage.

### **Background**

Most large-scale computer systems are rack-mounted and installed in environmentally controlled data centers relying on traditional air-cooling systems. Since the heat transfer capabilities of air are very poor, they require a significant volume of cold air to remove the heat. In such configurations, the power demand of the cooling system typically equals that of the IT equipment. An increase in IT computing capacity triggers a corresponding increase in power consumption.

#### Solution

In 2011, our IT department conducted extensive research and analysis of alternative options to increase our computing capacity without increasing power consumption.

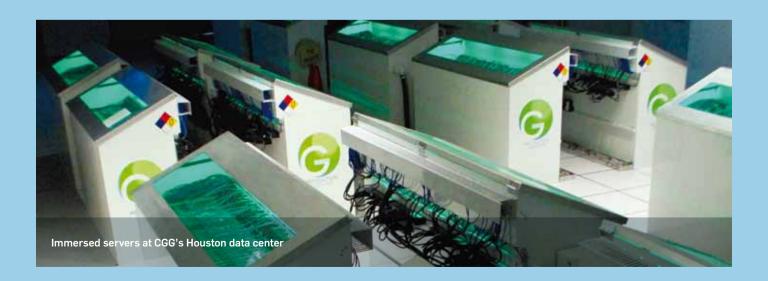
The solution retained is an oil-submersion server cooling system. Dielectric oil-submersion technology provides the most energy-efficient cooling and lowest cost per watt in the industry. Since oil retains 1,200 times more heat than air, it starts to cool servers at 40°C whereas air conditioning typically requires an ambient temperature of 24°C. In addition, oil cooling has

the ability to sustain up to 100 kW per tank. This compares to 30 kW per rack in traditional air-cooled environments. In 2012, following the successful 2011 pilot project, CGG went for a full-scale production installation in its largest data center (Houston – U.S.A.) and now operates the world's largest oil immersion installation.

#### Results

We have been able to significantly increase our computing capacity while achieving a Power Usage Effectiveness\* index of 1.2. This translates into a 40% power consumption and carbon footprint reduction. The adoption of oil-submersion technology has in turn encouraged original equipment manufacturers to test and develop products that are less material and energy intensive.

\* Power Usage Effectiveness (PUE) is determined by dividing the amount of power entering a data center by the power used to run the computer infrastructure within it such as cooling systems.









# SOCIAL RESPONSIBILITY

CGG believes that sustainable development engages all stakeholders - both internal and external. CGG is committed to intensifying exchanges and dialog with all stakeholders to increase mutual trust and create shared value over the long term.

## SOCIAL RESPONSIBILITY



# Contributing to National & Local Development

Successfully maintaining relations with national partners over time has been key to CGG's success. Our relationship goes well beyond mere commercial relations. We carry out on-going collaborative research and development with National Oil Companies such as Saudi Aramco to lead to a step-change in the efficient delivery of reservoir quality seismic data.

Present in 70 locations worldwide, CGG employs people and sources goods from all over the globe.

Despite the nomadic nature of acquisition activities, CGG consistently contributes to the economic development of the countries and communities hosting its operations.

Local staff is given preference whenever possible for short-term employment in land acquisition. CGG trains temporary employees and subcontractors in health, safety and environmental issues, over and above local regulation requirements.

79,000 hours of HSE training were delivered in 2012 for Land acquisition.

In addition to the local workforce, seismic acquisition typically sources diesel oil, local transportation services, vehicle maintenance, housing, catering and sanitation services locally. In Oman and Egypt for example, 80% and 77% respectively of the operational expenditures are spent locally.

#### Community relations

Developing and maintaining harmonious relations with local communities is central to geophysical acquisition. Evaluating the risk and the opportunities tied to our community relations is part of the Project Risk Assessment. In addition, a specific guidance document and toolbox called "Community Relations Management Plan" (CRMP) can complement the project risk assessment in areas where geophysical acquisition crews interact significantly with local communities. This is the case for example on marine surveys when vessels operate in waters close to the shore where artisanal fisheries are present or in land acquisition when crews operate close to urban areas or conversely in remote rural areas.

# Pernambuco Fishing Communities Compensation Plan

#### Challenge

Ensure a proper representation of the population potentially affected by marine surveys so as to compensate them fairly for lost activity.

Even with the best planning, marine surveys sometimes coincide with the prime activities of local fishing communities. Local community leaders and political groups usually look forward to influencing the consultation and compensation process, and local election campaigns can intensify the debates.

#### Background

The Pernambuco Seismic Survey imaged 2,720 km² of subsurface. Conducted more than 21 kilometers from the coast, it still coincided with small-scale fishing activities along the 200-meter isopleth. These artisanal fisheries provide the main source of subsistence and income for the population living along the coast.

#### Solution

CGG and the Brazilian Environmental Ministry IBAMA set up a process resulting in the designation of priority community projects. Representatives from each of the nine concerned communities joined the workgroup. A series of meetings involving fishermen, their representatives, CGG and IBAMA discussed the communities' needs and validated projects that they considered to have the most potential.

As CGG Brazil is headquartered far away from the affected area, in Rio de Janeiro, a local community liaison officer was hired to maintain direct contact with the fishing communities and the workgroup.

#### Results

The implementation phase began shortly after the last election meeting.

So far, three projects have been agreed upon and will materialize in 2013. The Paulista fish market will be built and CGG is also helping the community consolidate the administrative documents. In Itamaraca, the fishermen's association house will be renovated. In Olinda, a series of training sessions will be delivered on boat maintenance and sustainable fishing techniques.

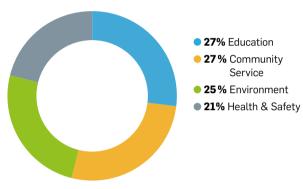


## SOCIAL RESPONSIBILITY

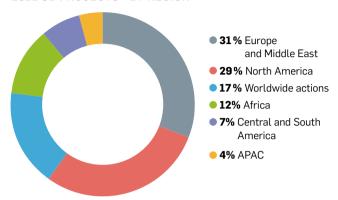
# **Corporate Citizenship**

CGG's approach to corporate citizenship is to concentrate on meaningful actions in the areas of education (with a focus on promoting earth sciences), community service, environmental protection and health. A network of sustainable development correspondents ensures the follow-up, promotion and reporting of local projects, coordinated by the Group's Social Responsibility Manager. In 2012, we conducted initiatives in 20 countries for about 760,000 USD.

#### 2012 SD PROJECTS - BY FIELD OF ACTION



#### 2012 SD PROJECTS - BY REGION



In selecting projects, CGG favors initiatives in which employees take an active part rather than simple donations. In 2012, CGG employees personally supported half of our projects, an improvement over the 29% of direct employee involvement the previous year. 70% of our employees feel proud to work for CGG. The opportunities that are provided for all of them to give back to the community certainly contribute to their satisfaction.

# Investor Relations and Socially Responsible Investment

Investor Relations keep the financial and extra-financial community regularly informed about CGG's business.

The Group is followed by 31 international investment analysts worldwide. In 2012, CGG participated in over 50 international roadshows and conferences.

Socially Responsible Investment (SRI) indexes assess a company's extra-financial performance based on specific methodologies. They analyze the social policies, performance and data, as well as the economic and environmental information disclosed by a company in order to give it a non-financial rating.

This determines whether or not the company will be listed in the given index. Each year, these indexes assess company progress in terms of sustainable development indicators and ensure that companies engage in an ongoing improvement process. SRI indexes select the most successful and conscientious companies in terms of sustainable practices.

In 2012, CGG was once again the only geophysical services company to be included in the ASPI Eurozone, Ethibel Excellence and Dow Jones Sustainability Europe indexes, to which we added a first listing in the Dow Jones Sustainability World index and Vigeo Europe 120 index.

CGG also further reinforced its dialogue with SRI brokers at two roadshows and provided regular updates of CGG's Environment, Social and Governance (ESG) profile to SRI extra-financial agencies.

# Socially Responsible Investment

CGG's Investor Relations department questioned analysts from EthiFinance and Vigeo about their expectations for CGG in terms of sustainable performance.

# What do you see as the major ESG challenges for the immediate future?

Jean-Philippe Rouchon, Vigeo analyst: Managing Human Capital will be a key corporate success factor in the geoscience industry. CGG and its competitors will have to make themselves more attractive to talented potential employees and encourage employee loyalty. In a sector like yours where expertise and innovation are essential to sustaining future performance, corporate policy for career development, skill enhancement and continuing education programs must be exemplary. It is also important that all geoscience stakeholders accelerate their transition towards eco-efficient processes. A case in point is the significant opportunity that R&D in the area of CO<sub>2</sub> sequestration represents for geoseismic acquisition activities (evaluating the stocking capacity and safety of potential reservoir sites).

# How would you describe CGG's sustainable development (SD) strategy?

**Léo Gaborit, EthiFinance analyst:** In recent years, CGG has developed a global sustainable development strategy and has made consistent progress on integrating SD issues into its core business.

Although the Group has been developing initiatives for many years, it is only recently that CGG started to formalize its commitments and report on its ongoing improvements. In 2010, the Group took a step forward and gave itself the resources necessary to fulfill its SD ambitions. CGG now has a well-defined, well-structured and ambitious SD strategy embodied by its top management. Moreover, the Group looks at SD in terms of risk (strengthening risk management and cost reduction) and opportunities (developing new activities, product innovation, partnerships...). The main risks or opportunities are addressed by CGG and the processes deployed in the different divisions enable CGG to tackle specific business issues. In a sector where many companies are regularly singled out for their bad ethical practices, HSE incidents or conflicts with community representatives (particularly in regions at risk) it is important to highlight that CGG is exempt from this kind of controversy.

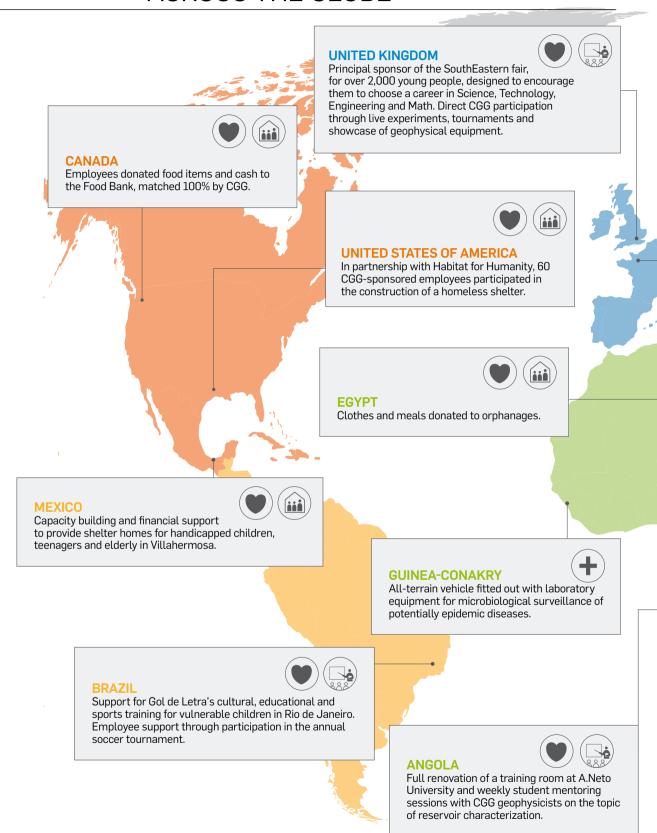


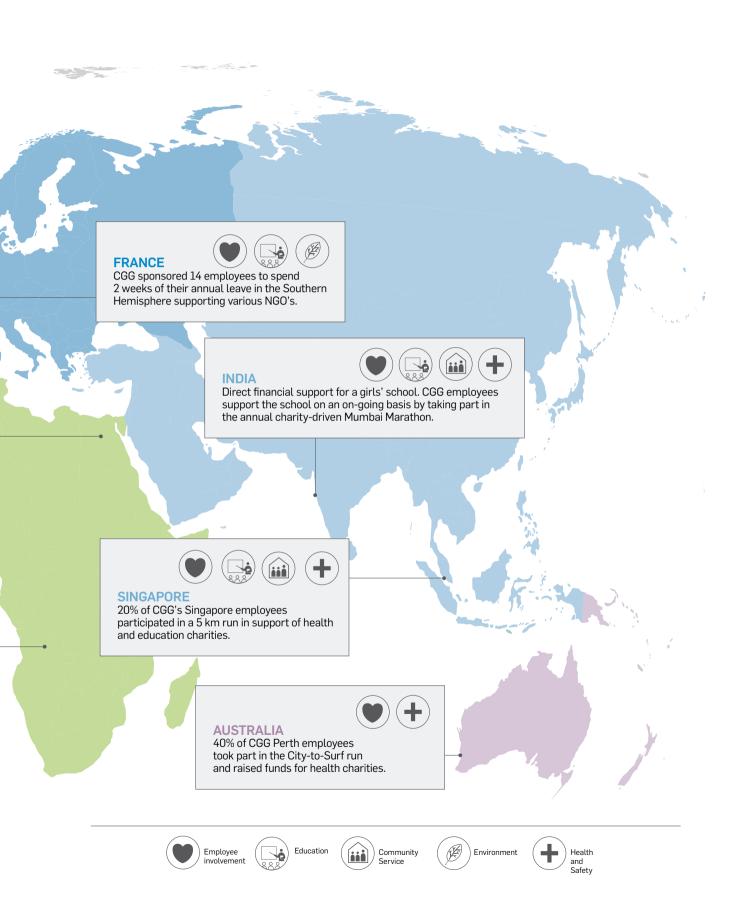






# A SELECTION FROM OVER 60 PROJECTS ACROSS THE GLOBE





# FACTS AND FIGURES

# Employees

	2010	2011	2012	THIRD-PARTY
	2010	2011	2012	VERIFICATION
NUMBER OF NATIONALITIES AT CGG	99	101	104	
PERMANENT EMPLOYEES	7,264	7,198	7,560	•
Europe	2,861	2,787	2,581	•
Female	25%	25%	28%	•
Africa & Middle East	735	411	331	•
Female	9%	18%	20%	•
Asia-Pacific	1,329	1,070	1,108	•
Female	31%	38%	38%	•
North America	2,012	1,710	1,782	•
Female	27%	29%	33%	•
Latin America	327	281	258	•
Female	32%	28%	31% <b>970</b>	•
Marine seismic crews Female	-	939	970 7%	•
Land seismic crews	-	7%	530	•
Female	-	-	2%	•
remate			2 70	
EMPLOYEE HIRES	629	773	1,238	•
Female	N/A	28%	28%	•
Non-French employees as a % of new hires	N/A	N/A	80%	•
TOTAL EMPLOYEE TURNOVER RATE	11%	11.2%	10%	•
COMPANIES WITH EMPLOYEE REPRESENTATION				•
Main countries only		France	France	
		Norway	Norway	
		Switzerland	Switzerland	
		Singapore	Singapore	
EMPLOYEES COVERED BY A	-	1,940	2,067	•
COLLECTIVE BARGAINING AGREEMENT		(reported)	(reported)	
EMPLOYEES ENTITLED TO HEALTH INSURANCE	-	100%	100%	
EMPLOYEES RECEIVING REGULAR PERFORMANCE AND CAREER DEVELOPMENT REVIEW	_	74%	97%	
EMPLOYEES PROUD TO WORK FOR CGG (YOUR VOICE SURVEY)	_	70%	N/A	•
TRAINING HOURS DELIVERED BY CGG UNIVERSITY			·	_
	-	111,440	139,160	
HSE training hours Society of Evaluation Coophysicists (SEC) (Student Brograms Spansorships (MISD)	1/1	14,742 141	7,980 141	•
Society of Exploration Geophysicists (SEG)/Student Programs Sponsorships (kUSD)	141	141	141	
European Association of Geoscientists and Engineers (EAGE)/ Student Programs Sponsorships (kUSD)	50	50	50	
Stangill Hodigins Shousoisilibs (KOSA)	50	50	50	

# Health & Safety

·	2010	2011	2012	THIRD-PARTY VERIFICATION
Exposure hours (million)	76.6	79.9	72.1	•
Fatalities	1	0	2	•
Partial or permanent disability cases	2	1	0	•
Lost time incident frequency	0.42	0.44	0.46	•
Total recordable cases frequency	3.06	3.18	2.76	•
Seriousness rate	0.0133	0.0102	0.0112	•
Motor vehicle crashes	0.92	0.84	0.45	•
HSE field training (hours)	74,426	117,684	120,073	•

#### **Environment**

	2010	2011	2012	THIRD-PARTY VERIFICATION
Fuel consumption (m³)	-	297,276	331,232	•
Direct and Indirect Greenhouse Gases emitted (kTonnes of CO <sub>2</sub> equivalent)	781	945	890	•
Significant spills (number of spills > 0.2 m³ of hydrocarbons)	1	2	1	•
Residual spillage after clean-up (m³)	0.5	0.8	0.2	•
Marine Fuel Efficiency Index (CMP-kms/m³ of fuel)	41	44	44	•
Number of Marine Life Sightings	1,222	904	2,189	•
Operational downtime linked to Marine Life Mitigation (hours)	181	53	92	•

#### Corporate Citizenship

	2010	2011	2012	THIRD-PARTY VERIFICATION
SPONSORSHIP OF SUSTAINABLE DEVELOPMENT PROJECTS (KUSD)	466	477	757	•
Europe	18%	17%	31%	•
Africa and Middle-east	1%	11%	12%	•
Asia-Pacific	20%	15%	4%	•
North America	44%	35%	29%	•
Latin America	13%	9%	7%	•
Worldwide initiatives	4%	13%	17%	•
Projects with direct employee engagement (%)	Not assessed	29	50	•

#### Reporting Scope and Method

#### Guidance

Health, Safety and Environmental (HSE) reporting procedures are based on the Group's Event Reporting, Classification and Recording Guidelines.

Social reporting consolidation rules and adjustments are defined by a protocol to ensure the comparability and traceability of the information provided.

#### Scope

Acquisitions are taken into account as soon as possible and at the latest on 1st January of the following year, and divestments are taken into account the month following their effective date of application. As of 2012, HSE and social data is published on a current perimeter.

HSE reporting covers all employees and subcontractors falling under CGG's prevailing influence, or 100% of our sites and acquisition activities owned 50% or more and consolidated by global integration included in the Registration Document. As an exception to this rule, 2012 HSE reporting also covered operations of:

- · Argas in Saudi Arabia;
- The Amadeus vessel, as she is operated by CGG under the PTSC CGGV Geophysical Survey Company Limited Joint Venture in Vietnam;
- The Pacific Finder vessel, which was operated under the PT Elnusa CGG Seismic Joint Venture in Indonesia until July of 2012 before joining the CGG fleet in Singapore.

The scope encompasses all statistics, facts and figures disclosed in this report.

The selected social indicators cover the scope of the consolidated Group. Employees of associated companies (Argas for example) are not included in the calculations.

#### Tools

Each site, crew or vessel from the Services Divisions records its HSE reporting via PRISM, CGG's integrated HSE and SD risk assessment and reporting tool. Social reporting is recorded in the Group Human Resources Information System (HRMS Database). This database is deployed in all Group entities, with the exception of Sercel, where a SAP database has been deployed. Sercel data is currently consolidated manually.

#### Consolidation and internal controls

HSE data is reviewed on a weekly basis by HSE support functions. The data is then consolidated every month at Division and Group level. Data pertaining to certain specific indicators is calculated directly by the businesses. These reporting procedures are regularly subject to internal audit.

Social data is stored in the Human Resources information system by local Human Resources administrative entities or through a special structure set up for this purpose (Employee Service Center for North America). The data is checked at three levels:

- A level of SOX compliance, via annual audits and setting up of control points for individual data such as: gender, birth dates, seniority, wages, promotions, tax situations, type of contract, etc.;
- A level of compliance via the pay slip or monthly time sheet, when the base is coupled to an HRMS payroll engine;
- A level of compliance regarding organizational reporting lines, belonging to a given business family, a Division, a Function, a Business Line etc. is done by checking made by operational and functional HR managers at the time of the monthly or quarterly reporting.

Some global processes implemented through tools directly connected to the HRMS database (annual performance appraisal, annual salary review, calculation of annual bonuses) also allow cross-correlation, analysis and evaluation of the information several times a year.

## **CONCORDANCE TABLE**

This index provides the concordance with the:

- 2011 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI), Version 3.1, www. globalreporting.org
- United Nations Global Compact 10 Principles, www.unglobalcompact.org

Page numbers refer to this Sustainable Development Report unless RG is mentioned, which corresponds to CGG's Management Report in French language, available at www.cgg.com > Investisseurs > Actionnaires > Assemblées Générales > Rapport de Gestion

	GRI	GLOBAL COMPACT	WHERE REPORTED
PROFIL			
Strategy and Analysis	1.1, 1.2		11-13
Organizational Profile	2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10		3-9
Report Parameters	Report Profile Scope and Boundary 3.1, 3.2, 3.3, 3.4		
•	3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11		13,43,47
	GRI Content Index 3.12		44
	Assurance 3.13		45-46
Governance, Commitments	Commence ( 1 / 2 / 2 / / / E / 6 / 7 / 9 / 0 / 10		16 17 DC07 110
and Engagement	Governance 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10 Commitments to External Initiatives 4.11, 4.12, 4.13		16-17,RG87-119
	Stakeholder Engagement 4.14, 4.15, 4.16, 4.17		
	Stakenotider Engagement 4:14, 4:15, 4:10, 4:17		
PERFORMANCE INFICATORS	Maria ENG. ENG.		
Environmental	Materials EN1, EN2	8,9	/2
	Energy EN3, EN4 Water EN8	8 8	43
	Biodiversity EN11, EN12	8	30,43
	Emissions, Effluents and Waste EN16, EN17, EN19, EN20, EN21,	_	31,33,43
	Products and Services EN26, EN27	8.9	28-33
	Compliance EN28	8	20 33
	·		
Human Rights	Investment & Procurement Practices HR1, HR2, HR3	1,2,3,4,5,6	
	Nondiscrimination HR4	1,2,6	25,RG57
	Freedom of Association & Collective Bargaining HR5	1,2,3	RG58
	Child Labor HR6	1,2,5	25
	Forced and Compulsory Labor HR7 Assessment HR10	1,2,4	25
	Remediation HR11		20,RG58
	Remediation HK11		
Labor Practices and	Employment LA1, LA2	6	4,25,42
Decent Work	Labor/Managment Relations LA4, LA5	1,3	42
	Occupational Health & Safety LA7, LA8	1	20-23,42
	Training & Education LA10		22,42
	Diversity & Equal Opportunity LA13	1,6	17
	Equal remuneration for women and men LA14	1,6	
Society	Local Community S01, S09, S010		36-37
Society	Corruption <b>SO2</b> , <b>SO3</b> , <b>SO4</b>	10	16
	Public Policy S05	1,2,3,4,5,6,7,8,9,10	32
	Compliance SO8	_/_// // // // // // // // // // // // /	
Product Responsibility	Customer Health & Safety PR1	1	20-22
	Product & Service Labeling PR3	8	20
	Marketing Communications PR6		38
	Compliance PR9		
Economic	Economic Performance EC1, EC2, EC3, EC4		4-5,RG81
	Market Presence EC6, EC7	6	RG58,36,42
	Indirect Economic Impacts EC8	_	38,40-41,43

#### Key to GRI Indicators:

Fully reported in 2012 Partially reported in 2012 Not material Not covered in 2012

## **ASSURANCE REPORT**

This Assurance Report is only valid with the Management Report (« Rapport de Gestion ») to which it refers. It may only be reproduced in its entirety.

#### Compagnie Générale de Géophysique CGG

Financial year ending December 31st 2012

#### Independent verifier's attestation and assurance report on social, environmental and societal information

To the General Management,

Pursuant to your request and in our capacity as independent verifier of Compagnie Générale de Géophysique, we hereby report to you on the consolidated social, environmental and societal information presented in the management report in the sections "Health, safety, security, environment and sustainable development" and "Consequences of the Company's Business on Labor" issued for the year ending December 31st 2012 in accordance with the requirements of Article L. 225-102-1 of the French Commercial Code (Code de commerce).

#### Management's Responsibility

The Board of Directors is responsible for the preparation of the management report including the consolidated social, environmental and societal information (the «Information») in accordance with the requirements of Article R. 225-105-1 of the French Commercial Code (Code de commerce), presented as required by the entity's internal reporting standards (the «Guidelines») and available upon request.

#### Our Independence and Quality Control

Our independence is defined by regulatory requirements, the Code of Ethics of our profession (Code de déontologie) and Article L. 822-11 of the French Commercial Code (Code de commerce). In addition, we maintain a comprehensive system of quality control including documented policies and procedures to ensure compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

#### Independent verifier's responsibility

It is our role, on the basis of our work:

- To attest whether the required Information is presented in the management report or, if not presented, whether an appropriate explanation is given in accordance with the third paragraph of Article R. 225-105 of the French Commercial Code (Code de commerce) and Decree no. 2012-557 dated 24 April 2012 (Attestation of presentation);
- To provide limited assurance on whether the Information is fairly presented, in all material aspects, in accordance with the Guidelines (limited assurance).

We called upon our Corporate Social Responsibility experts to assist us in the performance of our work.

#### 1. ATTESTATION OF PRESENCE

Our engagement was performed in accordance with professional standards applicable in France:

- We compared the Information presented in the management report with the list provided in Article R. 225-105-1 of the French Commercial Code (Code de commerce);
- We verified that the Information covers the consolidated perimeter, namely the entity and its subsidiaries within the meaning of Article L. 233-1 and the controlled entities within the meaning of Article L. 233-3 of the French Commercial Code (Code de commerce) and within the limits specified in the "Reporting method and scope" of the "Health, Safety, security, environment and sustainable development" and "Reporting methodology and definitions section" of the "Consequences of the Company's Business on Labor".
- In the event of the omission of some consolidated Information, we verified that an appropriate explanation was given in accordance with Decree no. 2012-557 dated 24 April 2012.

On the basis of our work, we attest that the required Information is presented in the management report.

#### 2. ASSURANCE REPORT

#### Nature and scope of the work

We conducted our engagement in accordance with ISAE 3000 (International Standard on Assurance Engagements) and French professional guidance. We performed the following procedures to obtain limited assurance that nothing has come to our attention that causes us to believe that the Information is not fairly presented, in all material aspects, in accordance with the Guidelines. A higher level of assurance would have required more extensive work.

Our work consisted in the following:

- We assessed the appropriateness of the Guidelines regarding their relevance, completeness, neutrality, clarity and reliability, taking into consideration, where applicable, the good practices in the sector.
- We verified that the Group had set up a process for the collection, compilation, processing and control of the Information to ensure its completeness and consistency. We examined the internal control and risk management procedures relating to the preparation of the Information. We conducted interviews with those responsible for social and environmental reporting.
- We selected the consolidated Information to be tested<sup>1</sup> and determined the nature and scope of the tests, taking into consideration their importance with respect to the social and environmental consequences related to the Group's business and characteristics, as well as its societal commitments.
  - o Concerning the quantitative consolidated information that we deemed to be the most important:

<sup>1.</sup> Information (quantitative or qualitative) audited with limited assurance are: number of permanent staff, movements in, Lost Time Incident Frequency (LTIF) and Total Recordable Case Frequency (TRCF), number of training days provided by CGG University, footprint minization of products and services, number of environmental incidents with limited or significant disturbance, Power Usage Effectiveness (PUE), quantity of linear seismic data acquired per cubic meter of fuel consumed, marine fauna mitigation measures (sightings, acoustic detections, marine fauna shutdowns/ delayed soft-starts, downtime in hours), percentage of national staff on permanent sites, measures to prevent corruption, percentage of products and services in value from suppliers originating from OECD countries and relations with stakeholders.

### ASSURANCE REPORT

- at the level of the consolidating entity and the controlled entities, we implemented analytical procedures and, based on sampling, verified the calculations and the consolidation of this information;
- at the level of the sites that we selected<sup>2</sup> based on their business, their contribution to the consolidated indicators, their location and a risk analysis:
  - we conducted interviews to verify that the procedures were correctly applied;
  - we performed tests of detail based on sampling, consisting in verifying the calculations made and reconciling the data with the supporting documents.

Due to the specificities of the activities of Compagnie Générale de Géophysique, which limit site access, our controls were mostly performed at the consolidated level. We estimate that the selected sample represents on average 10% of the workforce, 6% of the total number of working hours and approximately 35% of the fuel consumption upon which the indicator of energy efficiency for the Marine Division is calculated.

- o Concerning the qualitative consolidated information that we deemed to be the most important, we conducted interviews and reviewed the related documentary sources in order to corroborate this information and assess its fairness. Concerning the fairness of commercial practices and the footprint minimization efforts, the interviews were conducted only at the level of the consolidating entity.
- As regards the other consolidated information published, we assessed its fairness and consistency according to our knowledge of the company and, where applicable, through interviews or consultation of documentary sources.
- Finally, we assessed the relevance of the explanations given in the event of the absence of some information.

#### Comments on the Guidelines

We wish to make the following comments on the Guidelines:

- As indicated in the methodological note in the section "Consequences
  of the Company's Business on Labor" of the Management Report, the
  information relating to occupational diseases and to the number of
  training hours cover only a limited perimeter (respectively employees
  of French companies and CGGVeritas University courses).
- Movements in and out include, as mentioned in the Management Report, internal movements: reclassification of employees between seasonal and permanent status, movements associated with leave of absences... Real movements in and out could be more specifically disclosed.
- Reporting procedures and calculation methodologies associated with environmental indicators, particularly on energy efficiency indicators (Marine Division and PIR Division), could be more accurately described.
   Similarly, the process of reporting, monitoring and archiving hours of training managed by CGG University could be strengthened.

#### Comments on the Information

We wish to make the following comments:

- For the Lost Time Incident Frequency (LTIF) and Total Recordable Case Frequency (TRCF), the definition of working hours should be clarified to ensure consistent implementation across all entities in particular concerning the consideration of travel time or removing lost days.
- For information related to Safety (in particular Lost Time Incident Frequency (LTIF) and Total Recordable Case Frequency (TRCF)), internal controls could be strengthened to ensure more reliability in the reported data and overcome the discrepancies identified.

#### Conclusion

Based on our work described in this report, nothing has come to our attention that causes us to believe that the Information is not fairly presented, in all material aspects, in accordance with the Guidelines.

Paris, La Défense, March 6th 2013 The Independent Verifier Ernst & Young et Associés

French original signed by: Christophe Schmeitzky

<sup>2.</sup> Site of Sercel in Nantes, France (Equipment Division); Site of Massy, France (Headquarter); CGG University, France.

#### Contacts:

**Group Communications and Investor Relations:** media.relations@cgg.com **Group Enterprise Risk Management, HSE & SD:** sustainable.development@cgg.com

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