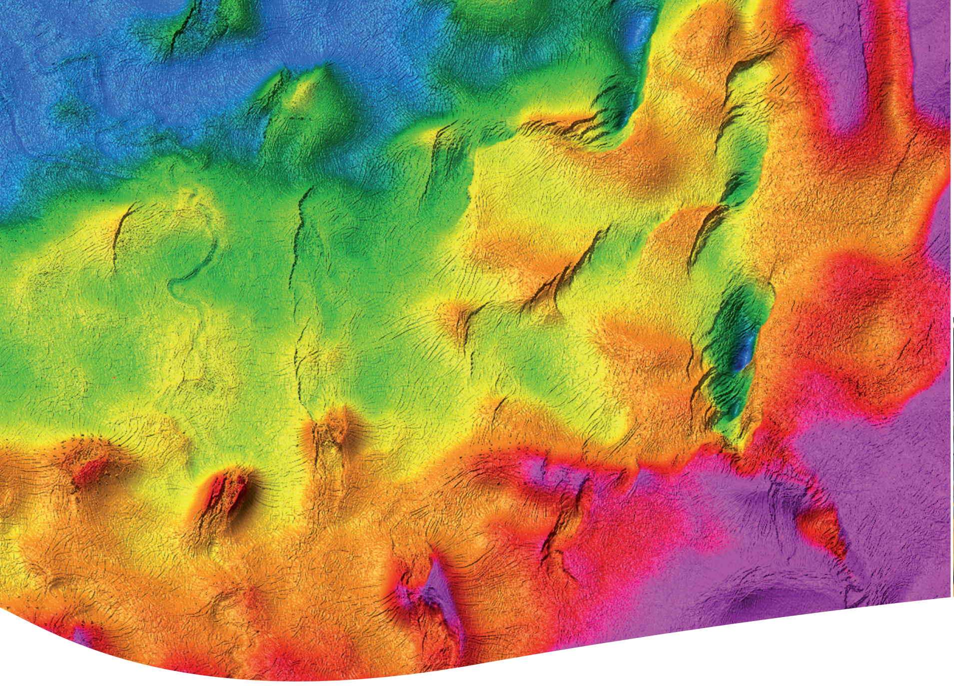
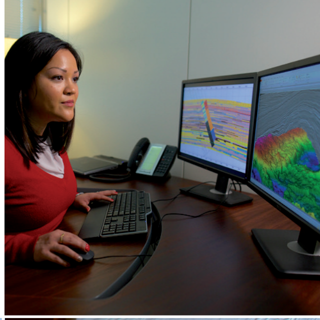

2017 Additional Information

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Passion for Geoscience

CGG – 2017 ADDITIONAL INFORMATION

EXPLANATORY NOTE

The information contained in this document, together with that set forth in the 2017 Annual report on Form 20-F filed with the U.S. Securities and Exchange Commission, both of which documents are in English, is equivalent to the information provided in French in the "*Document de Référence*" filed with the *Autorité des Marchés Financiers* on March 29, 2018.

This document is a free translation from French into English of some information from the *Document de Référence* that is not included in the 2017 Annual report on Form 20-F. Should there be any difference between the French and the English versions, only the text in French language shall be deemed authentic and considered as expressing the exact information published by CGG.

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1. FINANCIAL RESULTS OF CGG SA (GROUP HOLDING COMPANY) OVER THE LAST 5 YEARS

In Euros	2013	2014	2015	2016	2017
I. Financial position at year-end					
a) Capital stock	70,756,346	70,826,077	70,826,077	17,706,519	17,706,519
b) Number of shares outstanding	176,890,866	177,065,192	177,065,192	22,133,149	22,133,149
c) Maximal number of shares resulting from convertible bonds (see note below)	24,150,635	11,200,995	26,372,016	1,160,368	1,160,364
d) Total Equity	2,392,170,912	1,122,589,689	1,728,884,020	1,224,949,893	280,022,548
II. Earnings					
a) Sales net of sales tax	83,453,121	92 140 684	73,984,308	49,107,467	26,467,304
b) Earnings before taxes, employee profit sharing, depreciation and reserves	92,708,863	143 398 567	2,005,006,600	424,222,896	9,019,980
c) Employee profit sharing	—	—	—	—	—
d) Income taxes	(19,662,650)	57,118,390	(106,127,156)	1,319,915	(57,430,849)
e) Income after taxes, employee profit sharing, depreciation and reserves	(663,879,383)	(1,269,581,222)	606,294,331	(841,019,498)	(944,927,344)
f) Dividends	—	—	—	—	—
III. Earnings per share					
a) Earnings after taxes and profit sharing but before depreciation and reserves	0.64	0.49	11.92	19.11	3.00
b) Earnings after taxes, depreciation and reserves	(3.75)	(7.17)	3.42	(38.00)	(42.69)
c) Net dividend per share	—	—	—	—	—
IV. Personnel					
a) Average number of employees	40	39	37	34	32
b) Total payroll	6,488,564	6,862,431	6,486,844	6,664,549	8,923,393
c) Employee benefits (social security, etc.)	3,089,229	4,729,717	2,797,478	2,301,997	3,423,145

Note: following the operations involving the Company's share capital carried out in 2016, the conversion conditions applying to the OCEANE 2019 bonds and the OCEANE 2020 bonds were adjusted, with conversion on the following bases:

- 0.044 Company shares for one OCEANE 2019;
- 0.044 Company shares for one OCEANE 2020.

The number of shares that would be issued upon conversion of above Convertible Bonds as of December 31, 2016 and December 31, 2017, pursuant to their characteristics as existing as at such dates, are set out in the table below.

	As of December 31, 2016 (a)	As of December 31, 2017 (a)
OCEANE 2019	47,827	47,823
OCEANE 2020	1,112,541	1,112,541
Sub-total	**1,160,368**	**1,160,364**

(a) *Adjusted number of shares as a result of the share capital increase of February 5, 2016 and the reverse stock split of July 20, 2016.*

Nevertheless, since the Safeguard Plan was approved by the Commercial Court of Paris on December 1, 2017, the Convertible Bonds can only give right to shares of the Company according to the terms of the Safeguard Plan and are therefore to be fully converted in shares of the Company as a consequence of the implementation of the Safeguard Plan.

In accordance with the Safeguard Plan, on January 17, 2018, the Company launched a share capital increase with preferential subscription rights for an amount of approximately €112.2 million through the issuance of new shares, each with one warrant attached (the "Share Capital Increase").The Safeguard Plan provides that the claims of Convertible Bondholders, registered (inscription en compte) on the last day of subscription period of the Share Capital Increase with preferential subscription rights, will be equitized into CGG's shares (except for an aggregate amount of approximately €4.5 million which will be paid in cash to such holders pro rata to the amount of their respective claims). It is intended that such equitization be carried out by way of a share capital increase in favor of the abovementioned Convertible Bondholders at a subscription price of €10.26 per new share.

Accordingly, on February 21, 2018, the Company announced, in connection with the finalisation of the Financial Restructuring Plan, the issue of 35,311,528 new shares resulting from the equitization of the Convertible Bonds.

2. CONSOLIDATED FINANCIAL RESULTS OF THE GROUP OVER THE LAST 5 YEARS

	2013	2014	2015	2016	2017
I — Financial position at year end					
a) Capital stock in millions of US$	92.7	92.8	92.8	20.3	20,3
b) Number of shares outstanding	5,527,840	5,533,287	5,533,287	22,133,149	22,133,149
c) Maximal number of shares resulting from convertible bonds	None	None	None	None	None
II — Earnings, in millions of US$					
a) Sales, net of sales tax	3,765.8	3,095.4	2,100.9	1,195.5	1,320.0
b) Earnings before taxes, depreciation and reserves	1 043.0	690.4	409.4	14.5	(28.2)
c) Income taxes	(82.9)	(123.8)	(77.0)	13.7	(23.7)
d) Income after taxes, depreciation and reserves	(691.2)	(1,146.6)	(1,446.2)	(576.6)	(514.1)
e) Dividends	—	—	—	—	—
III — Earnings per share (in US$)					
a) Earnings after taxes, but before depreciation and provisions [a]	173.68	102.40	60.07	1.27	(2.34)
b) Earnings after taxes, depreciation and provisions [a]	(125.04)	(207.22)	(261.36)	(26.05)	(23.23)
c) Net dividend per share	—	—	—	—	—
IV — Personnel					
a) Number of employees	9,688	8,540	7,277	5,766	5,266

[a] *The calculation of the earnings per share, for years 2013 to 2015, has been adjusted further to the stock reverse split effective on July 20, 2016. The number of ordinary shares has been adjusted retroactively.*

3. INFORMATION ON TERMS OF PAYMENT

As of December 31, 2017, the parent company's trade payables totaled € 23.7 million, which can be broken down as follows:

Article D. 441 I.-1°: Invoices received and not paid as of the end of the financial year although the due date has passed

	0 days	1 to 30 days	31 to 60 days	61 to 90 days	91 days or more	Total (1 day or more)
(A) Late payment periods (see note below)						
Total number of invoices concerned	63					243
Total amount of invoices concerned, in millions of euros (incl. VAT)	10.4	0.2	4.2	0.1	8.8	13.3
Percentage of the total amount of invoices concerned	44%	1%	18%	-	37%	56%
(B) Invoices excluded from (A) that relate to unrecorded liabilities						
Number of excluded invoices	29					
Total amount of excluded invoices, in millions of euros (incl. VAT)	0.9					
(C) Reference payment terms used (contractual or statutory - article L. 441-6 or article L. 443-1 of the French Commercial Code [*Code du commerce*])						
Payment terms used to calculate late payments	☐	Contractual payment terms				
	■	Statutory payment terms				

Note: on June 14, 2017, the Paris Commercial Court (*Tribunal de commerce*) handed down a judgement ordering that the Company be placed in protection proceedings (*procédure de sauvegarde)*. In order to implement the planned financial restructuring, the relevant resolutions were adopted by the Company's General Meeting of Shareholders on November 13, 2017. The Company safeguard plan was then approved by judgement of the Paris Commercial Court dated December 1, 2017 (the 'Company Safeguard Plan'). As of December 31, 2017, and since June 14, 2017, the Company has not made any payments for supplies or services predating the date of the judgement placing the Company in protection proceedings, as required by the regulations. The Company Safeguard Plan provides for the full cash payment of all trade payables, subject to acceptance of the corresponding claims.

As of December 31, 2017, the parent company's trade receivables totaled € 4.6 million, which can be broken down as follows:

Article D. 441 I.-1°: Invoices received and not paid as of the end of the financial year although the due date has passed

	0 days	1 to 30 days	31 to 60 days	61 to 90 days	91 days or more	Total (1 day or more)
(A) Late payment periods (see note below)						
Total number of invoices concerned	24					13
Total amount of invoices concerned, in millions of euros (incl. VAT)	4.0	-	-	0.3	0.3	0.6
Percentage of the total amount of invoices concerned	87%	-	-	7%	6%	13%
(B) Invoices excluded from (A) that relate to unrecorded liabilities						
Number of excluded invoices	None					
Total amount of excluded invoices, in millions of euros (incl. VAT)	None					
(C) Reference payment terms used (contractual or statutory - article L. 441-6 or article L. 443-1 of the French Commercial Code [*Code du commerce*])						
Payment terms used to calculate late payments	☐	Contractual payment terms				
	■	Statutory payment terms				

Note: due to the ‘Chapter 11’ procedures opened on June 14, 2017 against certain group subsidiaries, some of the Company's receivables from said subsidiaries could not be collected by December 31, 2017, as the procedures were still ongoing. On February 21, 2018, CGG Group announced that it had finalised the implementation of its Financial Restructuring Plan.

4. INFORMATION ON THE UTILIZATION OF FINANCIAL INSTRUMENTS

As we are a US$ company, we maintain our financing primarily in US dollars. As of December 31, 2017 and 2016, our total outstanding debt denominated in US dollars was US$1,757 million and US$1,879 million and, respectively, representing 62% and 67% of our total financial debt outstanding at such dates.

Both in 2016 and 2017, around 75% of our turnover was denominated in US dollars and to a significantly lesser extent, in euros, Canadian dollars, Brazilian reais, Australian dollars, Norwegian kroner, British pounds and Chinese yuan. Most of our expenses in 2017 were paid in US dollars, Euro, British pounds and Renminbi-Yuan.

We aim to match our foreign currency revenues and expenses in order to balance, to the extent possible, our net position of receivables and payables denominated in foreign currencies, in particular currencies that are not readily available or are difficult to convert. Nevertheless, over past years, the Group did not succeed in totally balancing its foreign currency revenues and expenses, especially for the euros, due to personnel costs payable in euros in France and in certain European countries.

In addition, our general policy is, when possible, to hedge major currency exposures related to forecasted excess currency originating from operational contracts at the time such contracts are entered in the backlog. This strategy to reduce foreign exchange risks led us to mitigate, without eliminating it, the positive or negative impact of the foreign exchange rates variation on the operating income of the Group.

On the contrary, we do not enter into forward foreign currency exchange contracts to hedge recurring fixed expenses in any currency, especially the euros.

As of December 31, 2017, we did not have significant forward exchange contracts outstanding.

As of December 31, 2016, we did not have forward exchange contracts outstanding.

5. RATINGS OF THE CREDIT AGENCIES FOR CGG

We receive from the Credit Agencies a ratings outlook, which assesses the potential direction of credit rating over time. In determining a ratings outlook, consideration is given to any changes in the economic and/or fundamental business conditions of a company.

Ratings of the Credit Agencies for CGG as of the date of publication of the annual report are B- for Standard & Poors and B3 for Moody’s.

6. PROSPECTS

6.1. MARKET ENVIRONMENT

The growth of the oil services sector, and therefore of the seismic sector, slowed down significantly from the middle of the year 2013 because of the major international oil companies cutting back on exploration projects, and more broadly on Exploration & Production investment expenses, in order to generate greater cash flow in the short term and maintain the expected level of dividends for their shareholders. This trend was confirmed during the year 2014, with overall Exploration & Production expenses finally stabilising and seismic expenses falling by 10%. During the second part of 2014, the price of a barrel of oil fell sharply and swiftly following notably the lack of discipline of main producing countries who mostly favoured maintaining their market shares by producing more and let supply and demand fix the fair market price. Thus, in the space of seven months, oil prices fell by 59%, going from US$115 per barrel (middle of June 2014) to US$47 per barrel (middle of January 2015), which led to oil companies drastically reducing their Exploration & Production spending forecasts for 2015. In 2016, the average Brent oil price settled at nearly US$45, down 15% from 2015. At this pricing level, the International Oil Companies (IOC) do not generate positive cash flow after payment of the dividend and Exploration & Production investment expenses. As far as the National Oil Companies (NOC) are concerned, the priority is the management of the oil income and the rate of decline of their fields. In this respect, Exploration & Production investments in 2016 went down by about 30% compared to 2015.

In terms of production, if shale oil activity has been a lot more resilient than expected due to productivity gains, the surprise came from OPEC decision by end September 2016. Main Middle-East producing countries decided to constrain their production at 32.5 mb/day to sustain prices weakened by the excess supply. The price per barrel immediately rose by 10% to US$50. The organization officially implemented this policy on January 1, 2017 and extended it over the second half of 2017. Coupled with a strong growing demand, this supply restriction allowed the oil price to increase by 22% in 2017 to reach a US$54 average. However the oil companies remained cautious and the increase in global spending according to a well-known financial broker was limited to 4% in 2017, being strongly focused on North America, the international spending being down once again by 3%.

In the context of an oil price stabilised above US$60 since the beginning of the year (US$67 by end February), oil companies forecast (according to a well-known financial broker) a slight increase in Exploration & Production expenses by 8% for 2018, above the 4% reached in 2017. This growth actually should come with a strong geographic disparity, as the capex progression would reach circa 21% in the United States and 4% internationally. Onshore activity, in the Middle-East in particular, could demonstrate preliminary signs of recovery. As for the offshore activity segment, could still show a negative trend for the fifth year in a row, leading to a potential 60% decline since the peak in 2013.

But this situation of under-investment in oil exploration, and particularly in offshore exploration, does not seem sustainable over the long-term. Currently, the growth in production from conventional onshore deposits (Iran, Iraq, etc.) and the productivity gains from non-conventional deposits (shale oil in the United States) allow both the growth in worldwide demand and the natural depletion of deposits being operated to be addressed. In the medium-term, this continuous and rapid depletion of conventional onshore deposits will result in a renewal of producers' seismic imaging needs, particularly in the Middle East, China or Russia. Over the long term, it will not be possible to satisfy the growth in worldwide demand without the development of new offshore deposits, which will only become profitable again after a significant reduction in the costs of oil services, obtained particularly through a better collaboration between the service companies and the oil companies across all stages of a deposit's operating chain and the development of an integrated vision for the reservoir. Consequently, these changes allow us to glimpse favourable long-term growth prospects for geophysics and geosciences.

6.2. A COMMERCIAL STRATEGY BASED ON TECHNOLOGY DIFFERENTIATION

The Group will continue to focus its strategy on high-end seismic equipment and services, and on integrated solutions in the geology, geophysics and reservoir characterisation disciplines. The aim is to develop solutions based on a cross-disciplinary approach, integrating the most innovative technologies of each area of the Group's expertise whilst improving or adapting these technologies to its clients' needs. This is particularly the case with the Horda/Tampen in North Sea (Viking Graben) or the “Bedias Creek” survey in respect of shale oil hydrocarbons in the United States, which combined the Group's equipment, acquisition, subsurface imaging and geological expertise activities. In addition to the high quality of its services and technology, for CGG, attention to the sound management of health, safety and environmental matters (HSE) is crucial to establish lasting relationships with its clients.

CGG believes that its long-term differentiation will result from developing acquisition technologies using high-end seismic equipment and combined with sophisticated subsurface imaging. This combination will significantly improve image quality and maintain reasonable product lead times, in line with its clients' exploration and drilling decision-making process. This technological differentiation will be enhanced upstream by the Group's geological consulting expertise and downstream by its reservoir characterisation software and services to provide its clients with reliable static and dynamic reservoir modelling solutions to enable better assessment of known or future reserves and higher recovery rates in producing fields.

In general, the Group's clients are still focused, very early on in the production cycle, on the future positioning of the drilling wells and their configuration. This should translate into a steady interest, on the part of the oil and gas companies, in the technological content of seismic data in order to extract highly specific reservoir properties from it in advance of their investment decision-making process. The Group's clients will, in particular, want to predict stress fields and fractures to ensure the safety and accuracy of the well drilling and the extraction operations while optimising their return on investment. These requirements could strongly influence seismic processing and reservoir characterisation activities and thus significantly increase the geoscience component of the seismic market.

Sercel's innovative solutions

In terms of equipment, Sercel maintains a high level of research and development which is justified by the high technological content of seismic equipment which includes numerous cutting-edge technologies, such as wireless transmission, high- and low-frequency transmission or miniaturised electronic technologies, and also optical or acoustic technologies.

Sercel launched several new products the past few years, including:

- The Nomad 65 Neo and Nomad 90 Neo vibrators that allow the generation of a wider range of seismic wave frequencies and are therefore the ideal source for broadband seismic land surveys;
- GeoWave II, the first digital multi-level downhole array tool specifically designed to withstand high temperatures (up to 400°F/205°C) and high pressures (up to 25,000 psi/1,725 bars), and which allows for up to 120 levels to be deployed on a standard wireline;
- QuietSea, a passive acoustic monitoring system for detecting the presence of marine mammals during marine seismic surveys;
- GeoTag, the acoustic positioning solution of choice for seabed seismic acquisition, allowing the accurate positioning of all types of cable (OBC) or autonomous systems, on seabeds or in transition zones, for seismic surveys in depths up to 500 metres.

Developing and improving land and marine acquisition technologies

The Group believes that the growth in demand for geophysical services will continue to be linked to new technologies. The Group predicts that high-end surveys, such as high-definition 3D (BroadSeis), Broadband 3D, 3D Full Azimuth, and also 4D (with time as the additional dimension) and multi-component (3C or 4C) surveys, will play a key role in the future in Exploration & Production, especially in the sea deposits sector. With respect to the land sector, increased demand for ultra-high density surveys of sensors should result in teams deploying more than one hundred thousand channels appearing in the field in the next five years. This trend should transform the entire land acquisition chain, with developments focusing on low-cost sensors, more mechanised deployments and more automated data quality controls.

Improving imaging and developing integrated solutions for reservoir simulation

To anticipate the exponentially increasing in data acquired (*Big Data*), considerable research and development efforts will be necessary for seismic data processing, data storage and management, and also investigating new parallel computer architectures which should enable such data to be processed in a reasonable time frame whilst making energy savings. The Group believes that, by continually improving its seismic data processing software, it will remain among the leading suppliers of high-end land and marine seismic services. Its research and development work will therefore continue to focus on improving imaging in complex zones to help exploration and production as a technology for characterising and monitoring reservoirs. The Group will also continue to develop lithological prediction (identification of rocky layers surrounding the accumulation of hydrocarbons) and reservoir characterisation and content applications, in particular 3D prestack depth imaging, subsalt depth imaging, broadband depth imaging, multi-component acquisition imaging and differential imaging unique to 4D surveys.

6.3. OUTLOOK FOR GROUP ACTIVITIES IN 2018

Commercial and Industrial outlook

The Group's seismic activity (equipment, acquisition and imaging) is strongly correlated to the exploration activity and should therefore be slightly increasing over the year 2018. More generally, the geoscience activity should remain uncertain since the oil companies should continue to lower their expenses and rearrange their asset portfolios through numerous asset disposals, which will result in a slow growing market for Exploration & Production.

In 2018, the Group will focus on completing financial debt restructuring, while continuing to execute its Transformation Plan. In general terms, CGG will continue to develop and promote high-end solutions: upstream with its equipment offering; then in the acquisition field, which is essential for maintaining a strong and global relationship with the main ordering parties; and finally downstream with the services linked to the use of geological and geophysical data.

Equipment: capitalise on a strong client base and benefit from the start of the volume increase

In 2018, Sercel's revenue should improve compared to 2017 with a rebound of land activity worldwide in a more stabilized oil context than in 2017 and due to the need of new equipment after years of under investment. Moreover, Sercel should benefit from the 508^{XT} advanced technology compared to aging systems. Geographically pockets of new opportunities are emerging in India and Algeria, beyond our traditional markets (Russia, China and Middle East).

The marine market should also increase, but moderately as no major order will be coming from CGG and due to the financing difficulties Sercel's clients are facing. Marine contractors continue to face a difficult market, restricting their ability to invest in new equipment. However their current fleets are aging and their excess of equipment generated by the stacking of vessels is shrinking. In this market environment, and notably considering its important installed base, Sercel estimates that, for 2018, it should maintain its leading position in the seismic equipment market by capitalizing on growth opportunities resulting from the strength of its current product range, the application of new technologies in all of its products as well as from its diversified geographical presence.

In the medium-term, the land equipment market should be spurred by the need for better imaging of conventional onshore reservoirs that are currently being operated particularly intensively (with the increase in volumes produced aiming to offset the drop in oil prices as best as possible) in order to better control their depletion.

Overall, the geophysics market is characterised by ever increasing demand for new technologies, both in land and marine, to achieve high-resolution imaging. The Group predicts that this trend will continue in the coming years. Because of its strong reputation and past success, Sercel should be able to maintain its leading position in the seismic equipment market, capitalising on its installed base, the implementation of new technologies in its full product range and also its diversified geographical presence.

Contractual Data Acquisition: Continuing to optimise exposure

In 2014, the marine seismic industry had to demonstrate discipline in view of the deteriorating conditions in the marine contract activity. CGG announced its decision to reduce the size of its fleet from 18 to 13 3D high-capacity vessels within the year. By the end of 2014, the market contracted even more sharply as a result of the drastic reduction in offshore Exploration & Production budgets by oil companies. Against this background, CGG ceased operating 2 3D vessels at the start of 2015, keeping no more than 11 in operation. Despite this adjustment and those of other players, prices dropped to levels which had never been seen in the past, as, since the second quarter of 2015, the revenue generated by a vessel is close to the cash cost for operating it. In such an environment CGG announced, at the start of November 2015, an additional step with its decision to withdraw 6 additional vessels in order to operate no more than 5 3D high-capacity vessels.

In fact, the Group considered that the contractual marine seismic acquisition activity should remain depressed for a long time with very low price conditions generating heavy operating losses due to lower demand following the sharp reduction of exploration programs, less appetite for frontier exploration and a structural oversupply linked to a large number of good cold-stacked vessels which can quickly come back, at a low cost.

In 2016, the Group drastically reduced its exposure to the marine contract market and to reposition the size of its fleet towards its needs in the area of the production of multi-client studies that are sufficiently pre-funded, which means operating 5 3D vessels. The marine seismic acquisition activity will therefore be mainly a technological tool for the acquisition of multi-client data.

In 2017, we maintained a fleet of 5 high-end vessels to minimize our exposure to what continued to be a soft market whilst minimizing transits to improve utilization. 52% of the fleet was dedicated to contractual acquisition due to a large and long duration contract signed with Pemex.

In April 2017, CGG entered into agreements with Eidesvik a Norwegian ship owner, for the implementation of a new ownership set up for our seismic fleet and creating a new company Global Seismic Shipping AS ("GSS"), co-owned by CGG and Eidesvik. The joint venture owns 7 vessels. In return for a debt reduction related to the vessels and a lower rate for the charter agreements, CGG has committed to rent up to five vessels to the joint venture according to a calendar fixed in advance and spread over for 10 years at a fixed rate of US$25,000 per day per utilised vessel.

The industrial transformation plan initiated in 2014, was completed in 2017 with the marine business line reorganized and rightsized for the current market environment. The restructuring and reorganization of the personnel was implemented without negative impact on the operations and our HSE and Quality performance was even improved during the period

The worldwide 3D high-capacity seismic fleet, which stood around 37 active vessels at the end of 2017 compared to 63 vessels at the end of 2013. At the beginning of 2018, Schlumberger has announced that it will be exiting the seismic vessel market and he is evaluating options for divesting its acquisition business with an undetermined time frame. With still roughly 10 good cold stacked vessels which can quickly come back, vessel supply will remain elastic, which should limit a price rebound.

In 2018, we will continue to focus on cost reduction initiatives and operational efficiency with a view to delivering the best possible results irrespective of the prevailing market conditions.

Our land acquisition services still occupy a good position geographically (North and sub-Saharan Africa and niche markets in South East Asia) and technologically (high-end market. Our strategy in land acquisition remains focused on differentiation and operational excellence rather than market share. We intend to further reinforce this strategic focus on differentiation and existing partnerships in 2018 continuing as well our diversification outside of the oil & gas segment in a market which will nevertheless still remain very competitive.

In Multi-Physics, CGG remains geographically and technologically well placed, and should benefit from its strong presence in the mining, oil and gas and government sectors to seize any opportunity. Mining sector activity levels are expected to continue on an improvement trend and we expect to leverage our technological capabilities to differentiate ourselves from our competitors and exploit differentiation opportunities offered by fixed-wing and helicopter electromagnetic measurement systems. Airborne activities in the oil and gas sector are expected to be stable and primarily focused on areas of onshore frontier exploration. Our ability to offer both low and high resolution gravity measurement system technologies will allow us to present a range of options on projects, allowing clients to determine the most cost effective technique appropriate for the geological model in their exploration play.

Finally, with a reduced seismic fleet, the revenue generated by the Contractual Data Acquisition segment (land, marine, multi-physics) should represent in the future between 15% and 20% of the CGG Group's turnover.

Geology, Geophysics & Reservoir: Developing an integrated geoscience activity and capitalizing on our Multi clients library

Multi-client revenues increased by 22% in 2017 driven by very high after-sales rebound (+80% at US$200m). For 2018, multi-client cash investments are expected between US$275 million and US$325 million with a pre-funding rate of over 70%, spurred by the undiminished appetite of oil companies for good quality multi-client seismic data in zones that they know well (Brazil, the North Sea, etc.) which can capitalize on their existing infrastructures and reduce the marginal investment cost. Moreover, CGG should benefit from interest in new prospecting zones, such as Mozambique.

The multi-client activity will continue to be an integrating factor for all of the Group's technologies (equipment, acquisition, imaging and geoscience), by creating products that will use the different areas of expertise developed in each of its product lines and which will allow its clients to prepare for their exploration programs and developments in the related basins as best as possible.

The Subsurface Imaging market is following the global trend of reducing Exploration & Production spending by its clients, as the drop in the number of marine or land seismic acquisition projects directly results in a significant fall in the volumes of new data to be processed. As for the software sales and consulting activity, this was also affected in 2017, with a decrease in turnover in line with that of the Exploration & Production spending by its clients. Overall, the Subsurface Imaging and Reservoir activity saw its turnover erode in 2017 (a decrease of 13% compared to 2016).

Many customers are focusing their Exploration & Production budgets on increasing production from current installations, and GGR benefits with services and imaging projects, given our leading ocean bottom nodes processing capability, as well as large multi-client projects over mature areas. In addition, the oil companies, wanting to obtain the best possible images to maximise their exploration efforts, are asking for more reprocessing of previous data in order to benefit, at a lower cost, from developments of new imaging algorithms. In 2018, the GGR expected growth over the year, will be driven by strong demand for Multi clients data sets and a modest recovery in Imaging.

Looking forward, the Group in this new format will get around 60% of its revenue generated by the Geology, Geophysics & Reservoir (GGR) activity.

Financial outlook

In 2018, the Group does not expect a major improvement in the seismic and geoscience market compared to 2017. Market deterioration has stopped but the oil price increase in 2017, has not yet be translated into a strong rebound in exploration. Clients remain in a cautious mood. Against this background, the Group's priorities once the debt fully restructured remain continued cost reduction, sustained operational and commercial efficiency.

In a stabilized but still uncertain market at the beginning of the year, the group revenue should reach circa US$1.5bn (including a +/-5% variation). Industrial investments (excluding capitalized development costs) should be between US$100 million and US$135 million in 2018. Multi-client cash investments should be between US$275 and US$325 million with a pre-funding rate above 70%. Cash cost of debt should amount to circa US$85m.

7. RESEARCH & DEVELOPMENT ("R&D")

7.1. TECHNOLOGY INNOVATION AND RESEARCH & DEVELOPMENT POLICY

CGG's capacity to remain competitive in a depressed market while building for the future is largely dependent on its capacity for ongoing technological innovation. The Group believes that the future of the energy industry relies on seismic equipment and services with a high technological content and the ability to integrate geology with geophysics. With the market for products and services being subject to such downward pressure on prices, any development of new solutions - from initial design through to market launch - must make cost reduction the number one objective. Capitalizing on its integrated approach, CGG has the ability to reduce the cost of new solutions at each step in the value chain.

CGG, as an integrated geoscience company, is convinced that the energy industry needs new solutions that have a positive impact on exploration and production. The major focus areas for oil exploration - in "frontier" areas such as the Arctic, pre-salt structures deep offshore, and mountain ranges or jungles onshore - are difficult to image and constitute sensitive and complex environments. In production, the need for increasingly accurate reservoir monitoring and modelling, in terms of both recovery (maximizing oil recovery) and the risks associated with production ("geohazards"), requires our industry to conduct more repeat or time-lapse seismic surveys (4D), improve the accuracy of the data acquired in the shortest possible time and build reliable reservoir models integrating all available data (seismic, geology, production, etc.). Lastly, as the common denominator in all this, reducing the cost of new solutions is vital to the short-term survival of all industry players. With regards to geoscience integration, the ability to display geological data on seismic and exploring the practical applications of artificial neural networks as applied to geology are the major new challenges.

With its experience, expertise and involvement in the petroleum industry, CGG is ideally placed to design and implement such new solutions.

To implement this vision, CGG focuses its efforts on the entire exploration-production chain, including geological modelling, the development of full-bandwidth seismic data processing techniques, structural imaging and geological input into seismic acquisition, interpretation and processing and improved operational performance. These efforts focus on improving the characterization of subsurface while increasing operational efficiency and safety. With close to 650 people, CGG's R&D teams are spread around the world and cover a broad range of areas of expertise.

The trend in gross R&D expenditure over the past three years, including capitalized development costs, is shown below:

	2017		2016		2015	
	in MUS$	as % of net revenue	in MUS$	as % of net revenue	in MUS$	as % of net revenue
Gross research and development expenditure	84.5	6.4	93.2	7.8%	143.1	6.8%

7.2. KEY TECHNOLOGY INNOVATION AND R&D HIGHLIGHTS IN 2017

In the continued difficult environment experienced by the seismic industry in 2017, CGG only slightly reduced its R&D spending compared to 2016, thereby demonstrating its resilience in technological innovation as well as its continuing desire to differentiate itself from the competition with the high technological content of its various solutions.

In 2017, CGG performed the first commercial project with the new source-over-cable marine seismic acquisition solution, called "TopSeis", developed since 2015/2016, which builds on its proven BroadSeis/BroadSource technology. This method delivers a unique illumination of the subsurface, especially for shallow target depths. The solution was successfully implemented through close technical collaboration between all of CGG's business lines. Data processing is still ongoing, but initial results are showing benefits expected by the client. CGG has also developed an innovative acquisition design solution for the Gulf of Mexico, implemented on a Multi Clients project. This 5 vessels operation (2 streamers vessels and 3 source vessels) allow acquiring complementary data to existing WAZ data library to enrich them with additional azimuths and offsets.

In the geoscience field, CGG has initiated projects to integrate stratigraphic information into seismic starting with the ability to display geological data on seismic (so called Stratigraphy to Seismic - STS_{TM}). The goal is to create a new integrated workflow that would aid seismic interpretation and assist the integration process. CGG are also exploring the practical applications of artificial neural networks as applied to geology, especially in the field of image recognition. This has implications for the automated identification and tabulation of biostratigraphic species and in sedimentary petrography. New frontier basins for petroleum exploration are being identified and high-graded by using earth systems modelling techniques to predict environments of deposition of reservoir and source rocks. These earth systems models are constantly being improved by the successful implementation of a deformable global plate model for the Phanerozoic.

Furthermore, CGG has begun to assess onshore and offshore acquisition systems using drone technologies. These promising innovations will continue to be developed over the next few years.

Building on EmphaSeis technology for operating vibrators with a wide frequency band and our experience in high-channel-count acquisition, our Land business line has reinforced its offering in broadband (6 octaves) seismic domain used for acquisition projects of very high data density. This development is supported by Sercel's new 508^{XT} acquisition system. Given the very high volumes of data required for seismic imaging of reservoirs in the Middle East, these acquisition projects are designed to provide solutions to the specific problem of seismic data contamination onshore, by increasing the density of source and receiver points. Our optimized operating models allow for major productivity gains, and the integrated nature of our solutions ensures that the image provided is optimal for quantitative characterization of the reservoir.

In subsurface imaging, CGG continued to pursue and maintain a position of industry leadership and excellence in complex geology imaging as well as high-end broadband and time-lapse 4D imaging. Indeed, our R&D teams continue to deploy high-end compute-intensive algorithms such as least-squares migration and orthorhombic full waveform inversion to resolve the imaging challenges faced by our clients.

On the operational side, we significantly improved our turnaround time, with the latest record of final delivery on permanent reservoir monitoring as 8 days after received data. This means we can provide our clients with near real-time seismic volumes, helping them to expedite their exploration programs and bringing them the immediate guarantee of high-quality data. Throughout this year, our development teams made a significant effort to optimize all our algorithms with respect to the latest graphic processing unit (GPU) technology we use. This enables us to perform multiple mega-survey full waveform inversions efficiently, thereby providing the most accurate subsurface model for reservoir imaging and future reservoir work. In the area of production field monitoring, we expanded our toolbox to be able to process all types of time-lapse surveys, whether conventional permanent reservoir monitoring called node-to-node 4D or streamer-node 4D. This provides a complete picture of the reservoir history using all existing data.

CGG is also working on the combined processing of multi-physics and seismic data in order to exploit the synergy between these two types of measurements that are not sensitive to the same variations in geological property. CGG continues to provide results of exceptional quality that are recognized by the industry and delivered through a combination of seismic, resistivity, and gravimetry data to better characterize the near subsurface.

The seismic reservoir characterization group has developed new tools to integrate efficiently deterministic/stochastic inversion results with static model and production data. These new technologies are essential to build or update existing static and dynamic models, which are consistent with all available data (seismic, sedimentological model, petrophysics and production data).

The satellite mapping group has continued to develop new solutions focused upon integrated surface deformation monitoring datasets, geohazard activity targeting for the transport sector, and ground instability risk profiling for the insurance market.

In terms of our Equipment business, Sercel continues to maintain a high level of research and development, justified by the high technology content of its equipment for land and marine data acquisition. This intense R&D activity has put Sercel at the cutting edge of cableless data transmission technology, the design and manufacture of low-noise sensors, and the design of miniaturized electronics that can withstand extreme environmental conditions. Sercel also conducts research into underwater acoustics. It's Nautilus (lateral and vertical positioning and steering for streamers) and SeaProNav (integrated navigation) systems have reached industrial maturity and are now the standard used to equip CGG's fleet. Sercel's QuietSea aquatic activity monitoring system that is used to detect the presence of sea mammals during exploration surveys continues to gain market share, is recognized for its efficiency and user friendliness and was approved by some new regulation bodies.

In 2017, Sercel continued to market its Sentinel streamer technology, including the latest product, the multi-sensor Sentinel MS, which features an acoustic vector sensor composed of a group of accelerometers arranged around a hydrophone. First commercial deployment of Sentinel MS was a success. Applications for the 508XT land acquisition system have widened with new operating modes in different geographical areas. Part of 508XT family, Sercel announced the WTU-508, a single channel autonomous land node. It benefits from Sercel's new XT-Pathfinder technology to deliver wirelessly up to 100% spread real-time quality control to the recorder. Fully integrated in the 508XT platform, it further reinforces 508XT as the new paradigm in land seismic acquisition. In logging, the GeoWave II offers an unrivalled performance for the acquisition of seismic data in deep, high-temperature and high-pressure boreholes.

7.3. PROSPECTS FOR TECHNOLOGY INNOVATION AND R&D

On the production side, improvements in monitoring techniques both in terms of acquisition equipment and seismic data processing as well as in new technologies for data integration help to optimize production from shallow reservoirs, improve recovery rates, and extend the life of fields through appropriate management. In major oil-producing regions such as the North Sea and the Middle East, these issues are of crucial importance for operators. However, they remain an important avenue of study for expanding the application of seismic surveys as a core discipline for optimizing production from deep reservoirs where resolution and reliability need to be improved.

On the exploration side, R&D achievements in the seismic domain are helping to identify prospective fields that are increasingly difficult to detect and reduce the associated drilling risks. As a result, the success rate of exploration wells is showing an increase even though the easy targets have been drilled first. The improvements that can be made through the application of new technologies therefore justifies the regular reprocessing of previously acquired data and, increasingly, the acquisition of new seismic data in areas that have already been surveyed in the past. In this way, technical progress directly affects activity, in particular our multi-client business line which is reprocessing legacy data with new algorithms.

Finally, the concepts of "Digital Transformation, "Cloud", "Big Data", "Machine Learning" and "Analytics" are being increasingly integrated into our geoscience acquisition, processing, analysis and storage workflows. A Geosciences 5.0 team was created to coordinate activities surrounding these technologies and trends. In 2017 GGR launched a program to build a big data platform to support its data management business as well as manage and deliver the full range of data offered by CGG. Also, the digital transformation of GeoConsulting's entire geologic library continues to progress well.

Anticipating the difficult market conditions in 2018, CGG will be redirecting parts of its R&D efforts to the development and optimization of the costs of its solutions so as to provide a sustainable response to the low price of the barrel. In this context, two major areas of development continue to stand out: cost reduction to address the short-term business context and high value-added technological differentiation in order to maintain technological leadership.

Reducing and optimizing the costs of solutions:

- CGG is capitalizing on its capabilities as a mainstream player in geoscience and its integrated offering;
- CGG will continue to define the optimum quality/price ratio across the entire geophysical value chain, and thereby reduce costs while guaranteeing delivery of the necessary information for client decision-making;
- The mechanization and automation of data acquisition is another avenue for cost reduction that CGG is exploring. This approach necessarily requires a redefinition of existing operating models which have been used in both our Land and Marine business lines.

Technological leadership:

- Improving data quality by expanding the range of recorded frequencies : as high frequencies bring better resolution and therefore better geological characterization of reservoirs; while low frequencies ensure better penetration to detect increasingly deeper targets;
- Increasing data volumes through greater density of acquisition and increased azimuthal coverage to explore the geological target from all possible angles;
- Associating increasingly diverse data types (shear waves, well data, electromagnetic, gravity data in particular, geological models and production data) so that CGG can deliver the most accurate and consistent subsurface models in terms of porosity, permeability and fluid content (water and hydrocarbons);
- Broadband reservoir imaging with very fine quality control and a workflow that generates the best data for reservoir characterization;
- Improving marine operational performance through wider source tow configuration and barnacle cleaning solutions.
- Developing marine vibratory source technology.

Despite the unfavorable context in 2017, CGG will continue to invest in research and development in order to support the Group's leading position and capacity for innovation with respect to both geophysical services and equipment. We intend to be well prepared and positioned when the market will recover.

7.4. INVESTING ACTIVITIES

In 2015 and 2016, our total capital expenditures –industrial, capitalized development costs and multi-client cash capital expenditures -amounted respectively to US$430 million (US$415 million excluding asset suppliers' variance) and US$400 million (US$395 million excluding asset suppliers' variance).

In 2017, they decreased at US$332 million (US$335 million excluding asset suppliers' variance).

In 2015, 2016 and 2017, our industrial capital expenditures amounted respectively to US$104 million (US$89 million excluding asset suppliers' variance), US$71 million (US$66 million excluding asset suppliers' variance) and US$47 million (US$50 million excluding asset suppliers' variance).

Our capitalized development costs amounted respectively to US$42 million in 2015, US$34 million in 2016 and 2017. In 2015, 2016 and 2017, our multi-client cash capital expenditures amounted respectively to US$285 million, US$295 million and US$251 million.

In 2017, our industrial capital expenditures and capitalized development costs (excluding asset suppliers' variance) were committed by Contractual Data Acquisition, GGR and Equipment segments for respectively US$17 million, US$45 million and US$22 million.

In 2018, our industrial capital expenditures and capitalized development costs are targeted to be in the range of US$100-135 million while multi-client cash capital expenditures should be in the range US$275-325 million.

From a general standpoint, industrial capital expenditures and capitalized development costs are financed through permanent funding (equity and financial debt) whereas multi-client cash capital expenditures are financed with funds from original participants. Original participants' funds are recognized as external revenues.

The cash prefunding rate was of 107% in 2017 and is targeted to be above 70% in 2018.

8. SUSTAINABLE DEVELOPMENT

CGG's major contribution to sustainable development is based on providing, over the long-term, geoscience products and services, which enable better knowledge of, better access to and more efficient production of energy resources.

This business model is applied respecting employees, local communities and the environment.

CGG has been a member of the UN Global Compact since 2007 and every year its Chief Executive Officer reaffirms its commitment to respecting the environment and human rights, to promoting international labour standards and to combating all forms of corruption.

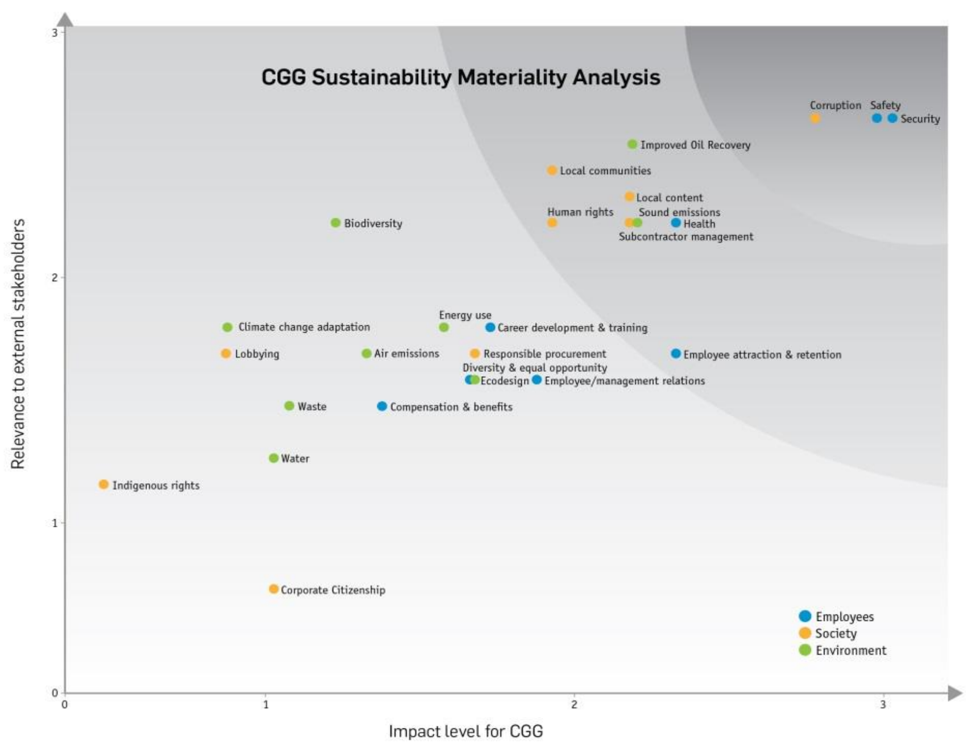
8.1. STRATEGY AND GOVERNANCE FOR SUSTAINABLE DEVELOPMENT

8.1.1. RANKING THE ISSUES RELATING TO SUSTAINABLE DEVELOPMENT: A REGULAR EXERCISE CARRIED OUT WITH THE STAKEHOLDERS

Dialogue with the stakeholders is at the heart of CGG's sustainable development approach. Acknowledging the interest and contribution of its stakeholders in CGG's sustainable development, the Group maintains a continuous dialogue with these stakeholders and mobilizes them on joint actions.

Every three years, the Sustainable Development department organizes an extensive consultation involving CGG Management, a panel of employees, clients, investors, NGO and the trade association in order to identify the most critical sustainable development themes for the Group. These priority issues are highlighted in the dark grey and light grey sections of the graph below. CGG's internal perceptions are positioned along the x-axis in ascending order of importance while the weighting of the issues and therefore the expectations of external stakeholders are shown along the y-axis in the same order. The graph below shows the results for the consultation undertaken at the end of 2015. An internal review conducted in 2017 ensured that the results were still pertinent. Safety, security and the fight against corruption stand out as top priorities. They are followed by environmental issues (optimization of the recovery of natural resources, sound emissions), social issues (local content, respect for local communities and human rights, management of subcontractors), and problems related to attracting and retaining staff and finally the protection of employee health. This materiality study inspires the objectives and actions to be undertaken between 2016 and 2018.

Ranking of CGG's own sustainable development issues



8.1.2. GOVERNANCE STRUCTURES FOR CGG'S SUSTAINABLE DEVELOPMENT

8.1.2.1. Promoting an ethical culture and conduct

Values and rigorous ethical standards are foundations of development for the CGG Group. They require that we comply with laws and regulations and the principles of our Business Code of Conduct with regard to our clients, shareholders, employees, and partners. The Business Code of Conduct, available in nine languages within the Group and on the site www.cgg.com, sets out the rules and expected to assure that the Group conducts its business with integrity.

The CGG Ethics Committee publishes and communicates the Business Code of Conduct, ensuring the recommendations concerning ethics are widely distributed.

In 2017, the Ethics Committee initiated a modernization of its Business Code of Conduct.

The Ethics Committee is notified of any issues related to the Business Code of Conduct, in particular through the whistleblowing procedure. This procedure, implemented in 2009, complies with the specifications of the Sarbanes-Oxley Act of 31 July 2002 (Article 301-4), the provisions of the Privacy Shield, and the requirements of the French Data Protection Authority ("Commission nationale informatique et libertés" - CNIL). Employees are regularly reminded of its existence in every communication regarding ethics. The telephone solution originally in place has been replaced by a web solution.

The composition of the Ethics Committee was reviewed in September, 2017. The Ethics Committee is now composed of 6 members. It meets regularly, several times a year. It presents its annual report to the Chief Executive Officer and to the Audit Committee of the Board of Directors.

In 2017, the Ethics Committee was called on fewer occasions than in 2016, which can be explained by the extensive restructuring plan conducted within the Group. However, the cases referred to the Committee were substantially similar in nature to those in previous years.

8.1.2.2. Anti-corruption program

CGG's sustainable development materiality study underlined the significant risk of corruption inherent to our sector of activity. A robust Compliance Program is an important focus for the CGG management team; it demonstrates the drive to maintain an ongoing effort against corruption, building on program development the last years and assuring that these efforts continue into the future.

CGG expanded its anti-corruption program by the means of procedures and control processes (e.g., due diligence), particularly in the context of the management of its partners e.g., Joint Ventures, and service providers. In this context, the Compliance Department continued its close collaboration with the Risk Management Department, the Purchasing & Supply Chain Department and Internal Control. In 2017, a closer collaboration was developed between the Compliance Department and the Sustainable Development Department.

CGG closely followed the entry into force of Sapin II law and its Anti-Corruption provisions as well as the resulting obligations regarding the Compliance program implemented at CGG.

In parallel, CGG continues its various activities in regard to training and communication. An Anti-Corruption E-learning platform is being prepared.

8.1.2.3. Governance of sustainable development issues

Responsibility for all aspects of Sustainable Development (Health, Safety, Security, Environment and Social Responsibility) and the development of human capital rests with Management. For this, Management draws on HSE, Social Responsibility and Human Resources professionals in Business Lines and Group Functions, to support their management systems.

The Group's Executive Management plays a vital role in defining the terms and conditions under which CGG can develop its business while protecting its employees, communities neighbouring its installations and the environment. CGG's leadership in sustainable development is established from the top through the formulation of specific expectations on HSE performance, regular communication, monitoring of performance throughout the year and implementation of any required changes following periodic formal reviews.

The Sustainable Development Committee supports Management by defining the guidelines for the Sustainable Development program. Three times a year, this Committee reports on the progress achieved to the Corporate Committee (C-Com) and to the HSE and Sustainable Development Committee of the Board of Directors. Regular reviews are also carried out by Business Lines, the Corporate Committee and the Sustainable Development Committee to check that the system is operating correctly. These reviews make it possible to identify areas for improvement and corrective measures to be applied, and ensure that suitable resources are made available to achieve the expected results. They also allow the development and the application of measures to ensure conformity with statutory requirements.

8.2. HEALTH, SAFETY, SECURITY, ENVIRONMENT AND SOCIAL RESPONSIBILITY

8.2.1. MATERIAL ISSUES ON HEALTH, SAFETY, SECURITY, ENVIRONMENT AND SOCIAL RESPONSIBILITY ("HSE & SOCIAL RESPONSIBILITY")

CGG's top sustainable development priority consists of preventing workplace accidents and occupational diseases among its employees and sub-contractors in its areas of prevailing influence. Historically, the Group's main risk activities have been road transport, helicopter operations, tree felling in forests, and the crossing of lakes and rivers. CGG is also committed to providing a healthy work environment with no addictive substances in the workplace.

The security of its employees is another absolute priority for CGG. The Group is exposed to threats of burglary, assault, piracy and terrorism, which it counters through a system based on prevention and dissuasion.

Through its seismic data acquisition activities, CGG covers considerable distances each year in varied and often isolated environments, sometimes operating in fragile ecosystems. CGG seeks, therefore, to develop methods and equipment enabling its customers to prevent or reduce their environmental footprint, whether in the acquisition of geophysical data or in the phase of hydrocarbon production. In particular, CGG seeks to contribute to better knowledge of the potential impact of its sound emissions on the marine environment so as to adapt where necessary the protection measures used.

Finally, with regards to Social Responsibility, CGG focuses on the fight against corruption in all its forms (described in Section 2.1.2.2. of this chapter), respect for and economic development of local communities that host our sites and activities and respect for human rights and fundamental rights at work.

8.2.2. POLICIES APPLIED TO HEALTH, SAFETY, SECURITY, ENVIRONMENT AND SOCIAL RESPONSIBILITY ("HSE & SOCIAL RESPONSIBILITY") ISSUES

8.2.2.1. Policies and objectives

CGG applies an HSE & Social Responsibility program based on the conviction that all accidents can be prevented.

CGG's HSE & Social Responsibility expectations are established by the Chief Executive Officer and are included in HSE, Sustainable Development, Health and Well-being, Security and Environment policies. Every employee has access to these policies, either via the Internet or in displays at the Group's sites. These policies are supported by three-year objectives set by the Chief Executive Officer and incorporated in the "*Care+Protect*" program.

Group objectives defined by the Management applying to the areas of health, safety, security, the environment and social responsibility target more specifically the commitment of management bodies and their visibility on these topics, risk management, subcontracting management, skills and training. Each Business Line adopts these objectives and specifies them in annual programs so as to best respond to the issues characterizing their activity. In this way, every level of the organization is clearly informed of the expected results and called on to help achieve them. Consequently, these Group objectives also become personal goals for the management team.

8.2.2.2. The operational management system for health, safety, security, the environment and social responsibility (HSE-OMS)

CGG 's structured approach to Health, Safety, Security, Environment and Social Responsibility issues is based on a management system addressing these topics (more commonly known as *HSE Operating Management System* – HSE-OMS). HSE-OMS applies to all of the Group's activities areas across many domains: health, safety and security of employees and contractors working within the sphere of influence of CGG projects, as well as environmental protection and social responsibility in all its projects and facilities.

Risk management is at the core of our HSE-OMS. The Group maintains a structured approach aimed at identifying, assessing and controlling risks, based on a common group-wide international methodology and model for risk management. Risks are assessed for each project or permanent installation. They incorporate the history of incidents recorded in the Group's database and those in the database shared with the *International Association of Geophysical Contractors* (IAGC), which covers several decades of incidents.

Through systematic risk assessments, and in particular the targeted identification of high-risk activities, we determine the necessary controls to manage safety risks. These controls include procedures, work instructions, specific risk management training, site meetings and daily on-the-ground HSE inspections, supplemented by cross-department inspections. The latter are carried out by a person from outside the entity inspected. Exercises carried out periodically at the installation and project level mean that the effectiveness of the emergency response plans can also be checked. At the site and mission level, the line management carries out its own inspections and observations. An annual audit plan is drawn up to check that the policies and key processes of the HSE-OMS are implemented and respected in all its activities. The environment of controls and monitoring is coupled with a culture of individual responsibility.

Individual risk awareness and personal responsibility are essential elements of our *HSE-OMS*. A behavioral safety program entitled "Rules to Live By" and "Things We All Must Know" has been in force since 2011. This program focuses on the Group's main safety risks, is published in multiple languages across all activities. These rules are supported by visible posting on the workplace and clear instructions, particularly concerning consequence management.

Good management of HSE and social responsibility risks requires transparent reporting and fast and efficient communication. Comprehensive notification of all incidents, near-misses and hazards is crucial to obtain good results. Our information system, PRISM, has been developed in-house for this purpose. PRISM is an application that allows HSE, Quality and Social Responsibility files to be shared by all CGG sites and operational units. It also allows analyses to be produced, performance to be monitored – including risk assessment and management – and the action points to be managed. All of CGG's employees have access to PRISM. Incidents are assessed according to their actual and potential severity. A subscription system allows for immediate notification to the appropriate level of management, including the highest level for incidents with high potential. In 2017, we deployed the new generation of PRISM, strengthening the risk management tools on all of the HSW-OMS areas. The PRISM cover rate for our activities increased from 90% to 100% of the hours of exposure of the Group. The final element in the Group's management system is management review; management reviews are held at Business Lines, Executive Committee and the Board HSE and Sustainable Development Committee. They ensure the system's proper operation, identify areas for improvement and the corrective measures to be applied, and finally help ensure that suitable resources are in place.

Health

CGG implements occupational health programs related to public health and well-being at work, aimed at maintaining quality of life at work through medical fitness for work, and at preventing occupational diseases. The management of risks and impacts on health is systematically adapted to the local environment. Therefore, it takes into account the issues specific to very isolated areas and adapts the means of protection, rescue and assistance for the staff exposed. This is especially the case for land acquisition projects. In 2017, operating in global region where health risks are high (Tanzania-Uganda: Cholera and tsetse fly in Kenya; Papua-New Guinea: malaria or working at high altitude), CGG has been adapting resources for prevention and emergency response. In addition, information to travellers from different sources was reviewed with a new format to better attract the attention of travellers to the main risks or health alerts in force in the destination countries, drawing them to the necessary preventive care if applicable.

Safety

Our risk analyses and prevention programs are directed first and foremost at high-risk activities (for example, road transport and offshore helicopter transfers of teams). In 2017, each Business Line implemented a specific prevention program: Equipment, for example, uses a program for better control of the load weights to avoid or limit manual handling, from purchasing through all of the production cycles.

Security

CGG has implemented a security intelligence and monitoring system to identify and assess threats in areas prone to maritime piracy and potentially unstable areas onshore. Projects in areas at risk are reviewed at the highest level. These reviews are supported by security experts. Local security plans, linked to projects, are developed and implemented before operations start. All staff also receive regular security information concerning the countries where they operate.

Environment

CGG implements environmental plans in all its Business Lines. These plans are aimed at eliminating, or otherwise, reducing the impact of its activities on the soil, water, fauna, flora and atmosphere. Particular attention is paid to the effect of sound emissions from acoustic sources of seismic marine operations on marine fauna. The Equipment Business Line follows an eco-design chart that allows new generations of geophysical products to reduce their environmental footprint over their life cycle. The range of geoscience services offered by CGG to its clients also allows them to reduce their own environmental footprint. This is what the materiality study presented in 2.1.1 identifies as "Improved Oil Recovery".

Social Responsibility

CGG is committed to proactively developing and maintaining harmonious relationships with the local communities living close to its permanent centres and seismic acquisition projects. In order to contribute positively to the socio-economic development of these communities, CGG seeks whenever possible to source from domestic suppliers and to hire and train staff native to the country of activity. CGG signs many cooperation agreements around the world with local universities which provide for the free of charge education licenses for our reservoir characterization and seismic data processing software. This proximity established with the research centres facilitates the recruitment of qualified personnel close to our operating centres.

As stipulated on our Sustainable Development policy and our policy to exclude child labour, CGG undertakes to operate in the 38 countries where it is present in accordance with the Universal Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work and the United Nations Convention against Corruption. This commitment is also reflected in our purchasing policy, notably through a suppliers' code of conduct setting out the minimum social and environmental standards expected of our suppliers.

8.2.2.3. Promoting excellence and innovation in HSE & Social Responsibility

Seismic acquisition projects and the Equipment Business Line implement internal recognition schemes rewarding proactivity with regard to HSE. The quality and quantity of notifications of dangers and near-accidents reported at the project level are therefore generally linked to a system of material rewards and formal recognition by the local management.

At Group level, since 2014, CGG has also organized the annual Care+Protect reward program. The prizes reward CGG teams that have achieved HSE or sustainable development excellence through technological development, innovative practices, or as the results of an original initiative.

CGG continues to play an active role in the HSE Committee of the *International Association of Geophysical Contractors* (IAGC) and participates in a number of working groups organized by the *International Oil and Gas Producers* (IOGP). These committees facilitate the sharing of lessons learned from the management of major near-misses or accidents, the dissemination of best practices, and the review and improvements to HSE standards in the exploration and production industry. The same spirit of exchange of best practices also inspires CGG’s representatives regarding sustainable development within the Advanced Clubs and Human Rights of the French arm of the United Nations Global Compact.

8.2.3. MAIN RESULTS ACHIEVED FOR HEALTH, SAFETY, SECURITY, THE ENVIRONMENT AND SOCIAL RESPONSIBILITY ("HSE & SOCIAL RESPONSIBILITY")

The key performance indicators related to material HSE & Social Responsibility themes, as well as indicators concerning some non-material themes, are listed in Section 8.4, HSE & Social Responsibility Indicators of this reference document.

8.2.3.1. Health

Frequency rates for occupational diseases resulting in lost time are improving, and the severity rate is falling.

The following table, based on IOGP rules, covers occupational diseases (OD) excluding the Equipment Business Line.

	OD with days lost frequency rate (LTIF)	Recordable OD frequency rate (TRCF)	Severity rate Number of lost days × 1,000/ hours	Hours (millions)
2015	0.08	0.33	0.003	47.8
2016	0.09	0.14	0.001	21.6*
2017	0.05	0.23	0.0005	21.4

LTIF = (Fatalities+ Lost Time Incidents)*1,000,000/hours.
TRCF = (Fatalities+Lost Time Incidents+Restricted Work Cases+ Medical Treatment Cases) x 1,000,000/hours.

8.2.3.2. Safety

CGG measures safety performance by the frequency of Lost Time Injuries. These indicators include permanent and seasonal Group employees and subcontracted staff working under our authority.

	Fatal accident rate (FAR)	Lost time injury frequency rate (LTIF)	Recorded accidents frequency rate (TRCF)	Severity rate	Cases of total permanent or partial disability	Hours (millions)
2015	1.9	0.29	1.38	0.003	1	52.1
2016	0	0.25	1.40	0.004	0	24.3*
2017	0	0.5	1.9	0.019	0	24

LTIF = (Fatalities+ Lost Time Incidents)*1,000,000/hours.
TRCF = (Fatalities+Lost Time Incidents+Restricted Work Cases+ Medical Treatment Cases) x 1,000,000/hours

(*) In 2016, CGG changed the convention for calculating hours, aiming for greater consistency among our different Business Lines but also with our industry associations (IOGP and IAGC). Following the consolidation, the hours

worked and not the hours exposed are taken into account (as at offshore sites and camps). The total of hours for 2016 is thus lower than it would have been under 2015 convention.

The Group recorded a rise in the frequency rate of Lost Time Injury and in the total number of cases registered. The frequency of HSE incidents with high potential severity (potentially fatal incidents including near-accidents), which is tracked worldwide, also rose.

CGG has continued its transport program by focusing on driving skills and driver assessments. CGG uses *In Vehicle Monitoring Systems* (IVMS), *Speed Limiting Devices* (SLD), *Roll-over Protection*, and there are always trainers in defensive driving on our crews. Our *Motor Vehicle Crash* (MVC) rate improved significantly in 2017.

	MVC rate	Driven Kilometers
2015	0.44	22 500 000
2016	0.74	18 900 000
2017	0.31	16,100,000

8.2.3.3 Security

In terms of security, maritime piracy has experienced a regain in the Indian Ocean, in the Gulf of Aden and near Somalia. A higher level continued in the Gulf of Guinea, especially near Nigeria and neighbouring countries, and to a lesser degree in Southeast Asia, especially in the Sulu Sea. Furthermore, the return of terrorists from the combat zones of Iraq, Syria and Libya has contributed to the increase in the jihadist threat in North Africa, in the sub sahelian area and the Middle East.

8.2.3.4 Environment

Reduction of the environmental footprint in the value chain

Seismic imaging is essential in exploration, to correctly identify the location of natural resources reservoirs. The ratio of producing wells to dry wells has thus improved steadily since seismic imaging has been fully involved in the drilling decision-making process. This avoids drilling and harm to environments without any energy benefit ensuing.

In 2017, the Land Acquisition Business Line developed a commercial offer called LiteSeis, which allows acquisition methods to quickly acquire the subsoil data in urban, agricultural or difficult to access areas, while maintaining as small an environmental footprint as possible. This method of acquisition responds well to the requirements for the knowledge of the geothermal subsoil or store of gas in an urban environment. For a mission in a mountainous region, it could benefit from the new product sold by the Equipment Products Business Line in 2017, the wireless WTU node. The WTU uses four times less energy than the previous generation of wireless nodes. This significantly increases its automatic data recording and allows for a drastic reduction in the handling and transport of equipment, thereby hand in hand reducing the security risk, the environmental footprint and the potential for damage to the local communities.

The geosciences services of CGG, such as seismic interpretation, petrophysical analysis and the analysis of the rock samples take place at the exploration and at the production stages of hydrocarbons, not only allowing clients to properly place their wells, but also to optimize their output.

In 2017, the land and marine acquisition activities allowed the teams to image almost 108,000 square kilometres, a small fraction (less than .001%) of which is located in protected sites. Airborne acquisition flew over an area equivalent to the United Kingdom. CGG did not record any significant environmental incident.

Sound emissions and the marine environment

Sound emissions emitted by seismic sources can, in certain operating conditions, disturb the animal world, particularly marine mammals in which hearing is the most developed sense. This is why CGG applies measures for the prevention and mitigation of the risks of sound impact. These measures ensure that the seismic sources are systematically activated in a gradual manner, assuring beforehand and during the progressive start-up that no animal is within a radius of at least 500 meters around these sources. The perimeter of security and the monitoring methods used (visual observation and acoustic detection) vary according to the risk evaluation, closely tied to the ecological sensitivity of the relevant area of acquisition.

The implementation of the preventative measures described above reduce the risk of inflicting hearing damage to insignificant levels. CGG is also concerned about the effects of acoustic disturbance on the life cycle of cetaceans and fish, an area where scientific knowledge is still incomplete. The Exploration and Production industry's ambitious joint research program "Sound and Marine Life", which, since 2006, has funded US$55 million in research, continually provides answers to the various questions regarding sonar impact. Since 2016, CGG has been part of the technical management committee monitoring the progress of about twenty projects. The results obtained by the various research projects are intended to be shared with the greatest number of people. Published on the site www.soundandmarinelife.org, they are also published in scientific reviews and presented at scientific conferences such as *Oceanoise* in May, 2017.

Regarding operations for monitoring cetaceans, in 2017, CGG continued to equip the seismic fleet with QuietSea, Passive Acoustic Monitoring - PAM - developed by the Equipment Business Line. QuietSea has also been adapted to meet the specific needs of the identification of marine mammals from source boats and 2D data acquisition methods. QuietSea was thus able to demonstrate its detection abilities in the deep waters of the Gulf of Mexico, Surinam, Mauritania and Mozambique. The large scale deployment of this new automated technology makes detection of cetaceans possible at any time and in any weather. Because of the large number of sensors in the network, the quality of the detection and the precision of the localization of marine mammals have been greatly improved by this technology. This makes the risk reduction procedures more reliable; procedures such as progressive startups of the sources or stopping them in case of the presence of marine mammals.

8.2.3.5 Social Responsibility

Interactions with local communities

CGG is committed to developing and maintaining mutually beneficial relationships with the local communities living close to its seismic acquisition projects, factories and permanent offices.

Regarding seismic acquisition, the client for which CGG is performing a service generally bears the responsibility and management of relationships with local stakeholders. However, it does happen that the client contractually delegates this responsibility to CGG. In addition, CGG is entirely responsible for the management of relations with local communities when the company acquires data in Multi-Client.

In 2017, CGG directly interacted with local communities in Brazil, Mozambique, Norway and Ireland (marine acquisition) and Namibia, Tanzania, Uganda, Algeria, Egypt, Saudi Arabia and Germany (land acquisition). No significant detrimental impacts on the communities have been noted or reported.

Community interactions follow the general recommendations of the "Management Plan for Community Relations" published by the Group. This plan is accompanied by four practical guides (Management of Fishing Activities/Obtaining Permits and Access to Land/Management of Temporary Local Personnel in Land Acquisition Missions/Implementation of a Sustainable Development Project).

Since 2016, important land acquisition projects have systematically used a social initiative to benefit the local communities. In marine acquisition, a large scale social initiative was begun in 2017 in connection with the Wide Azimuth acquisition project, which mobilized five ships in the deep Mexican waters for the account of PEMEX. CGG has committed itself to implementing a series of social projects that have been preselected by PEMEX's Sustainable Development Department for up to 2% of the value of the acquisition contract. The first project completed in 2017 had a landscape architecture firm working on a study to define the contours and specifics of model recreational parks which will be created in the country. CGG has assumed responsibility for the construction of such a park, with a surface area of 50,000 m^2 in the city of Coatzacoalcos. The Multi-Client New Ventures Business Line (MCNV) commissioning the acquisition of marine data also endeavours to implement social responsibility projects in the countries in which it is operating.

The permanent sites of CGG are themselves encouraged by Management to get their employees involved in local sustainable development initiatives that meet the specific needs of the local communities in terms of health, security, the environment, education or community service. The type of activities varies greatly among the sites, but the most common practice consists of organizing periodic blood drives, which allow the employees to donate their blood during the work day. In 2017, 82 initiatives took place in 20 countries.

Local employment and content

Maintaining long-term relationships with national partners is key to CGG's sustainable development approach. The various partnerships created by the Group as Joint Ventures are witness to this, whether it is in Saudi Arabia with ARGAS, with 51 years of experience in land acquisition, in China, where Sercel Jungfeng has been producing geophysical equipment for 14 years, or in Vietnam, working with PTSC in marine acquisition for 6 years.

The Group's permanent sites primarily employ national employees. Thus, of the total workforce of the CGG Group (excluding field staff), 80% of employees work in a country in which they hold citizenship. Moreover, among the CGG sites employing more than 50 staff, 72% of managers hold the nationality of the country where they work.

Regarding short-term employment for Land Acquisition, locally hired staff and continuation of employment over several successive projects is favored whenever possible. In 2017, CGG carried out land acquisition operations, either directly or through its participation in the Argas joint venture, in five non-OECD countries (Papua-New Guinea, Namibia, Algeria, Egypt and Saudi Arabia), for a total of 469,000 workdays by employees who are nationals from those same countries.

To meet our local recruitment needs closest to our imaging centers, CGG GeoSoftware is engaged in a University partnership program that encourages innovative approaches to education in the geosciences. With almost 500 million US dollars (estimated market value), in license donations or renewals recorded in 2017, this allows for the training of students on advanced industrial software and to develop new reservoir characterization techniques on real data. This program is international in scope: in 2017, CGG GeoSoftware was partnering with 116 universities throughout the world, including 32 located in countries considered to be developing (non-OECD countries). In most of these countries, software donations are very often accompanied by logistical help and donations of computer equipment. GeoSoftware has identified forty scientific articles published in 2017 by researchers and academics who benefited from free software licenses.

Human rights

Since 2013 CGG has been a "GC Advanced" member of the Global Compact, underlining its advanced level of implementation and higher degree of engagement concerning the issues of human rights and labor rights. With a view to continuous improvement, our report *Communication on Progress* has been subject to peer review by members of the GC Advanced club for the last two years.

In 2017, CGG subscribed to the database Social Hotspots, which allows it to understand in more detail the country risk of violations of fundamental rights at work and to perform the required due diligence before beginning an acquisition project. The HSE & Social Responsibility audits carried out in CGG's various Business Lines verify the application of the fundamental rights at work, such as eliminating forced labor and child labor, non-discrimination and respect for freedom of association. The findings of these audits regarding respect for these rights contribute to the global evaluation of the project or the audited site, and are subject to corrective actions.

8.2.3.6 Training and Competence

The CGG HSE & social responsibility training programs are provided to the HSE community and to staff on all company sites, at CGG University and in the field. The variety of formats available (interactive classroom training, educational films, e-learning) seek to adapt the information to the public and optimize assimilation. CGG has completed over 52,968 hours of HSE and Social Responsibility training to its employees and subcontractors in 2017.

8.3. EMPLOYEES

8.3.1. MATERIAL ISSUES CONCERNING EMPLOYEES

8.3.1.1 Economic Environment and ensuing HR issues

The CGG Group is a leading market player in Geosciences, which form an integral part of the oil services industry value chain. It operates in two different business sectors, "geophysical and geoscience equipment" and "geophysical and geoscience services ".

These sectors have been particularly affected by the continued deterioration of the market since 2013.

The latest steps in the industrial transformation plan initiated in 2016 were rolled out in 2017, the main issue being the preservation of maximum employment by promoting internal redeployment or outplacement including by actions to provide guidance, training and support in the creation of new activities. Another key issue in HR policy has been to give renewed motivation to teams and allow professional and personal employee fulfilment in this context.

8.3.1.2 HR Training / Development

In a globalized economy which is marked by the continuous creation of new trades, continuing training and professional development are emerging as true strategic challenges. This competitive lever is an essential driver of innovation and growth.

It must constantly adapt to the new needs of employees which always require more personalization, immediacy, and mobility.

To continue and ensure its strategic position, CGG has a constant need to advance the women and men who are our main resource. CGG therefore strives to develop technical and managerial skills to create conditions that encourage technical expertise and an interdisciplinary and committed approach.

8.3.1.3 Restructuring

The CGG Group confirms its global strategy to build an integrated group among equipment, seismic acquisition, imaging and reservoir models with multi-client activity that is transverse and allows the best use to be made of the expertise and technology of the whole Group.

The industrial transformation plan required a large reduction in staff and led to the closing of some operational sites and industries, and major organizational changes, as well as the withdrawal of many vessels, airplanes and helicopters and the departure of marine teams and land and multi-physical teams. The resilience of the CGG Group allows it to overcome industrial change and financial turmoil. The Group is resized, rebalanced and now less capital intensive.

8.3.2. HUMAN RESOURCES POLICIES

8.3.2.1 Work environment

CGG's Human Resource strategy consists of strengthening, mobilizing and inspiring our most important asset: the women and men of our company.

Coherent and ambitious HR practices and their implementation throughout the organization contribute to CGG's attractiveness. This vision relies on objectives and action plans tied to initiatives that will lead to change, assist in the development of the talents of each of our employees and prepare us for future succession plans.

The development of a work environment that fosters equal opportunities and respect for all of our employees is encouraged by CGG. In order to suppress any form of discrimination, CGG makes resources available to any employee that allow him or her to anonymously communicate any offense that he or she may have been the victim of. The policies of the Group exclude the employment of anyone under 16, and we are committed to always being in compliance with the law and with local and international principles regarding child labour and the protection of young workers.

Furthermore, CGG is committed to maintaining working conditions compliant with health, safety, and ergonomic standards to contribute to both employee well-being and performance.

Employee Assistance

The Employee Assistance Program was renewed in 2017 with the American company, ComPsych, for three years. This program, provided by a third party, guarantees confidentiality for the employee and aims to provide personal and individual assistance in case of need: medical, social, professional, or legal.

In France, this program co-exists with other more conventional forms of social assistance implemented under French labour regulations related to occupational health, CHSCT (Health, Safety, and Working Conditions Committee), and recourse of elected staff representatives. However, in countries where the structure or laws do not permit such recourse, it compensates for it.

Institutional labor relations

In order to promote cooperation and information exchange, the CGG SA - CGG Services SAS ESU (Economic and Social Unit) and Sercel SAS in France have representative bodies with which they organize a number of official meetings (Works Committee, Staff Representative Meetings, CHSCT, and various commissions) as well as trade union organizations with which agreements have been signed in France. Within the CGG SA - CGG Services SAS ESU, employee rights are guaranteed by a company labour agreement.

Body	Number of ESU ordinary meetings	Number of ESU extraordinary meetings	Number of ordinary Sercel SAS meetings	Number of extraordinary Sercel SAS meetings
CHSCT	4	4	4	2
Staff representative meetings (Works Council)	12	11	12 (3)	2 (1)
Staff Rep. Meetings	12	0	10	2

Similarly, and in accordance with the law, staff representatives are elected for employees, field staff and expatriates of CGG International for a period of three years under the Swiss Code of Obligations. Elections for the Marine Committee took place in 2012 and led to the formation of a new committee in 2013, whose term of office was extended for a further year with the approval of the elected officials to implement the restructuring plan in 2016. The Land Committee was also renewed in 2013, after new elections, for an additional three years.

In Singapore, 76 employees are represented under the aegis of the collective bargaining agreement of December 31, 2012. These employees are represented by the SISEU (Singapore Industrial and Services Employees Union) which is affiliated to the National Trades Union Congress.

In Norway, we have an agreement with an employee representative union. 34 employees are members of this union.

Compliance with international labor agreements

The Group adheres to the principles and rules of the core conventions of the International Labour Organisation (ILO). *See further detail in Section 2.2.2.2 (subsection Social Responsibility).*

Measures to promote the employment and integration of people with disabilities

The Group, as specified in its Human Resources Policy, rejects all forms of discrimination in employment or during the career of its employees. In particular, this concerns discrimination against people with disabilities. The Group complies with national legislation on the subject and does not publish statistics on the subject due to the nature of its activities and the constraints related to the collection and analysis of information that might exist in some countries which prevents the Group from recording this information in its databases (discrimination).

In France, the Group is subject to Law No. 2005-102 of February 11, 2005 on equal rights and opportunities as well as the participation and citizenship of people with disabilities.

Agreement on gender equality

CGG is making a special effort to promote greater gender balance in managerial functions through promotions and targeted recruitment.

The agreement on professional equality signed for Sercel SAS on October 23, 2012 ended on December 23, 2016; a new agreement has been finalized and is being signed to extend the specific actions on job desegregation, access to training, career paths and pay equity.

The Group's Human Resources Policy, published in 2010 and amended in 2012, explicitly provides for non-discrimination in hiring and equality of opportunity and treatment between men and women.

Remuneration Policy

CGG guarantees the homogeneity of the remuneration system while ensuring compliance with local practices. Rewarding the performance of each employee is at the heart of the implementation of mechanisms to share value created by the company.

This policy includes the following parameters:

- A competitive remuneration policy intended to attract, motivate, recruit, and retain skills needed by the Group.
- A remuneration policy that is consistent with market practices regarding base salary, variable share (short and long term), and benefits.
- Variable remuneration in keeping with the strategic objectives of the Group and aimed at the improvement of business performance.
- A remuneration policy in line with CGG's culture and values: simple and fair systems, and the wish to actively encourage personal involvement, teamwork, innovation, and commitment to health, safety, environment, and sustainable development issues.

These general principles apply in each country where CGG has employees, in full respect with the legal framework.

8.3.2.2 Training and career development

The employee development and training policy remains at the heart of the group’s priorities.

In a complex and uncertain economic environment, it is important for the organization and for each of its employees to continually acquire and develop the knowledge and expertise that are required for adapting to changes in technology, methods and working tools, as well as to changes outside of the company.

To do this, the Group continues to rely on existing HR tools and processes to encourage discussions regarding employee development, which include:

- An annual performance interview that allows, outside of the annual performance evaluation, for an exchange regarding employee’s desires of professional development as well as possible development within the Company.
- An employee development plan, which formalizes the development actions to be taken for the employee.
- It includes training programs that will facilitate the acquisition of new expertise and soft skills in the Company.

The CGG Corporate University is a key partner to the employees in the implementation of their development. It is organized to ensure that there is a close relationship between the internal training offer and operational needs. There are contact persons in each region and they regularly meet with the business line managers. A needs report is performed every year.

The University provides training courses intended to foster the development of our employees and accelerate the integration of new employees in the Group's various activities.

It offers internal programs covering our core technical activities: seismic data acquisition, data processing and management, interpretation, geology and reservoir analysis, use of seismic equipment. These programs, delivered in conjunction with the operational centers, are offered to our employees as well as to our clients.

The CGG University also offers training that allows our staff to prepare themselves for managing teams, to handle customer relations or innovative projects and, in general, to meet the challenges of a high tech company in a fast changing environment .

8.3.3. MAIN RESULTS RELATING TO EMPLOYEES

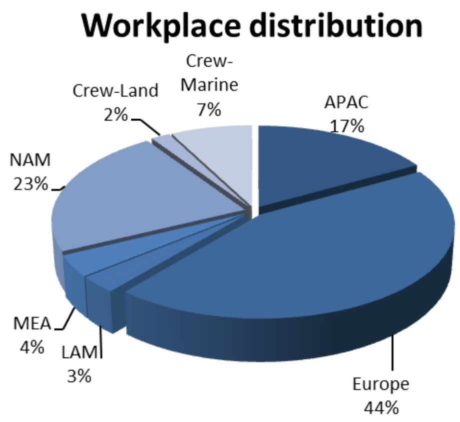
8.3.3.1 Situation and developments in 2017

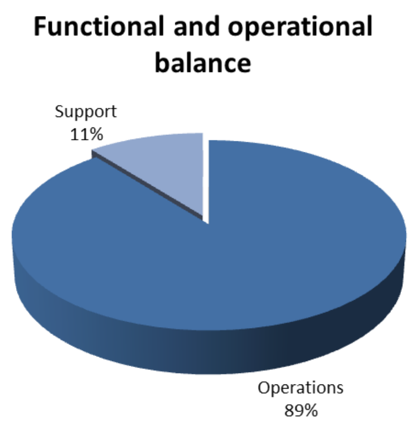
Work force

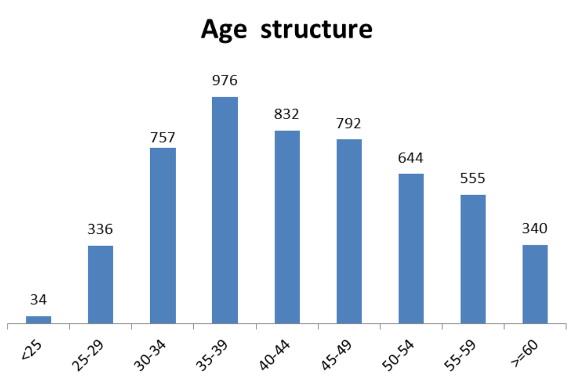
The figures below are for the CGG Group worldwide scope (see chapter on Methodology).

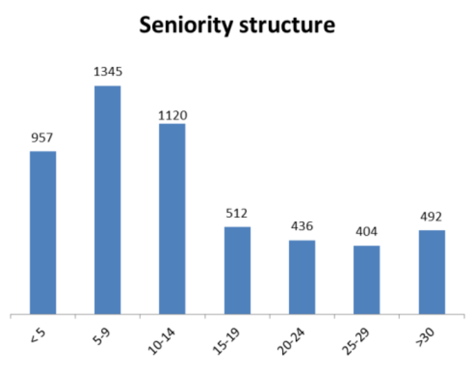
On December 31, 2017, the Group employed 5,266 permanent employees (compared to 5,766 on December 31, 2016). The following are the main indicators of the Group's human resources:

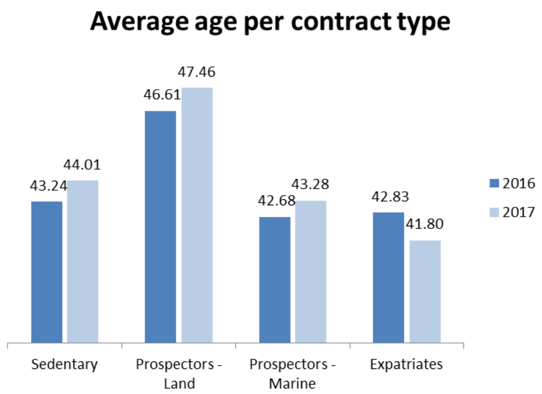
- 5,266 employees;
- over 85 nationalities;
- over 70 locations worldwide.

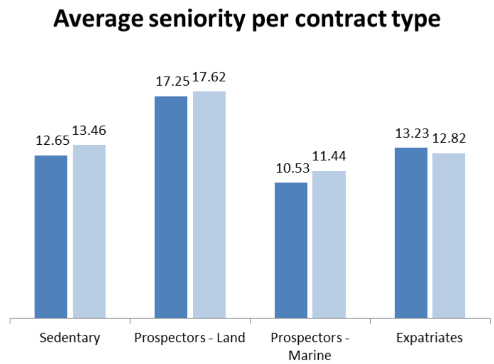








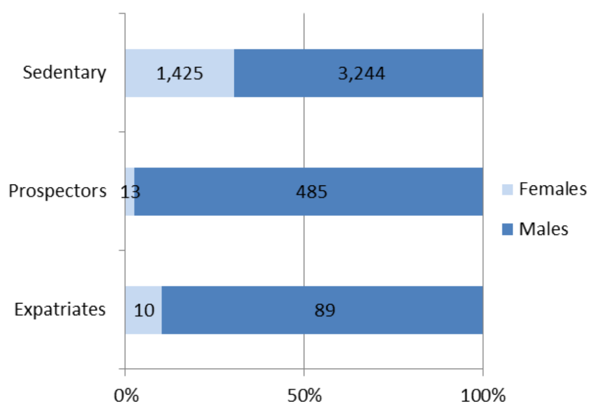


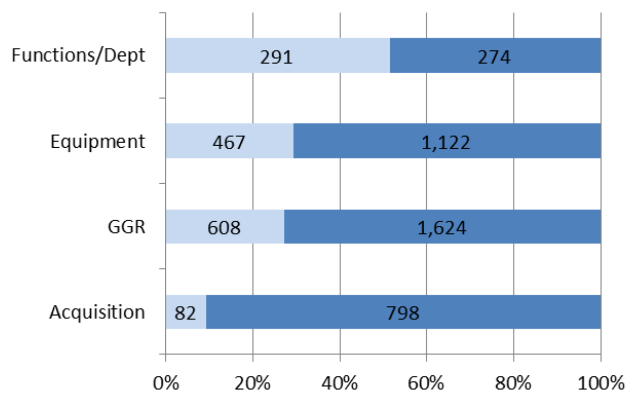


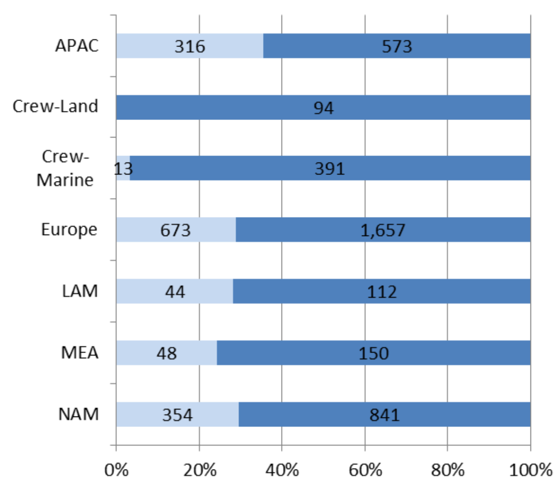
Equality between men and women

Over the last 5 years, the percentage of female in the Group has been maintained stable at around 27%.
Out of the Group's 5,266 permanent employees the gender distribution is as follows:

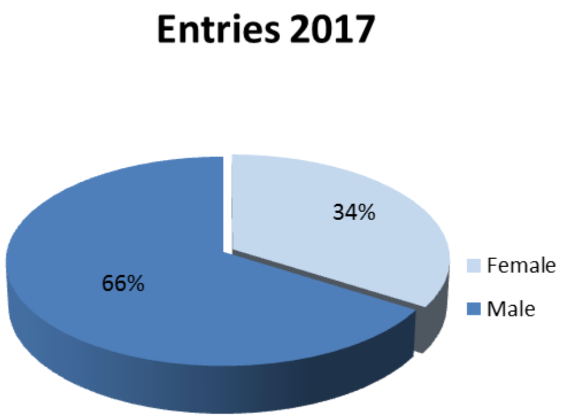
Gender distribution per contract type, division and assignment location

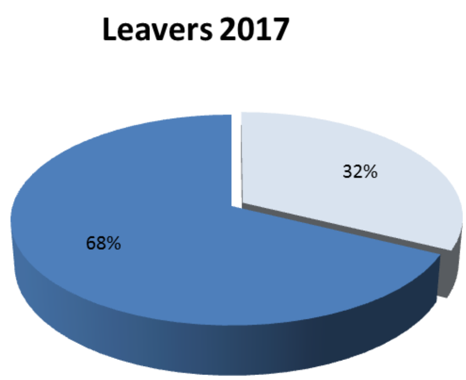




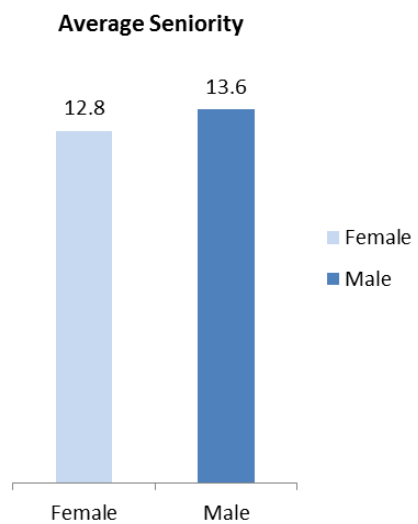


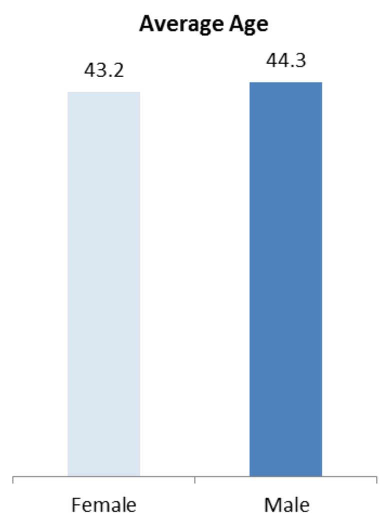
Gender distribution of entries/leavers





Gender distribution average age and average seniority



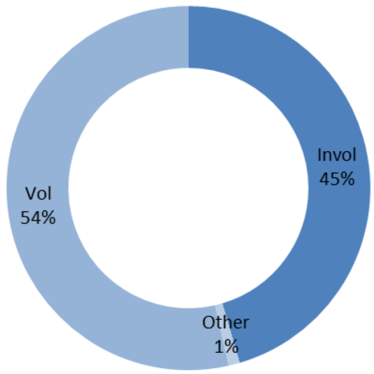


Entries and exits

In 2017, 215 entries and 704 exits were recorded for the Group's permanent employees.

Entries include 201 employments and 14 re-employments.

Exits include both voluntary departures (retirement, resignations, etc.) and involuntary departures (redundancies). Departures break down as follows:



Over the whole of 2017 a balance of 11 people was deducted from the workforce due to the suspension of their contract or working for a joint venture.

Against the backdrop of our transformation, we are increasing our focus on internal mobility, placing our reliance on the Country, Hub and Business Line HR teams to support our employees in these changes. We are maintaining strict control over new positions in our support functions. All positions are primarily filled in-house before we resort to external recruitment. The posting of our job offers in the career section of our Intranet site makes it easier to communicate our career opportunities rapidly and in all countries.

We have also introduced for our staff an Intranet site that brings together all the information and contacts that could be useful in the various HR areas. This central HR portal is a tool that gives our employees unique access to finding the information of interest to them day to day, either at group level or locally.

HR teams also have a common Intranet allowing them secure access to all the information, tools and files useful in the practice of their profession. This allows the same practices and a common standard to be shared within the Group.

8.3.3.2 Work environment

Employees are subject to compliance with the working times stipulated in the social regimes of their countries of assignment.

"Prospector" contracts are contracts that provide for rotational work arrangements, such as six weeks of work for six weeks of rest in Marine acquisition. Land acquisition rotations are more flexible according to the nature and duration of projects.

In France, Group working conditions are governed by a specific company labor agreement whose terms have been adopted in consultation with social partners. This agreement is common to the parent company, CGG SA, and CGG Services SAS as part of the economic and social unit (ESU) implemented. It does not include Sercel SAS which is subject to the collective bargaining agreements for the metallurgy industry.

Four types of working rhythm are provided for in this collective bargaining agreement:

- two regimes are for people working in offices (time-sheets and time-by-day);
- one is for annualized prospectors (set number of days of work per year) who work in rotation;
- one is for non-annualized prospectors who acquire rest days based on the number of days worked in the field.

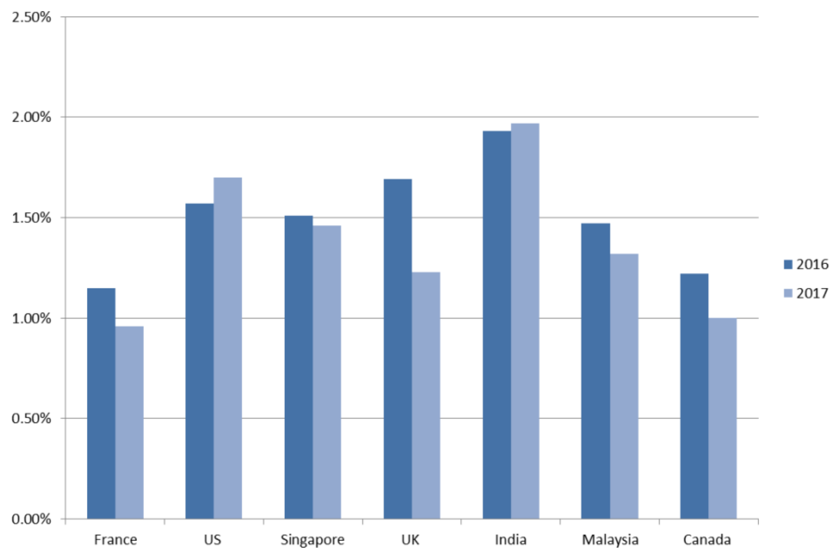
Employee working rhythm is governed by an agreement on the reduction of working hours signed on August 27, 1999 and implemented, following the principle of annualization, by the implementing agreement of February 17, 2000.

A working time account was implemented in parallel with the implementation of the 35 hour working week. Similar schemes regarding work time planning have been implemented on Sercel SAS' French sites.

Absenteeism

The Group's Absence Management tool generates statistics for key countries within the limits of local laws and data reliability which is constantly improving. It is important to note that these figures are difficult to compare as the notions of work and absence are diverse and long-term absences are not taken into account in the same way by the various local laws. We therefore only report absences of less than 100 days here.

The absenteeism rates (excluding parental and maternity leave) are detailed below, with a homogenized scope not taking the Equipment Business Line into account.



The absenteeism rate for Sercel SAS in France is 2.72% for absences of less than 100 days.

8.3.3.3 Professional training, HR development and remuneration

In a complex economic environment, CGG continues to implement a strategy which aims to help develop its employees and its organization. The knowledge and skills and competencies required for each job are regularly identified and assessed. Employee development through training, mentoring, and coaching and the broadening of assignments and experiences foster employee mobility and challenges. CGG University also offers a training program that is tailored to our present and future needs.

Training

In 2017, CGG University continued to improve its training catalog in the area of reservoirs and geoscience and to offer conferences on subjects related to Geosciences, Information Technology and Management. CGG University also offers training programs in management and leadership, negotiation, project management and QHSE policy (quality, health, security and the environment).

In 2017, CGG University trained 3,899 trainees, of which 3,497 were employees, and 402 were external clients.

CGG University provided 6,285 days of training in 2017 of which 1,574 were for external customers and 4,711 for CGG employees. The 1,571 days of training provided to external customers concerned techniques for data acquisition and processing and reservoir geology, as well as project management.

The 4,711 days of training provided to our employees break down as follows:

1,528 days devoted to technical training (introduction to the fundamentals of our businesses and to geoscience, advanced training), 143 days devoted to health, security and the environment, 2,859 days devoted to individual managerial, leadership or development programs, 181 other training days provided in the form of conferences or by internal and external experts.

Finally, training activities relating to the promotion of ethics, the understanding of the business code of conduct, and the fight against discrimination and harassment continued to be deployed (e-learning). The attendance rate as of December 31, 2017 for this training was 95 % of the total population of the company.

In addition to its training programs, CGG University creates ad hoc programs or seminars to respond to specific operational requirements: organization agility, innovation, project management and feedback were the leading topics in 2017.

In addition to the Group's corporate university, training programs are also offered by third parties (external training organizations). External training provided by specialized professional bodies or equipment suppliers concern the acquisition of specific technical skills or generic business skills and can lead to a qualification. Health, Safety, and Environment (HSE) training, such as offshore safety induction, first aid, and fire-fighting, is mandatory for our prospectors and staff visiting our seismic acquisition vessels. Finally, a third type of training is provided in situ by operations staff themselves which include, among others, the continuous training of geophysicists or HSE and professional training for employees assigned to offshore, onshore or airborne surveying missions.

To better direct training and improve the return on investment, CGG developed and has deployed the "Course Tracker" (CT) tool since 2013. This tool registered 10,144 trainings given in 2017, of which 6,285 for CGGU.

Training data for 2017 is as follows:

- Course Tracker tool: 8,570 days
- OLM tool (for Marine Prospector training): 657 days
- Group e-learning tool: 95 % of employees
- Equipment Business Line France: 3,279 days

In France, outside of the mandatory training related to HSE, the 3,279 days of Sercel SAS employee training were divided into the following subjects:

- Languages: 121 days
- Industrial: 1368 days
- Management and control: 491 days
- Quality: 138 days
- IT: 440 days
- Research and Development: 332 days
- Sales and Marketing: 23 days
- Administration and support: 366 days

HSE training is one of the major axes of SERCEL and are broken down into the following 3 subjects:

- BOSIET type training, off-shore safety, first aid, electrical accreditation, safe driving accreditation, movement and posture, design ergonomics, bridge and cranes, dangerous material
- Training activities meet either legal obligations or the strategy that the company has used in 2017 (352 days total) on the following topics: First witness to a fire/Handling fire extinguishers, chemical risks and wearing PPE and an important segment on the Prevention of RPS and Health and Well Being at Work.
- Training activities relating to the promotion of ethics, the understanding of the business code of conduct, and the fight against discrimination and harassment, or e-learning on information security.

These training programs directly or indirectly aided in the development and resilience of CGG in a difficult market, by promoting operational excellence (quality and deadlines) and cross-disciplinary projects

HR Development

The Group continued to use its Human Resources development tools to encourage discussion on personal and career development for employees. The main aspects and tools are: annual performance interview, personal development plan, annual review, and succession plan.

The annual review process for employees helps maintain a succession plan for key positions in the Group and identify promising talent. Following this identification, personal development plans are formalized for this category of employees to help them acquire or develop skills.

In addition to training, in CGG there are many initiatives aimed at employee development through exposure to varied projects and experiences, especially including international or functional transfers, and also through tutoring, coaching or participation in various professional networks,

International mobility is an integral part of the Group's business. In 2017, in parallel with the Group's restructuring efforts, we have continued to encourage mobility in particular through the recognition and development of local talent.

Compensation

In 2017, a performance-related bonus was paid to all employees for 2016. This variable portion of remuneration is implemented uniformly across the Group. It comes in two forms. One, for support and management entities (GPIP or Global Performance Incentive Plan), is equally based on collective financial performance and individual performance. The other, for production units, is based on their results compared to their own comparative production targets.

In France (CGG SA - CGG Services SAS ESU, and Sercel SAS), the remuneration policy also contains the following specific elements:

- Mandatory Annual Negotiations: wage negotiations with social partners in 2017 did not lead to any agreements being signed for CGG SA - CGG Services SAS ESU. The 2017 pay increase was 1.88% of the total payroll for ESU.
- For Sercel SAS, the wage negotiations with social partners led to the signing of an agreement for a salary budget increase of 1.3% of the total payroll: a specific budget of up to 0.5% of the total payroll was devoted to promotions. .
- Profit sharing: the agreement originally signed on June 30, 2007 between the ESU and social partners expired in 2014. The 2015 negotiations with the social partners did not lead to a renewal of this agreement. Sercel SAS profit-sharing agreement was renewed on June 18, 2015 and did not result in a payment for 2015 and 2016.
- Staff share scheme: The ESU's results did not permit a budget to be allocated for this. Within Sercel SAS, the current agreement did not give rise to any payment in 2017 (for financial year 2016).
- The supplementary savings and retirement plans, “PEE” and “PERCO” remain in force. As of the end of December 2017, 350 employees joined the “PEE” and 458 joined the “PERCO” in CGG SA and CGG Services SAS. In Sercel SAS, only 3 employees joined the “PEE” and 2 joined “PERCO”. (Not including placements in relation to maturing participations).

8.4. HSE & SOCIAL RESPONSIBILITY INDICATORS

In addition to the indicators mentioned below, concrete examples of application of our HSE & Social Responsibility strategy are available on our website: www.cgg.com/fr > Sustainable Development > HSE & SD Case Studies.

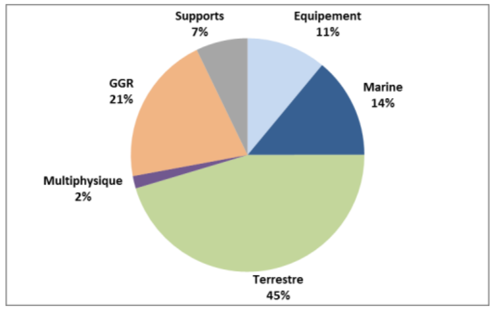
Employees

	2013	2014	2015	2016	2017	2017 External audits
Number of nationalities	108	102	94	87	88	✓
Permanent Employees (Total) *of which female (%)*	9,688 26%	8,540 26.9%	7,277 26.9%	5,766 *28%*	5,266 *27.5%*	✓
Europe *of which female (%)*	3,601 *29.3%*	3,458 *28.9%*	3,138 *28.8%*	2,502 *29%*	2,330 *28.9%*	✓
Africa & Middle East *of which female (%)*	408 *19.9%*	338 *20.7%*	277 *23.8%*	230 *23.9%*	198 24.2%	✓
Asia Pacific *of which female (%)*	1,370 *36.1%*	1,258 *36.6%*	1,178 *37.0%*	1,007 *37.4%*	889 35.5%	✓
North America *of which female (%)*	2,294 *31.3%*	1,925 *31.7%*	1,496 *30.1%*	1,312 *29.5%*	1,195 29.6%	✓
Latin America *of which female (%)*	398 *29.6%*	336 *26.8%*	196 *28.6%*	168 *30.4%*	156 28.2%	✓
Marine Acquisition teams *of which female (%)*	1,242 *6%*	1,046 *6.1%*	841 *5%*	436 *3.4%*	404 3.2%	✓
Land Acquisition teams *of which female (%)*	375 *0.8%*	179 *1.1%*	151 *0.7%*	111 *0.9%*	94 0%	✓
Hiring *of which female (%)*	3,411 *26.9%*	587 *31.2%*	240 *36.7%*	114 *27.2%*	215 34%	✓
Total employee turnover rate *Including voluntary employee turnover*	12.4% n.c	17.83% *6.5%*	17,22 *4.88%*	20.17% 4.89%	12.21% 6.42%	✓
Employees covered by a collective bargaining agreement (France, Norway, Singapore)	2,242	2,120	1,901	1,626	1,505	✓
Training provided by CGG University (hours)	115,255	120,656	87,744	68,712	50,280	✓

	2016	2017
Cases referred to the Ethics Committee (#)	**10**	**3**
Human resources cases (#)	*1*	*1*
Harassment cases (#)	*2*	*0*
Compliance cases (#)	*3*	*0*
Conflict of interest cases (#)	*1*	*2*
Discrimination cases (#)	*3*	*0*
Other cases of human rights violations (#)	*0*	*0*

Health & Safety

	2013	2014	2015	2016	2017	External verification 2017
Hours (millions)	68.4	54.8	52.1	24.3	24	□



Fatality	0	1	1	0	0	□
Fatality rate	0	1.8	1.9	0	0	□
Partial or permanent disability	1	0	1	0	0	□
Lost time injury frequency rate	0.60	0.42	0.29	0.25	0.5	□
Total Recorded Cases Frequency	2.16	1.79	1.38	1.40	1.9	□
Severity rate	0.013	0.01	0.01	0.004	0.018	□
Recordable occupational diseases with days lost frequency rate *	0.20	0.12	0.08	0.09	0.05	□
Recordable occupational diseases with days lost frequency rate *	0.71	0.35	0.33	0.14	0.23	□
Recordable occupational diseases with days lost frequency rate *	0.002	0.001	0.003	0.001	0.0005	□

	2013	2014	2015	2016	2017	External verification 2017
Driven Kilometers (million)*	28,300,000	26,000,000	22,500,000	18,900,000	16,100,000	□
Motor vehicle crash rate*	0.88	0.60	0.44	0.74	0.31	□
HSE Field Training (hours)	142,666	141,617	109,593	71,688	52,968	□
Inspections	101,901	112,723	95,037	124,137	69,761	□
HSE-OMS (health, safety, security, environment, social responsibility) audits	74	47	40	28	34	□
"Rules to Live By" Violations Frequency	2.3	2.8	2.0	5.2	3.1	□

Note on Health & Safety:

In 2016, CGG changed the convention for calculating hours, aiming for greater consistency among our different Business Lines but also with our industry associations (IOGP and IAGC). Following the consolidation, the hours worked and not the hours exposed are taken into account (as at offshore sites and camps). The total of hours for 2016 and 2017 is thus lower than it would have been under 2015 convention.

Frequency rates are calculated on the basis of one million hours worked. The Fatality Rate is calculated on 100 million hours worked. The severity rate is calculated on the basis of 1000 hours worked.

Indicators marked with * do not take into account the Equipment Business Line (2.6 million hours worked in 2017).

The significant gap between the "Rules to Live By" violations frequency between the years 2015 and 2016 is due to a change in the scope, now widened to include the Equipment Business Line.

Environment

	2013	2014	2015	2016	2017	External verification 2017
Territorial footprint of acquisition activities (km^2 covered)			707,814	391,310	380,946	
including Multiphysics airborne activity			552,000	273,658	273,354	
including Marine activity			135,243	98,304	90,474	
including Land activity			20,571	19,348	17,118	
Significant environmental incidents (#)	1	0	1	0	0	□
Accidental hydrocarbon spills >200 liters (#)	1	0	2	0	0	□
Residual hydrocarbon spillage after clean-up (m^3)	0.2	0	0.4	0	0	□
Energy consumption (Total in GWh)			2,552	1,503	1689	□
Fuel oil (GWh)			2,360	1,362	1554	□
Natural gas (GWh)	-	-	41	21	9	□
Electricity (GWh)			151	120	126	□

The fuel consumed by the seismic fleet represents three quarters of the Group's energy consumption. Marine diesel, which emits less sulfur and fine particles, represents 78% of fuel consumed. In 2017, the fuel oil energy consumption and the associated greenhouse gases have augmented, as a result of survey design and enhanced productivity (3D vessels towing more streamers, long Wide Azimuth Survey). Optimization of the energy used on the vessels is a key element in the relationship between CGG and its maritime partners, who formalize the areas for improvement in their *Ship Energy Efficiency Management Plans*. In 2017, the ship manager CGG Eidesvik continued to use its energy efficiency program *Blue-e*. Energy savings yielded 3.8% of annual consumption of vessels fuel, equal to the energy consumption required for 6 cross Atlantic crossings in these same vessels.

Energy efficiency - Marine Acquisition Marine Fuel Efficiency Index (CMP-kms/m^3 of fuel)	51	54	55	43	67	□

This index measures the number of seismic data points acquired per unit of fuel. The continued improvement in the productivity of the seismic vessels, as well as the success of studies such as Wide Azimuth will improve this index over the long term. In 2017, the WAZ study was continued for more than 6 months by five vessels in Mexican waters, and strongly contributed to the improvement in this index.

	2013	2014	2015	2016	2017	2017 External audits
GGR Energy efficiency *Power Usage Effectiveness* (PUE)[1]	1.41	1.40	1.36	1.31	1.32	✓

The GGR subsurface image requires a large computing capacity, housed in the data centres of CGG. The Power Usage Effectiveness (PUE) is the leading indicator of the energy efficiency of a data centre.

[1] *The PUE relating the total energy of the data center (infrastructure) to that of computer equipment is calculated as recommended by Energy Star, Recommendations For Measuring and Reporting Overall Data Center Efficiency Version 2 - Measuring PUE for Data Centers, May 2011. The data in the table takes into account the three main CGG data centers.*

	2013	2014	2015	2016	2017	External audit 2017
Total direct and indirect greenhouse gas emissions (Scope 1 & 2; kton CO_2 eq.)[2]	995	747	649	446	**482**	✓
including direct emissions (Scope 1)	920	700	558	374	**420**	✓
including indirect emissions (Scope 2)	75	47	91	71	**62**	✓
Intensity of greenhouse gas emissions (Scope 1 & 2 ; kton CO_2 eq. per employee)	103	88	89	77	**91**	✓
Sulfur oxide emissions (SOx) of the marine flotilla (kton)				0.6[3]	1.2	✓
Nitrous oxide emissions (NOx) of the marine flotilla (kton)				4[4]	5.7	✓

CGG has cut its greenhouse gas emissions in half in five years as a result of the transformation of the company's business model. Geosciences (GGR) emit significantly less gas than the acquisition of seismic data. The slight increase in direct emissions in 2017 is linked to the increase of the total fuel oil consumption in Marine as a result of Wide Azimuth surveys.

Significant fines for non-compliance in environmental matters (#)	0	0	0	0	0	✓
Grievances about environmental impacts filed, addressed, & resolved through formal mechanisms	0	0	0	0	0	✓
Marine Mammal Observations (Total in #)	2,069	4,189	3,562	1,808	1,538	✓
Visual observations (#)	1,417	2,381	1,995	918	733	✓
Acoustic detections (#)	652	1,807	1,567	890	805	✓
Measures for the protection of marine mammals (# of hours of stopped seismic sources)	133	254	204	231	361	✓

[2] Conversions of energy data into emissions were made using the methodology of the Greenhouse Gas Protocol developed by the World Resources Institute (WRI), 2016 edition.
[3] 2016 data reevaluated in 2017
[4] 2016 data reevaluated in 2017

Social Responsibility

	2013	2014	2015	2016	2017	External audit 2017
Management of Local Communities / Local Content Employees						
Employees working in a country in which they are nationals[5]	Not assessed	Not assessed	78 %	79 %	80%	✓
Managers working in a country in which they are nationals[6]	Not assessed	Not assessed	70 %	72 %	72%	✓
Days worked by the staff who are nationals of the country of the acquisition project[7]	Not assessed	Not assessed	733,500	517,500	469,000	✓
Employment - Partnerships with Universities and donations for educational purposes of CGG GeoSoftware						
Number of partner Universities in the CGG GeoSoftware donation program	Not assessed	50	116	129	116	✓
of which Universities located in countries considered to be developing countries (non OECD countries)	Not assessed	30	37	37	28	✓
Estimated commercial value of license donations and renewal (US $ millions)	Not assessed	133	450	311	479	✓

ESG Indices (Environment, Social and Governance)

The recognition of ESG best practices of CGG by Dow Jones Sustainability World Index ended in 2017. CGG is no longer invited to compete, due to its weak market capitalization. CGG was renewed on the investment register Ethibel Excellence in December 2017. This selection by the Ethibel Forum (www.forumethibel.org) indicates that the company performs better than the average in its sector in terms of Social Responsibility (CSR).

ESG index listing CGG as of December 31, 2017	Ethibel EXCELLENCE Investment Registers

5 *Scope: CGG Group except offshore and onshore field staff.*
6 *Sites reporting more than 50 employees. Manager: employee with at least one subordinate. 2015 Scope: CGG Group without Equipment; Scopes 2016 and 2017: CGG Group.*
7 *Scope: Land Business Line, operations in non-OECD countries directly or through participation in the ARGAS joint venture*

8.5. METHODOLOGY NOTE

8.5.1. SELECTION AND PERTINENCE OF INDICATORS

Published data is intended to inform stakeholders of CGG's HSE & social responsibility results for the current year. It is in line with IOGP, EPCM, and *Global Reporting Initiative* (GRI) recommendations on information transparency regarding social and environmental responsibility data.

Indicators were selected to monitor:

- ✓ CGG's HSE and social responsibility commitments and policies integrated in management systems;
- ✓ performance relating to CGG's main risks and impacts;
- ✓ regulatory obligations (French Commercial Code, updated in 2012 by the decree implementing Article 225 of the Grenelle II law and in 2016 by Article 173 of the law on energy transition and green growth).

The themes mentioned in the decree are handled as transparently as possible. Those presented below, considered non material at a Group level (see the complete materiality study as a graph in paragraph 8.1.1 of this document), were not subject to detailed reporting for the following reasons:

Environment

- ✓ ***Consumption of raw materials and measures to improve efficiency in their use:*** Only the Equipment Business Line within the Group consumes raw materials. The systematic approach to eco-design of this Business Line particularly aims to minimize their use. Benefits in terms of weight, material and energy consumption reduction are highlighted on the product datasheets of new generations of products. In addition, work is being conducted to determine whether the minerals used in its manufacturing facilities stem from the Democratic Republic of Congo and/or adjacent countries (report available on http://www.cgg.com/en/Investors/Financial-Information/Quarterly-and-Annual-Reports).
- ✓ ***Water use and supply according to local constraints:*** CGG consumes little water (estimated volume of 327,000 m^3 in 2017). Seismic surveys taking place in a desert environment or suffering from water stress are also low consumers of water (estimated average of 170 litres per employee per day). Preventing potential impact on the local community's water supply is taken into consideration in project risk assessment plans.
- ✓ ***Prevention, recycling, and waste disposal measures:*** CGG emits a low level of waste in the oil services sector. Permanent sites as well as seismic acquisition projects have determined waste management plans that all include the same principles: avoid, reduce, reuse, and treat/recycle. About 8,000 tons of waste were generated in 2017, of which 90% were non-hazardous. Sludge and oily water from the vessels are the largest source of hazardous waste. They are treated in authorized centres on land. Only one quarter of the waste from CGG's activities is given to material recycling. The seismic acquisition activities are used in regions where the infrastructure for the treatment of waste is undeveloped.
- ✓ ***Activities in the fight against food waste*** The 2016 evaluation campaign demonstrated that CGG wastes two times less food in its mass catering facilities compared to the French average. Our service providers continue their awareness campaigns.
- ✓ ***Adaptation to climate change:*** The physical risks related to climate change should not impact the Group's activities in the short term. Financial risks related to the energy transition are being assessed and further described in Chapter 3, "Risks and Controls".
- ✓ ***Measures to enhance biodiversity:*** The Group is particularly committed to minimizing the environmental footprint of its activities so as to not impact habitats and their related biodiversity.
- ✓ ***Use of land:*** Most of CGG permanent sites are located in highly urban areas and have not caused any cropland loss. Land seismic acquisition projects that require to access crops or cultivable land are tightly managed by a permitting team in order to prevent or reduce potential damage. Land owners are compensated when an impact is noted.
- ✓ ***Amount of provisions and guarantees for environmental risks:*** CGG has not established any provisions for environmental risk. The amount of guarantees is confidential;
- ✓ ***Use of renewable energy:*** 85% of CGG's energy consumption serves seismic acquisition's maritime, airborne and road transport activities. These activities occur mostly round the clock and do not lend themselves to the use of renewable energy. CGG permanent office locations use renewable energy on a case by case basis. For example, British CGG sites are supplied with electricity produced from a mix of wind, wave, solar, biomass, and hydro power. The main French site of CGG uses heat from the recycling of municipal waste.
- ✓ ***Significant sources of greenhouse gas emissions generated due to the activity of the company, including the use of goods and services it produces:*** Scope 3 of greenhouse gas emissions of CGG were estimated at 100 ktons eq. CO_2. The most significant source of emissions are related to the production of hydrocarbons consumed by the seismic vessels and the land acquisition vehicles.

Society

- ✓ ***Sub-contractors and suppliers:*** Although the volume of purchases by the Group is very large, exposure to environmental and social responsibility risks in its supply chain is very limited. 86% of its products and services are from suppliers in countries considered to have a low risk of corruption by Transparency International (corruption perceptions index equal to or higher than 60). 82% of the total volume of purchases are from OECD countries, countries that recognize the ILO Declaration on Fundamental Principles and Rights at Work and whose environmental legislation is developed.

  The Marine Products Business Line evaluates the performance of the service providers that are considered critical for operations. Five major evaluation criteria are considered, the first being HSE.
- ✓ ***Measures for consumer health and safety***: CGG mainly provides services to its clients and is not in contact with consumers. The Equipment Business Line trains its clients to use its products and provides all information about the materials used. The Group has not been informed of any adverse effects to date.

8.5.2. METHOD

CGG's HSE & social responsibility reporting procedures are based on the Group's *Event Reporting, Recording and Classification Guidelines*.

8.5.3. SCOPE

HSE & Social Responsibility reporting concerns all employees and contractors working under CGG's prevailing influence, namely all of our sites and acquisition activities that are at least 50% owned by CGG and consolidated in the Group's financial statements.

As an exception to this rule, HSE reporting also covers the operations of:

- ✓ ARGAS, in the Middle East;
- ✓ *Amadeus* and *Binh Minh 2*, vessels operated through the minority joint venture PTSC CGGV Geophysical Survey Company Limited in Vietnam.

Unless otherwise specified, all statistics provided in this report include this scope which accounted for more than 24 million hours worked in 2017.

Every site, factory and mission for the acquisition of seismic data records its HSE activities and incidents in PRISM, which is CGG's integrated tool for HSE and social responsibility reporting and risk assessment.

Data associated with acquisitions is recorded as soon as possible and no later than January 1 of the following year; sales activities are recorded in the month following their actual output.

Human Resources ("HR") indicators used cover the consolidated scope of the Group. The figures for HR have mainly been extracted from the Group's HR information system which is the HRMS (*"Human Resources Management System"*) database. This database is deployed in all Group entities, with the exception of the Equipment Business Line. Equipment data is therefore currently consolidated manually.

The statistical data regarding the work force of the Group conform to the following regulations (unless indicated otherwise):

- ✓ CGG employees only (sub-contractors and employees working for a minority joint venture are excluded);
- ✓ no employee under long term absence (contract suspension, long term disability);
- ✓ employees leaving the group on the last day of a given month are included in said month.

The employees of equity-accounted companies are not included in the calculations. In the case of acquisition or disposal, the scope is adjusted to the effective time of the transaction and variances are explained.

8.5.4. CONSOLIDATION AND INTERNAL CONTROL

HSE and sustainable development data is reviewed on a weekly basis by HSE and sustainable development support functions. The data is then consolidated every month at the segment and Group level. Data pertaining to certain specific indicators are calculated directly by the businesses. These processes undergo regular internal audits

HR consolidation and adjustment rules are defined by a protocol followed for each report to ensure the comparability and traceability of the information provided. Data in this report may differ from the data reported for national scopes for the same domain, depending on national regulatory methodologies.

However, the information managed in this Group database does not contain all the data recorded and stored in local databases mainly relating to payroll. Note that these databases are outsourced in major countries, except for the USA and Canada. The Group database is not intended to replace the various national administrative data processing systems (typically payroll systems) which are compliant with the laws of the country concerned.

The structure of personal data collection and storage varies from one country to another depending on national regulations. Some of the information collected which is subject to monitoring in France is illegal in other countries and vice versa, which is why some information cannot be consolidated at world level.

The data is recorded in HR information systems by local HR administration entities or through a service specially structured for this purpose (e.g. the *Employee Service Center* for North America). This data is verified at two levels:

- ✓ a SOX level of compliance in the form of annual audits and implementation of continuous control points for personal data: gender, dates of birth, seniority, wages, promotions, tax situations, contract type, etc.;
- ✓ an organizational compliance level concerning reporting lines, membership to trade families, Division, Function, Business Line (Business Line), etc., through audits conducted on operational and functional HR for monthly and quarterly reports.

Finally, some global processes implemented through tools directly connected to the HRMS database such as the annual performance evaluation, annual salary review, calculation of annual bonuses, also allows ad hoc (at least once a year) cross-referencing of information and its analysis and validation.

The data reported is based on the 2017 calendar year. Information regarding certain themes, including training hours and absenteeism data, is not based on the entire scope. The tools to consolidate these figures are currently being deployed or improved. However, we believe that the main scope (countries or activities) are covered.

8.5.5. DEFINITIONS

The following section provides definitions of the various terms used in the “Employees” section of this report.

- ✓ The Group: CGG Group, including all activities in the various countries where the Group operates;
- ✓ Office-based staff: office or workshop staff working on a weekly basis;
- ✓ Field staff: staff working in rotation over several weeks on onshore or offshore seismic activity projects or on the water in seismic vessels.

9. INDEPENDENT VERIFIER'S REPORT ON CONSOLIDATED SOCIAL, ENVIRONMENTAL AND SOCIETAL INFORMATION[8]

Year ended the 31st December 2017

Independent verifier's report on consolidated social, environmental and societal information presented in the management report

This is a free translation into English of the original report issued in the French language and it is provided solely for the convenience of English speaking users. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

To the shareholders,

In our quality as an independent verifier accredited by the COFRAC[9], under the number n° 3-1050, and as a member of the network of one of the statutory auditors of the company CGG, we present our report on the consolidated social, environmental and societal information established for the year ended on the 31 12 2017, presented in chapter 2 of the management report, hereafter referred to as the "CSR Information", pursuant to the provisions of the article L.225-102-1 of the French Commercial code (*Code de commerce*).

Responsibility of the company

It is the responsibility of the Board of Directors to establish a management report including CSR Information referred to in the article R. 225-105-1 of the French Commercial code (*Code de commerce*), in accordance with the protocols used by the company (hereafter referred to as the "Criteria"), and of which a summary is included in section "2.5 Methodological note" of chapter 2 of the French *Document de référence* including the management report, and available on request at the company's headquarters.

Independence and quality control

Our independence is defined by regulatory requirements, the Code of Ethics of our profession as well as the provisions in the article L. 822-11 of the French Commercial Code (*code de commerce*). In addition, we have implemented a quality control system, including documented policies and procedures to ensure compliance with ethical standards, professional standards and applicable laws and regulations.

Responsibility of the independent verifier

It is our role, based on our work:

- to attest whether the required CSR Information is present in the management report or, in the case of its omission, that an appropriate explanation has been provided, in accordance with the third paragraph of R. 225-105 of the French Commercial Code (*Code de commerce*) (Attestation of presence of CSR Information);
- to express a limited assurance conclusion, that the CSR Information, overall, is fairly presented, in all material aspects, in according with the Criteria.

Nonetheless, it is not our role to give an opinion on the compliance with other legal dispositions where applicable, in particular those provided for in the Sapin II law n°2016-1691 of December 9, 2016 (anti-corruption).

Our verification work mobilized the skills of four people between August 2017 and February 2018 for an estimated duration of 16 weeks

We conducted the work described below in accordance with the professional standards applicable in France and the Order of May 13, 2013 determining the conditions under which an independent third-party verifier conducts its mission, and in relation to the opinion of fairness and the reasonable assurance report, in accordance with the international standard ISAE 3000[10].

1. Attestation of presence of CSR Information

Nature and scope of the work

We obtained an understanding of the company's CSR issues, based on interviews with the management of relevant departments, a presentation of the company's strategy on sustainable development based on the social and environmental consequences linked to the activities of the company and its societal commitments, as well as, where appropriate, resulting actions or programmes.

We have compared the information presented in the management report with the list as provided for in the Article R. 225-105-1 of the French Commercial Code *(Code de commerce).*

In the absence of certain consolidated information, we have verified that the explanations were provided in accordance with the provisions in Article R. 225-105-1, paragraph 3, of the French Commercial Code *(Code de commerce).*

We verified that the information covers the consolidated perimeter, namely the entity and its subsidiaries, as aligned with the meaning of the Article L.233-1 and the entities which it controls, as aligned with the meaning of the Article L.233-3 of the French Commercial Code *(Code de commerce)* with the limitations specified in the Methodological Note (section 2.6) in chapter 2 of the French *Document de référence*.

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[8] *This translation of the independent verifier's report on consolidated social, environmental and societal information which is included in the French Document de Référence on fiscal year 2015 is included here for information purpose.*
[9] Scope available at www.cofrac.fr
[10] ISAE 3000 – *Assurance engagements other than audits or reviews of historical information.*

Conclusion

Based on this work, we confirm the presence in the management report of the required CSR information.

2. Limited assurance on CSR Information

Nature and scope of the work

We undertook four interviews with the people responsible for the preparation of the CSR Information in the different departments of Sustainable Development, Human Resources and HSE, in charge of the data collection process and, if applicable, the people responsible for internal control processes and risk management, in order to:

- Assess the suitability of the Criteria for reporting, in relation to their relevance, completeness, reliability, neutrality, and understandability, taking into consideration, if relevant, industry standards;
- Verify the implementation of the process for the collection, compilation, processing and control for completeness and consistency of the CSR Information and identify the procedures for internal control and risk management related to the preparation of the CSR Information.

We determined the nature and extent of our tests and inspections based on the nature and importance of the CSR Information, in relation to the characteristics of the Company, its social and environmental issues, its strategy in relation to sustainable development and industry best practices.

For the CSR Information which we considered the most important[11]:

- At the level of the consolidated entity, we consulted documentary sources and conducted interviews to corroborate the qualitative information (organisation, policies, actions, etc.), we implemented analytical procedures on the quantitative information and verified, on a test basis, the calculations and the compilation of the information, and also verified their coherence and consistency with the other information presented in the management report;
- At the level of the representative selection of sites that we selected12, based on their activity, their contribution to the consolidated indicators, their location and a risk analysis, we undertook interviews to verify the correct application of the procedures and undertook detailed tests on the basis of samples, consisting in verifying the calculations made and linking them with supporting documentation. The sample selected therefore represented for example 33% of total headcount and 24% of energy consumption of the Group, which were considered representative of social and environmental topics.

For the other consolidated CSR information, we assessed their consistency in relation to our knowledge of the company.

Finally, we assessed the relevance of the explanations provided, if appropriate, in the partial or total absence of certain information.

We consider that the sample methods and sizes of the samples that we considered by exercising our professional judgment allow us to express a limited assurance conclusion; an assurance of a higher level would have required more extensive verification work. Due to the necessary use of sampling techniques and other limitations inherent in the functioning of any information and internal control system, the risk of non-detection of a significant anomaly in the CSR Information cannot be entirely eliminated.

Conclusion

Based on our work, we have not identified any significant misstatement that causes us to believe that the CSR Information, taken together, has not been fairly presented, in compliance with the Criteria.

Paris-La Défense, March 29, 2018

French original signed by:

Independent Verifier
ERNST & YOUNG et Associés

Christophe Schmeitzky
Partner, Sustainable Development

Bruno Perrin
Partner

[11] ***Environmental, social and societal information**:*
- *Indicators (quantitative information) : information and indicators marked with a "tick" in the text of Chapter 2 "Sustainable Development", including: number of permanent employees, number of entries and exits in the company, Lost Time Injury Frequency Rate (LTIF) and Total Recordable Cases Frequency (TRCF), number of training days provided by CGG University, minimization of the footprint of the Group's products and services, number of accidental spills of moderate or higher level at sea or on land, Power Usage Effectiveness (PUE), amount of linear seismic data acquired per cubic meter of fuel consumed, marine fauna monitoring & mitigation measures (number of sightings, number of acoustic detections, number of hours of downtime, number of marine fauna shutdowns, number of delayed soft-starts), percentage of national staff by country of permanent implantation, the share of purchases from suppliers in countries with low risk of corruption.*
- *Quantitative information: employment (permanent employees and distribution, hires and layoffs, compensation and its evolution), work time organization, absenteeism, institutional labor relations (organization of social dialogue, overview of collective agreements), relationships with stakeholders, health and safety work conditions, work accidents, including their frequency and severity, occupational illnesses, training policy, diversity and equal opportunity policy (agreement on gender equality, measures to promote the employment and integration of disabled employees, rejection of all forms of discrimination), promotion and respect of the ILO core conventions (freedom of association, elimination of discrimination, of child and forced labor).*

[12] *The subsidiary Sercel (France), the entity CGG do Brazil (Brazil), the seismic acquisition survey in Seebach (France).*

10. STOCK OPTIONS AND PERFORMANCE SHARES

In accordance with sections L. 225-184 and L. 225-197-4 of the French Commercial Code, the stock options and performance shares plans currently in force in the Company are described in separate special reports of the Board of Directors.

10.1. STOCK-OPTIONS PLANS

The table below summarizes the evolution, during fiscal year 2017, of the stock-options plans put in place by virtue of the authorizations granted by the General Meetings of April 29, 2008, May 4, 2011, May 3, 2013, and May 29, 2015 respectively.

As of December 31, 2017:

	2010 Plans			2011 plan	2012 plan	2013 plan	2014 plan	2015 plan	2016 plan	Total
Date of the Board of Directors' meeting	01/06/2010	03/22/2010	10/21/2010	03/24/2011	06/26/2012	06/24/2013	06/26/2014	06/25/2015	06/23/2016	
Number of beneficiaries	1	339	3	366	413	672	752	749	683	
Total number of shares that can be subscribed (3).	220 000	1548 150	120 000	1164 363	1410 625	1642 574	1655 843	1769 890	6 658 848	16 190 293
Out of which the number can be exercised by:										
Executive Officers :										
Remi Dorval	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jean-Georges Malcor	220 000	162 500	0	133 333	200 000 (*)	200 000 (**)	200 000 (***)	220 600 (****)	882 400	2 218 833
Start date of options exercise	07/01/10	03/23/2011	10/22/2011	03/25/2012	06/27/2014	06/25/2015	06/27/2016	06/26/2017	06/24/18	
Expiration date	06/01/18	03/22/2018	10/21/2018	03/24/2019	06/26/2020	06/24/2021	06/26/2022	06/25/2023	06/23/24	
Subscription price (in €)(1) (2) (4)	373.44	493.44	428.80	646.72	476.48	493.44	274.88	160.64	21.76	
Exercise rules (when the plan provides for several batches of options) (5)	- Options accrue rights by half immediately and by fourth every year during the two following years; - prohibition to sell or transfer his shares before January 7, 2014.	- Options accrue rights by third every year during the first three years; - prohibition to sell or transfer his shares before March 23, 2014 for French tax residents.	- Options accrue rights by third every year during the first three years; - prohibition to sell or transfer his shares before October 21, 2014 for French tax residents.	- Options accrue rights by third every year during the first three years; - prohibition to sell or transfer his shares before March 24, 2011 for French tax residents.	- Options accrue rights in three batches (50% after 2 years, 25% after 3 years and 25% after 4 years) - prohibition to sell or transfer his shares before June 26, 2016 for French tax residents.	- Options accrue rights in three batches (50% after 2 years, 25% after 3 years and 25% after 4 years)	- Options accrue rights in three batches (50% after 2 years, 25% after 3 years and 25% after 4 years)	- Options accrue rights in three batches (50% after 2 years, 25% after 3 years and 25% after 4 years)	- Options accrue rights in three batches (50% after 2 years, 25% after 3 years and 25% after 4 years)	
Number of shares subscribed as at December 31, 2017(3)	0	38 382	0	0	0	0	0	0	0	38 382
Cumulated number of stock-options which were cancelled or lapsed as at December 31, 2017(3)	0	138 818	43 661	154 593	999 946	535 468	406 904	137 682	23 357	2 440 429
Remaining stock-options as of December 31, 2017(4)	8 668	51394	1564	38 345	19 720	30 817	41353	47 790	184 732	424 383
Out of which the remaining number is held by:										
Executive officers										
Remi Dorval	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Jean-Georges Malcor	8 668	6 402	—	5 254	0	0	3 276	5 160	27 575	56 335

(1) Considering the adjustements done further to the capital increase of February 5, 2016, to the stock reverse split of July 20, 2016 and and the capital increase of February 21, 2018.

(2) The subscription price corresponds to the average of the opening share prices of the share on the last twenty trading days prior to the meeting of the Board of Directors granting the options.

(3) Without taking into account the various adjustments that have occurred after the implementation of the plans.

(4) Considering the adjustments done further to the capital increase of October 23, 2012 for all plans previously granted and the adjustments done further to the capital increase of February 5, 2016 and to the stock reverse split of July 20, 2016.

(5) In addition, certain performance conditions are applicable to the senior executive officers and the members of Executive Committee or Corporate Committee (see item 4 of 20-F Form).

(*) For the senior executive officers and members of the Corporate Committee, this plan is subject to performance conditions which have not been met for each of the three batches in 2014, 2015 and 2016.

(**) For the senior executive officers and members of the Corporate Committee, this plan is subject to performance conditions which have not been met for each of the three batches in 2015, 2016 and 2017.

(***) For the senior executive officers and members of the Corporate Committee, this plan is subject to performance conditions which have not been met in 2016 for the first batch (corresponding to 50% of the allocation) nor for the second batch in 2017 (corresponding to 25% of the allocation);

(****) For the senior executive officers and members of the Corporate Committee, this plan is subject to performance conditions which have not been met in 2017 for the first batch (corresponding to 50% of the allocation).

Individual information on stock-options allocated to the Executive Officers is set forth in item 4 of our 2017 report on Form 20-F.

As of the date of this report:

	2010 Plan	2011 plan	2012 plan	2013 plan	2014 plan	2015 plan	2016 plan	Total
Date of the Board of Directors' meeting	10/21/2010	03/24/2011	06/26/2012	06/24/2013	06/26/2014	06/25/2015	06/23/2016	
Number of beneficiaries	3	366	413	672	752	749	683	
Total number of shares that can be subscribed [3] :	120 000	1 164 363	1 410 625	1 642 574	1 655 843	1 769 890	6 658 848	14 422 143
Out of which the number can be exercised by:								
Executive Officers :								
Remi Dorval	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Jean-Georges Malcor	0	133 333	200 000 (*)	200 000 (**)	200 000 (***)	220 600 (****)	882 400	2 218 833
Start date of options exercise	10/22/2011	03/25/2012	06/27/2014	06/25/2015	06/27/2016	06/26/2017	06/24/18	
Expiration date	10/21/2018	03/24/2019	06/26/2020	06/24/2021	06/26/2022	06/25/2023	06/23/24	
Subscription price (in €) [1] [2] [4]	167.95	253.30	186.62	193.27	107.66	62.92	8.52	
Exercise rules (when the plan provides for several batches of options) [5]	- Options accrue rights by third every year during the first three years; - prohibition to sell or transfer his shares before October 21, 2014 for French tax residents.	- Options accrue rights by third every year during the first three years; - prohibition to sell or transfer his shares before March 24, 2011 for French tax residents.	- Options accrue rights in three batches (50% after 2 years, 25% after 3 years and 25% after 4 years) - prohibition to sell or transfer his shares before June 26, 2016 for French tax residents.	- Options accrue rights in three batches (50% after 2 years, 25% after 3 years and 25% after 4 years)	- Options accrue rights in three batches (50% after 2 years, 25% after 3 years and 25% after 4 years)	- Options accrue rights in three batches (50% after 2 years, 25% after 3 years and 25% after 4 years)	- Options accrue rights in three batches (50% after 2 years, 25% after 3 years and 25% after 4 years)	
Number of shares subscribed as of the date of the present document [3]	0	0	0	0	0	0	0	0
Cumulated number of stock-options which were cancelled or lapsed as of the date of the present document [3]	43 661	154 593	999 981	535 509	406 954	137 713	23 457	2 301868
Remaining stock-options as of the date of the present document [4]	3 994	98 064	50 436	78 892	105 711	122 189	471856	931142
Out of which the remaining number is held by:								
Executive officers								
Remi Dorval	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Jean-Georges Malcor	—	13 415	0	0	8 365	13 175	70 404	105 359

[1] Considering the adjustements done further to the capital increase of February 5, 2016, to the stock reverse split of July 20, 2016 and and the capital increase of February 21, 2018.

[2] The subscription price corresponds to the average of the opening share prices of the share on the last twenty trading days prior to the meeting of the Board of Directors granting the options.

[3] Without taking into account the various adjustments that have occurred after the implementation of the plans.

[4] Considering the adjustments done further to the capital increase of October 23, 2012 for all plans previously granted and the adjustments done further to the capital increase of February 5, 2016, to the stock reverse split of July 20, 2016 and the capital increase of February 21, 2018.

[5] In addition, certain performance conditions are applicable to the senior executive officers and the members of Executive Committee or Corporate Committee (see item 4 of 20-F Form).

(*) For the senior executive officers and members of the Corporate Committee, this plan is subject to performance conditions which have not been met for each of the three batches in 2014, 2015 and 2016.

(**) For the senior executive officers and members of the Corporate Committee, this plan is subject to performance conditions which have not been met for each of the three batches in 2015, 2016 and 2017.

(***) For the senior executive officers and members of the Corporate Committee, this plan is subject to performance conditions which have not been met in 2016 for the first batch (corresponding to 50% of the allocation) nor for the second batch in 2017 (corresponding to 25% of the allocation).

(****) For the senior executive officers and members of the Corporate Committee, this plan is subject to performance conditions which have not been met in 2017 for the first batch (corresponding to 50% of the allocation).

As of the date of filing of our 2017 report on Form 20-F, the exercise price for all the plans is above CGG share market price.

10.2. PERFORMANCE SHARES PLANS

There was no performance shares allocated since 2012.

11. REPORT ON CORPORATE GOVERNANCE

In accordance with article L.225-37, 6th paragraph of the French commercial code, the Board of Directors approved this report on corporate governance in its meeting of March 8, 2018. This report will be presented to the general meeting to be convened to approve the 2017 financial statements.

11.1. GOVERNANCE

11.1.1. CODE OF CORPORATE GOVERNANCE APPLIED BY THE COMPANY

The Company complies with the AFEP-MEDEF code of corporate governance for listed companies (the "AFEP-MEDEF Code"). This code is available on the website of the MEDEF (www.medef.fr).

However, the Company does not apply the following provisions of the AFEP-MEDEF Code:

AFEP-MEDEF Code	CGG's practice / Justification
Supplementary pension plan (section 23.2.6 of the AFEP-MEDEF Code): *"Supplementary pension schemes with defined benefits must be subject to the condition that the beneficiary must be a director or employee of the company when claiming his or her pension rights pursuant to the applicable rules."*	In some particular circumstances (in the event of the death, incapacity or dismissal of the beneficiary, except in case of gross or serious misconduct, after reaching the age of 55 and not followed by any other professional activity), a senior executive officer may still benefit from the supplementary pension plan in effect even though he is no longer an employee of the Group. Taking into consideration circular no. 105/2004 issued by the French Social Security Department on March 8, 2004, these exceptions are maintained with regard to the following elements: ➢ the current supplementary pension plan may continue to apply on a uniform and identical basis to all the other executive officers also benefiting from this plan without further consequences; and ➢ given the seniority of certain beneficiaries of this plan and in light of their service over the years, it would be unjustified for them to lose the benefit of the pension commitments made by the Company solely because of a departure arising under very special circumstances (death, disability) or occurring shortly before retirement, making it difficult to find further employment (dismissal without gross and serious misconduct, after the age of 55, not followed by any other professional activity). This plan was closed to new comers on July 1, 2014.
Time given to the Audit Committee to review financial statements (section 16.2.1 of the AFEP-MEDEF Code): *"The time available for reviewing the accounts should be sufficient (no less than two days before by the Board."*	The Audit committee usually meets before each session of the Board of Directors. For practical reasons that are linked to the presence of a director residing abroad, meetings of the Audit committee are held in general on the eve of the Board of Directors. In order that this constraint does not prevent the proper functioning of the Committee, the Chairman of the Board and the Chief Executive Officer ensure that the members of the Committee receive the necessary documents and information sufficiently in advance in order to have sufficient time to be able to review the accounts.
Composition of the Appointment-Remuneration Committee (section 17.1 of the AFEP-MEDEF Code): *"It must not include any executive Officer and must mostly consist of independent directors."*	Further to the departure of Mrs. A. Lemarchand form her board position on October 31, 2017, the appointment-remuneration committee is composed of three members and is chaired by the only independent committee member. As the Board has initiated a significant renewal process of its composition in anticipation of the implementation of the financial restructuring plan, the Board has considered that in such circumstances, it was not appropriate to revisit the composition of this committee before the appointment of the new directors. In addition, the Board believes that, under its current format, the Committee is still in a position to carry out its assignments in a satisfactory manner and in full independence from the management of the company."
Independence of the Directors (section 8.5.6 of the AFEP-MEDEF Code): *"[…] not to have been a director of the corporation for more than twelve years. Loss of the status of independent director occurs on the date at which this period of twelve years is reached."*	The Board considered that notwithstanding the term of office of Mr. R. Dorval now exceeds 12 years, this situation does not prevent Remi Dorval from remaining independent from the general management. The Board may also rely on the fact that the term of office of Mr. R. Dorval will expire at the next general meeting and will not be renewed. He thus remains Chairman of the Board for a transition period to complete the Board renewal process which was initiated in the second half of 2017.

In addition, as a listed company on the New York Stock Exchange, the Company is also subject to the Sarbanes – Oxley Act.

11.1.2. BOARD OF DIRECTORS AND MANAGEMENT

11.1.2.1. Board of Directors

11.1.2.1.1. Composition of the Board of Directors as of the date of this report

See "Item 6 – Directors and Senior Management" of our 2017 report on Form 20F.

11.1.2.1.2. Directors appointed by the employees - Censors

The extraordinary general meeting held on November 13, 2017 (28^{th} resolution) decided to amend article 8 of the Company's articles of association to provide for the appointment of Director(s) representing employees, in accordance with the provisions of Article L. 225-27-1 of the French Commercial Code applicable to the Company.

By decision dated December 15, 2017, the Group Committee appointed Mr. Patrice Guillaume as Director representing the employees for a term of four years, his mandate expiring, in accordance with article 8 of the articles of association of the Company, following the general meeting of shareholders called to approve the financial statements for the year ended December 31, 2020.

The credentials of Mr. Patrice Guillaume are set out in "Item 6 – Board of Directors" of our 2017 report on Form 20F.

The Company did not appoint any censor.

11.1.2.1.3. Independent directors

See "Item 6 – Board Practices" of our 2017 report on Form 20F.

11.1.2.1.4. Update on the Company's application of the principle of a balanced representation of men and women on the Board of Directors

See "Item 6 – Board Practices" of our 2017 report on Form 20F.

11.1.2.1.5. Professional address of the Directors

The professional address of the Directors is the registered office of the Company, Tour Maine-Montparnasse, 33 avenue du Maine, 75015 Paris.

11.1.2.1.6. Share ownership

The Board's internal regulations provide that each director is required to own at least 156 of our shares.

11.1.2.1.7. Rules applicable to transactions carried on Company's shares by Directors

The Directors may be led to hold information relative to the Company that has come to their attention because of their position as director and which, if made public, might have an appreciable effect on the Company's share price. The significant character of a piece of information is normally related to the influence it may have on the financial results of the listed Company. A significant piece of information can relate to operating revenues, financial or budgetary estimates, investments, acquisitions or divestments, main discoveries, stops of important manufacturing units, launching or withdrawal of products, significant changes in shareholding or management, transactions affecting the capital, the dividend, the appearance or the settlement of a dispute, etc.

In such a case, the internal regulations provide that the directors must refrain:

- from exploiting such information in their own behalf or in behalf of others, directly or through an intermediary, by purchasing or selling the Company's securities or financial products connected with the said issue;
- from communicating the said information for purposes other than and for an activity other than the one in connection with which it is held.

In addition to the above, Directors must abstain from carrying-out any transaction on the Company's shares, of whatever nature, during the 30-calendar days preceding the publication of quarterly, semiannual or annual results and until the day after the publication date. Such publications occur the last week of February, mid-May, the last week of July and mid-November.

In case of doubt, the Directors are invited to contact the Group Chief Financial Officer.

The Directors must notify to the *Autorité des Marchés Financiers* the transactions that they may carry out on the Company's shares, pursuant to the provisions of Regulation (EU) no 596/2014 of the European Parliament and of the Council of April 16, 2014. These provisions are described in the internal rules and regulations of the Board of Directors.

11.1.2.2. General Management

11.1.2.2.1. General management organization

Split of the Chairman and Chief Executive Officer positions

Since June 30, 2010, the positions of Chairman of the Board and Chief Executive Officer have been split.

Role of the Chairman of the Board of Directors

The Chairman represents the Board of Directors and, except in exceptional circumstances, is the only one with the capacity to act and speak on behalf of the Board. He organizes and oversees the activities of the Board of directors and ensures that the corporate bodies operate in an efficient manner, in compliance with good governance principles. He ensures, in particular, that directors are in a position to fulfill their duties and are provided with sufficient information in this respect. He reports on annual basis to the shareholders' meeting on the board of directors' composition, preparation and organization of the board of directors' work, on internal control and risk management procedures implemented by the Company. The Chairman is regularly kept informed by the Chief Executive Officer of the significant events relating to the Group business and may request from him any information that may be necessary for the Board and its committees. He may meet with the external auditors of the Company in order to prepare the meetings of the Board. Upon request of the general management, he may represent the Company vis à vis top level representatives of governmental authorities and major partners of the group, whether in France or abroad.

Role of the Chief Executive Officer

The Chief Executive Officer is in charge of the general management of the Company. He is granted the broadest powers to act on behalf of the Company in any circumstances in compliance with the corporate governance principles applied by the Company and except for those powers vested in the Company's general meeting or Board of Directors by applicable laws. He represents the Company vis-à-vis third parties. He is responsible for the financial information released by the Company and presents, on a regular basis, the Group's results and prospects to the shareholders and the financial market. He reports on significant events for the Group business to the Board and its Chairman.

11.1.2.2.2. Limitations of authority of the Chief Executive Officer

The Board of Directors imposed no restrictions on the powers of the Chief Executive Officer (*Directeur Général)*. In consequence, in accordance with the law and article 10 of the Company's articles of association, the Chief Executive Officer is vested with the broadest powers to act in all circumstances in the name of the Company.

11.1.2.2.3. Chief Executive Officer in 2017 and as of the date of this report

See "Item 6 – Executive officers" of our 2017 report on Form 20F.

11.1.2.2.4. Term of Mr. Jean-Georges Malcor's office as Chief Executive Officer

See "Item 6 – Executive officers" of our 2017 report on Form 20F.

11.1.2.3. Conflict of interests

There is no family link between the members of the Board of Directors and the other main officers of the Company.

In the knowledge of the Company, none of the members of the Board of Directors or of the executive officers:

- have been sentenced for fraud during the past five years;
- have been associated, as executive officer, to bankruptcy, sequestration or liquidation process during the last five years;
- have received an offense and/or official public penalty from statutory or regulatory authorities;
- have been prevented to act as a member of a board, management board or supervisory board of an issuer or to participate in the management or the conduct of business of an issuer during the last five years at least.

There are no potential conflicts of interests between the duties of the Directors, the Chairman of the Board and the Chief Executive Officer towards the Company and their respective private interests.

There are no service agreements entered into between the Directors, as well as the companies in which they have a position, and the Company or any of its subsidiaries.

11.1.2.4. Corporate Committee

See "Item 6 – Executive officers" of our 2017 report on Form 20F.

11.1.3. BOARD OF DIRECTORS - COMMITTEES

11.1.3.1. Preparation and organization of the works of the Board of Directors

11.1.3.1.1. Role of the Board of Directors

Pursuant to article L.225-35 of the French commercial code, the Board lays down the guidelines governing the Company's activity and sees to their application. Subject to the powers explicitly assigned to the shareholders' meetings and within the limits of the business purpose, it considers any question affecting the proper operation of the company and it settles the matters concerning it.

11.1.3.1.2. Preparation of meetings

The operating procedure of the Board is governed by internal rules and regulations (hereafter the "Internal rules and regulations of the Board of Directors") which are available on the Company's website (www.cgg.com). Their main provisions are summarized below.

Information to be provided to Directors:

In preparation of every Board meeting, the Board's Secretary sends documentation to the Directors containing all useful information on each of the points appearing on the meeting agenda. This documentation is generally uploaded on the secured website of the Board of Directors and its committees to enable the directors to review it before the meeting.

Furthermore, Directors are kept informed and consulted by the Chief Executive Officer between Board meetings about all events or operations of importance to the Company.

A draft version of press releases related to quarterly, semiannual and annual financial statements and all events or operations of importance for the Company are sent to Directors sufficiently in advance of their publication so they can transmit their comments to the general management. Other press releases are systematically sent to them at the same time they are published by the Company.

In general, the Chairman of the Board ensures that Directors are able to fulfill their duties. For this purpose, he assures that each of them receives the documents and information necessary to perform their duties. In addition, Board members usually meet for a two-day annual strategic seminar generally held close to one of our operational sites. The agenda of this seminar is determined by the Chief Executive Officer, in close cooperation with the Chairman of the Board and the Chairman of each Board Committee.

11.1.3.1.3. Board meetings

At every meeting, the Board is informed of the evolution of the operating and financial performance of the main segments of the Group since the last meeting.

This information per segment is supplemented by a particular review of the consolidated financial situation of the Group in terms of debt, cash flow and financial resources available available on a short-term basis and in the light of forecasts.

All transactions with a material impact on the strategy of the Group such as acquisitions, partnerships, disposals or strategic investments are subject to the prior authorization of the Board after the Technology/Strategy Committee has issued its recommendation. The Board is regularly informed on the progress of the transaction in question.

The Board of Directors meets at least four times per year in the presence of the statutory auditors and whenever circumstances so require.

Pursuant to the Internal Rules and Regulations of the Board of Directors, Directors may participate in Board proceedings through videoconferences or telephone conferencing provided such telecommunication means permit the identification of participants and allow them to effectively participate to the meeting in the conditions set forth in article L.225-37 of the French commercial code. They are in such cases counted as present for the calculation of the quorum and majority in accordance with the rules of the Board of Directors. However, pursuant to law the said procedure may not be used in connection with the following decisions:

- establishment of the annual financial statements and of the management report;
- establishment of the consolidated financial statements and of the report on the management of the Group, if that is not included in the annual management report.

In addition, pursuant to the internal rules and regulations of the Board of Directors, this restriction also applies to decisions relating to the establishment of the half-year financial statements and related Board report.

11.1.3.1.4. Rules applicable to Directors

Duty of expression:

Each Director has a duty to clearly express his or her opinions and shall endeavour to convince the Board of the relevance of his or her position.

Diligence:

Each Director must devote the necessary time, care and attention to his or her duties. Before accepting any new position or office, he or she must consider whether he or she will still be able to fulfil this obligation. Unless he or she is genuinely unable to do so, he or she must attend all meetings of the Board of Directors and of any committees of which he or she is a member, and all general meetings of shareholders.

Conflicts of interest:

Each Director must inform the Board about any conflict of interest situation, even potential, that may involve him/her because of the duties he/she may hold in other companies.

In such a case, the director shall abstain from taking part in voting on the related resolution.

11.1.3.1.5. Works of the Board of Directors

See "Item 6 – Board Practices" of our 2017 report on Form 20F.

Appraisal of the operation of the Board and its committees:

The Board of Directors organizes an annual appraisal of its operation and of its Committees. Up to 2014, this self-appraisal had been analyzed by an outside consultant. In 2017, the appraisal was carried out by the Chairman of the Remuneration-Appointment committee based on a questionnaire sent to all directors. In compliance with the provisions of the AFEP-MEDEF Code, the Board self-appraisal questionnaire was amended in 2016 to include a component related to the appreciation of the actual contribution of each director to the Board's work.

The Directors have globally favourably assessed the way the Board and its committees operate. They underlined their satisfaction with the governance of the Group and the quality of the communication between the general management and the Board, in particular with respect to the very complex Group financial restructuring, on which the Board of Directors highly focused in the course 2017. They insisted on the quality of the discussions and work of the Board and indicated that they were satisfied with the way the Chairman was leading the Board's works and conducting its discussions.

They confirmed that they intended to deepen their review of the Group strategy. Besides, they have also expressed the wish to be regularly updated on the evolution of the markets on which the Company operates and on the industry. Finally, regarding the documentation package sent to them prior to each meeting, they have expressed the wish that presentations be sent well ahead of the meetings, while noting an improvement compared with the previous years.

11.1.3.2. Board Committees

See "Item 6 – Board Practices" of our 2017 report on Form 20F.

11.2. COMPENSATION

11.2.1. COMPENSATION OF THE BOARD OF DIRECTORS

See "Item 6 – Directors' Compensation" of our 2017 report on Form 20F

11.2.2. COMPENSATION OF THE SENIOR EXECUTIVE OFFICERS

11.2.2.1. Report on the principles and criteria for determination, allocation and distribution of the fixed, variable and exceptional elements of the total remuneration and the benefits of all kinds that may be granted to the executive officers

See "Item 12 – Directors' Compensation" of this document.

11.2.2.2. Summary table

Summary table of the compensation and stock-options granted to each Senior Executive Officers

	2016	2017
Remi DORVAL, Chairman of the Board of Directors		
TOTAL COMPENSATION OVER THE YEAR (see details in "Item 6 – Compensation » of our 2017 report on form 20F)	**€170,810.00**	**€170,310.00**
Valuation of the multi-annual bonus plan granted over the year	n.a.	n.a.
Valuation of stock-options granted over the year	n.a.	n.a.
Valuation of the performance shares granted over the year	n.a.	n.a.
TOTAL OF THE POTENTIAL RIGHTS TO DEFERRED COMPENSATION SUBJECT TO FUTURE RESULTS OF THE COMPANY	**n.a.**	**n.a.**
Jean-Georges MALCOR, Chief Executive Officer		
TOTAL COMPENSATION OVER THE YEAR (see details in "Item 6 – Compensation » of our 2017 report on form 20F)	**€1,026,096.00**	**€1,556,765.00**
Valuation of the multi-annual bonus plan granted over the year (see details in "Item 6 – Compensation » of our 2017 report on form 20F) (*)	€32,943.00	n.a.
Valuation of stock-options granted over the year (see details in "Item 6 – Share ownership » of our 2017 report on form 20F) (*)	€124,000.00	n.a.
Valuation of the performance shares granted over the year (see details in "Item 6 – Share ownership » of our 2017 report on form 20F) (*)	n.a.	n.a.
TOTAL OF THE POTENTIAL RIGHTS TO DEFERRED COMPENSATION SUBJECT TO FUTURE RESULTS OF THE COMPANY	**€156,943.00**	**n.a**

(*) The Company considers that these elements are not cumulative with the other elements due for the year, and therefore the total here above mentioned does not represent the actual compensation received within the year. The final grant of these compensation components are, on one hand, submitted to fulfilment of performance conditions (therefore, there could be no allocation if the performance conditions are not met) and, on the other hand, the valuation of the multi-annual bonus plan in the form of performance units, stock-options and performance shares at the fair value as of the date of the allocation does not correspond to a compensation received by the beneficiaries in the course of the year of the allocation.

The valuation of the options pursuant to the method used to prepare the consolidated financial statements does not necessarily correspond to the actual value that the beneficiary could derive from the exercise of the options. The exercise of the options is subject to the fulfillment of certain performance conditions and supposes a subscription price lower than the stock market price (as of the date of this report, the subscription price of all plans is above the stock market price). Moreover, the gain before tax that a stock option beneficiary may derive from the option exercise depends upon the share market price on the exercise date. This gain could be nil if, during the duration of the plan, the exercise price remains above the share market price.

11.2.2.3. Compensation of the Senior Executive Officers for 2016 and 2017

11.2.2.3.1. Fixed and variable compensation of the Chairman of the Board of Directors and the Chief Executive Officer for 2016 and 2017

See "Item 6 – Compensation" of our 2017 report on Form 20F.

11.2.2.3.2. Multi-annual bonus plan in the form of performance units

See "Item 6 – Compensation" of our 2017 report on Form 20F.

11.2.2.3.3. Stock-options

See "Item 6 – Share ownership" of our 2017 report on Form 20F.

11.2.2.3.4. Performance shares

See "Item 6 – Share ownership" of our 2017 report on Form 20F.

11.2.2.3.5. Contractual indemnity in case of termination

See "Item 6 – Compensation" of our 2017 report on Form 20F.

11.2.2.3.6. Non-compete agreement

See "Item 6 – Compensation" of our 2017 report on Form 20F.

11.2.2.3.7. General benefits plan

See "Item 6 – Compensation" of our 2017 report on Form 20F.

11.2.2.3.8. Individual insurance covering loss of employment

See "Item 6 – Compensation" of our 2017 report on Form 20F.

11.2.2.3.9. Supplemental retirement plan

See "Item 6 – Compensation" of our 2017 report on Form 20F.

11.2.2.3.10. Summary table as of December 31, 2017

	Employment agreement		**Supplemental retirement plan [a]**		**Contractual indemnity in case of termination [b]**		**Non-compete agreement [c]**	
Name of the senior executive officer	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
Remi DORVAL *Chairman of the Board* First appointment: 2014 End of term of office: 2018		X	n.a.			X		X
Jean-Georges MALCOR *Chief Executive officer* First appointment: 2010 End of term of office: 2018		X	X		X		X	

(a) See 11.2.2.3.9. above.
(b) See 11.2.2.3.5 above.
(c) See 11.2.2.3.6. above.

11.2.2.3.10. Senior executive officers' remuneration components submitted to the vote of shareholders

See "Item 13 – Senior executive officers' remuneration components submitted to the vote of shareholders" of this document.

11.2.3. COMPENSATION OF THE CORPORATE COMMITTEE FOR 2017

See "Item 6 – Compensation" of our 2017 report on Form 20F.

11.2.4. OTHER COMPENSATION

See "Item 10 – Stock-options and performance shares" of this document.

11.2.5. TRANSACTIONS IN THE COMPANY'S SHARES CARRIED OUT BY EXECUTIVES OF THEIR CLOSE RELATIVES IN THE COURSE OF 2017 AND UNTIL MARCH 15, 2018

See "Item 6 – Share ownership" of our 2017 report on Form 20F.

11.2.6. TRANSACTIONS ENTERED INTO BETWEEN THE COMPANY AND ITS EXECUTIVES AND/OR A SHAREHOLDER HOLDING MORE THAN 10% OF THE VOTING RIGHTS

The list of transactions entered into in the course of 2017 between the Company and companies or subsidiaries having common directors or common executives is reflected in the Statutory Auditors' special report on related party commitments, available on the Company's website cgg.com.

11.3. INFORMATION ON THE SHARE CAPITAL OF THE COMPANY

11.3.1. GENERAL INFORMATION ON THE COMPANY'S SHARE CAPITAL

11.3.1.1. Changes in the share capital and voting rights

There are no specific rules in the Company's articles of association relating to the change in the share capital or the rights attached to the securities constituting the share capital. As a consequence, these changes shall be carried out in accordance with legal requirements.

11.3.1.2. Share capital

Share capital

2016

As of December 31, 2017, our issued share capital amounted to €17,706,519 divided into 22,133,149 shares of the same class with a nominal value of €0.80 per share, all fully paid.

On January 13, 2016, the Company launched a share capital increase through the distribution of preferential subscription rights to existing shareholders to finance its Transformation Plan. The final gross proceeds amounted to €350,589,080.16, corresponding to the issuance of 531,195,576 new shares. As a consequence, on February 5, 2016, the share capital of the Company amounted to €283,304,307.

In accordance with the authorization granted by the General Meeting on May 27, 2016, the Company launched a reverse stock split, pursuant to which 32 ordinary shares of the Company, each with a nominal value of €0.40, were exchanged for one new share with a nominal value of €12.80 each. The reverse stock split occurred on July 20, 2016, and resulted in the new number of shares in the Company decreasing from 708,260,768 shares with a €0.40 nominal value, to 22,133,149 shares with a €12.80 nominal value. As a consequence, on July 20, 2016, the share capital of the Company amounted to €283,304,307, divided into 22,133,149 shares of €12.80 each.

On August 11, 2016, in accordance with the authorization granted by the General Meeting on May 27, 2016, the Company reduced the its share capital by €265,597,788 to bring it down from €283,304,307 to €17,706,519 by reducing the nominal value of the Company's shares from €12.80 to €0.80. As a consequence, on August 11, 2016, the share capital of the Company amounted to €17,706,519 divided into 22,133,149 shares of €0.80 each.

2017

As of December 31, 2017, our issued share capital amounted to €17,706,519 divided into 22,133,149 shares of the same class with a nominal value of €0.80 per share, all fully paid.

In the framework of the implementation of its Financial Restructuring Plan, and in accordance with the authorization granted by the Extraordinary General Meeting on November 13, 2017, the Company decided to launch a share capital reduction, not resulting from losses through diminution of the share par value, for an amount of €17,485,187.71 by reducing the nominal value of the Company's shares from €0.80 to €0.01. The Board of Directors acknowledged the completion of this share capital reduction on January 15, 2018.

2018

On January 15, 2018, further to the acknowledgment of the share capital reduction by the Board of Directors, the share capital of the Company amounted to €221,331.49, divided into 22,133,148 shares, all fully paid.

As part of the implementation of its financial restructuring plan, the Company issued on 21 February 2018:

- 71,932,731 shares of the Company, each with one share purchase warrant, all of which were subscribed by holders of preferential subscription rights;
- 35,311,528 new shares resulting from the equitization of the Convertible Bonds;
- 449,197,594 new shares resulting from the equitization of the Senior Notes;
- 22,133,149 warrants allocated to the shareholders of CGG (the "Warrants #1");
- 113,585,276 warrants in favor of the subscribers to the Second Lien Notes (the "Warrants #3");
- 7,099,079 warrants allocated to the members of the ad hoc committee of holders of Senior Notes (the "Coordination Warrants");
- 10,648,619 warrants allocated to the members of the ad hoc committee of holders of Senior Notes (the "Backstop Warrants").

As a result of these transactions, our issued share capital amounted to €5,785,750 divided into 578,575,002 shares of the same class with a nominal value of €0.01 per share, all fully paid.

Dilutive instruments

Information relating to our Convertible bonds and warrants is available in Note 13 of our 2017 consolidated financial statements and "Item 7 – Principal Shareholders – Dilutive Instruments of our 2017 report on Form 20F"

Changes in share capital during the past three years and until March 15, 2018

Transaction	Nominal value	Number of shares created	Amount of the share premium	Amount of the capital variation	Resulting total share capital
Share capital increase dated March 9, 2018 (as a result of exercise of certain warrants by their holders)	€0.01	6,882,395	€15,064.84	€68,823.95	€5,854,537.97
Share capital increase dated February 21, 2018 (reserved to the senior noteholders)	€0.01	449,197,594	€1,397,004,517.34	€4,491,975.94	€5,785,750.02
Share capital increase dated February 21, 2018 (reserved to the senior noteholders)	€0.01	449,197,594	€1,397,004,517.34	€4,491,975.94	€5,785,750.02
Share capital increase dated February 21, 2018 (reserved to the convertible bondholders)	€0.01	35,311,528	€361,943,162.00	€353,115.28	€1,293,774.08
Share capital increase dated February 21, 2018 (with preferential subscription right)	€0.01	71,932,731	€111,495,733.05	€719,327.37	€940,658.80
Share capital increase dated February 21, 2018 (with preferential subscription right)	€0.01	71,932,731	€111,495,733.05	€719,327.37	€940,658.80
Share capital reduction dated August 11, 2016	€0.80	—	—	-€265,597,788	€17,706,519
Reverse stock split dated July 20, 2016	€12.80	—	—	—	€283,304,307
Share capital increase dated February 5, 2016	€0.40	531,195,576	€138,110,849.76	€212,478,230.40	€283,304,307

11.3.1.3. Share buyback program to be submitted to the General Meeting to be held on April 26, 2018

11.3.1.3.1. Main characteristics

In accordance with article 241-2 of the General regulation of the French *Autorité des Marchés Financiers*, the share buyback program submitted to the General meeting to be held on April 26, 2018 is detailed below.

Date of the General Meeting convened to approve the share buyback program

This program will be submitted to the General Meeting convened on April 26, 2018, through its 7th resolution.

Shares held by the Company as of March 15, 2018

As of March 15, 2018, the Company held 24,996[13] of its shares, representing 0.00427% of its share capital.

Objectives of the share buyback program

The objectives of this share buyback program would be the following:

- to support liquidity of our shares through a liquidity contract entered into with an investment service provider in compliance with the Code of Practice of the French *Autorité des Marchés Financiers*;
- to deliver shares in the scope of securities giving access, immediately or in the future, to shares by redemption, conversion, exchange, presentation of a warrant or by any other means;
- to deliver, immediately or in the future, shares in exchange in the scope of external growth within the limit of 5% of the share capital;
- to allocate shares to employees and officers of the Company or affiliated companies within the meaning of article L.225-180 of the French Commercial Code, including but not limited to options to purchase shares of the Company;
- to deliver shares for no consideration to executive officers and employees, including but not limited to the scope of articles L. 225-197-1 and seq. of the French Commercial Code,
- to cancel the shares through a capital reduction, subject to a decision of, or an authorization, by the extraordinary general meeting.

In accordance with such objectives, the treasury shares so acquired may be either kept, cancelled, sold or transferred.

The shares may be acquired, sold or transferred, on one or several occasions, by any means, including by individual agreement or stock market purchase, by an offer to buy, or by block of shares and at any moment, but not during a take-over bid. The maximum amount of share capital that can be purchased or transferred as block of shares can reach the whole amount of this program.

Maximum number of shares which may be acquired and percentage of the share capital

The maximum purchase price per share shall be €3.12.

[13] *This number was adjusted further to the reverse stock split on July 20, 2016.*

The maximum number of shares that the Company may hold, pursuant to the 7th resolution, shall not exceed at any time 10 % of the capital as of the date pf the purchase, including the treasury shares already owned by the Company. For information purposes, based on the total number of shares as of February 28, 2018, i.e. 578,575,002 shares, this represents 57,832,504 shares to be purchased, taking into account the 24,996 shares already held by the Company on that date. Considering the maximum purchase price set at €3.12, this corresponds to a maximum investment of €180,437,413.10, as proposed in the 7th resolution.

Notwithstanding the above, pursuant to article L.225-209, paragraph 6, of the French Commercial Code, the number of shares to be acquired in order to be kept and delivered in the future in payment or exchange in the scope of a merger, demerger or contribution in kind shall not exceed 5% of the share capital.

Duration of the authorization

This authorization would be granted for an 18-month period from the date of the General Meeting approving the program, i.e. until October 25, 2019.

11.3.1.3.2. Summary of the share buyback program authorized by the General Meeting held on May 27, 2016

At the Shareholders' Meeting held on May 27, 2016, our shareholders renewed the existing authorization to acquire up to 10% of our share capital through purchases of shares and to resell shares so acquired for the 18 months following the date of such meeting this authorization has now expired.

Under such authorization, we were allowed to carry out transactions on our shares with the following objectives:

- to support liquidity of our shares through a liquidity contract entered into with an investment service provider in compliance with the Code of Practice of the French *Autorité des Marchés Financiers*,
- to deliver shares in the scope of securities giving access, immediately or in the future, to shares by redemption, conversion, exchange, presentation of a warrant or by any other means,
- to deliver, immediately or in the future, shares in exchange in the scope of external growth within the limit of 5% of the share capital,
- to allocate shares to employees and officers of the Company or affiliated companies within the meaning of Article L.225-180 of the French Commercial Code, including but not limited to the scope of options to purchase shares of the Company,
- to deliver shares for no consideration to Executive Officers and employees, including but not limited to the scope of Articles L.225-197-1 et seq. of the French Commercial Code,
- to cancel the shares through a capital reduction, subject to a decision of, or an authorization, by the Extraordinary General Meeting.

In accordance with these objectives (save for liquidity contracts), and subject to the provisions of the European Commission Regulation Number 2273/2003 of December 22, 2003, the treasury shares so acquired may be either cancelled, sold or otherwise transferred. The shares may be acquired, sold or transferred, on one or several occasions, by any means, including by individual agreement or market purchase, by an offer to buy, or in a block of shares and at any moment, but not during a take-over bid. The maximum amount of share capital that can be purchased or transferred as block of shares can be up to the total authorized amount under this program.

The General Meeting approved a maximum purchase price of €40 per share.

The maximum number of shares that we are entitled to hold is 10% of our share capital as at the time of the purchase, less any shares acquired under previous authorizations. Notwithstanding the above, pursuant to Article L.225-209, paragraph 6 of the French Commercial Code, the number of shares that may be acquired and retained for possible use for payment or exchange in the context of a merger, demerger or contribution may not exceed 5% of the share capital.

This authorization was granted for a period of 18 months from May 27, 2016 and cancelled and replaced the authorization granted to the Board of Directors by the General Meeting held on May 29, 2015.

This share buyback program was not implemented in 2016 and 2017.

As of December 31, 2017, we held 24,996 of our own shares, acquired in the course of 2010.

As of the date of this report, we do not have any shareholders' authorization in force to implement a share buyback program.

11.3.1.4. Authorized capital

The tables below summarize the financial delegations granted by the General Meeting to the Board of Directors, which are currently in force.

Share capital increases

	Authorizations in force during 2017 fiscal year and until March 15, 2018			
	Resolution number - General Meeting	**Period**	**Maximum authorized amount**	**Use of the authorization in 2017 and until March 15, 2018**
Issuance and granting of free warrants to the shareholders of the Company	19th - GM 11/13/2017	18 months	€325,000 upon exercise of the warrants (2)	02.21.2018 : Issuance of 22,133,149 warrants, corresponding to a maximum number of shares to be issued of 29,477,536
Issuance of new shares with warrants attached with shareholders' preferential subscription rights	20th - GM 11/13/2017	18 months	€720,000 and €480,000 upon exercise of the warrants (2)	02.21.2018 : Issuance of 71,932,731 warrants, corresponding to a maximum number of shares to be issued of 47,955,154
Issuance of new shares with removal of the shareholders' preferential subscription rights in favor of holders of OCEANE (1)	21st - GM 11/13/2017	18 months	€375,244 (2)(3)	02.21.2018 : Issuance of 35,311,528 shares
Issuance of new shares, with removal of the shareholders' preferential subscription rights in favor of holders of Senior Notes (1)	22nd - GM 11/13/2017	18 months	€4,967,949 (2)(3)	02.21.2018 : Issuance of 449,197,594 shares
Issuance of new notes secured by second-ranking security interests and warrants, either freestanding or attached to said notes, with removal of the shareholders' preferential subscription rights in favor of persons committed to subscribing for the Second Lien Notes, in accordance with the private placement agreement dated June 26, 2017 (1)	23rd - GM 11/13/2017	18 months	€1,238,173 upon exercise of the warrants (2)(3)	02.21.2018 : Issuance of 113,585,276 warrants, corresponding to a maximum number of shares to be issued of 113,585,276
Issuance and granting of free warrants, with removal of the shareholders' preferential subscription right in favor of funds and/or entities advised and/or managed by Alden Global Capital LLC, Attestor Capital LLP, Aurelius Capital Management LP, Boussard & Gavaudan Asset Management LP, Contrarian Capital Management LLC, et Third Point LLC	24th - GM 11/13/2017	18 months	€77,386 upon exercise of the warrants (2)(3)(6)	02.21.2018 : Issuance of 7,099,079 warrants, corresponding to a maximum number of shares to be issued of 7,099,079
Issuance and granting of free warrants, with removal of the shareholders' preferential subscription rights in favor of persons backstopping the subscription of the new notes secured with second-ranking security interests (1)	25th - GM 11/13/2017	18 months	€116,079 upon exercise of the warrants (2)(3)	02.21.2018 : Issuance of 10,648,619 warrants, corresponding to a maximum number of shares to be issued of 10,648,619
Increase of share capital through the issue of securities other than shares, without preferential subscription rights in favor of the holders of existing shares through a public offer	14th - GM 05/27/2016 (*) (**)	26 months	€1.8 million	None
Increase of share capital through the issue of ecurities other than shares, without preferential subscription rights in favor of the holders of existing shares made by private placement	15th – GM 05/27/2016 (*) (**)	26 months	€1.8 million	None
Increase of share capital by incorporation of reserves, profits or premiums	25th – GM 05/29/2015 (*)	26 months	€10 million (4)	None
Increase of capital, reserving the subscription of the shares to be issued to members of a Company Savings Plan ("*Plan d'Epargne Entreprise*")	26th - GM 11/13/2017 (*)	26 months	€115,800 (2) (7)	None
	16th – GM 05/27/2016 (*)	26 months	€2.5 million (5)	None
	26th – GM 05/29/2015 (*)	26 months	€2.5 million (4)	None

(1) Category of persons under article L.225-138 of the French Commercial Code.
(2) Deducted from the ceiling of EUR 8,415,631 set forth in the 27th resolution.
(3) Deducted from the ceiling of EUR 6,890,631 set forth in the 27th resolution.
(4) Within the limit of the aggregate ceiling of €350 million mentioned in the 3rd resolution of the General Meeting held on January 11, 2016.
(5) Within the limit of the aggregate ceilling of €1,8 million mentioned in the 14th resolution of the General Meeting held on May 26, 2016.
(6) The updates of the Document de référence on October 13, 2017 and on January 16, 2018 contained a material mistake regarding the maximum authorized amount pursuant to the 24th resolution submitted to the general meeting held on November 13, 2017. This material mistake is corrected in this table.
(7) The updates of the Document de référence on October 13, 2017 and on January 16, 2018 contained a material mistake regarding the maximum authorized amount pursuant to the 26th resolution submitted to the general meeting held on November 13, 2017. This material mistake is corrected in this table.
(*) Cancels and replaces, for the non-used portion, the resolutions voted in this respect during the previous General Meetings.
(**) The general meeting held on November 13, 2017 (17th resolution) decided to terminate this delegation of authority,

Stock-options and performance shares

	Resolution number - General Meeting	Period	Maximum authorized amount	Use of the authorization in 2017 and until March 15, 2018
	Authorizations in force during 2017 fiscal year and until March 15, 2018			
Stock-options	27th – GM 05/29/2015 (1) / Allocation to the employees (excluding the Chief Executive Officer and the members of the Corporate Committee)	26 months	1.32% of the share capital as of the date the Board of Directors' decision, without exceeding 0.85% of the share capital over a 12-month period. No discount.	None
Stock-options	28th – GM 05/29/2015 (1) / Allocation to the Chief Executive Officer and the members of the Corporate Committee	26 months	0.68% of the share capital as of the date the Board of Directors' decision, without exceeding 0.43% of the share capital over a 12-month period. Subject to performance conditions. No discount.	None
Performance shares	29th – GM 05/29/2015 (1) / Allocation to the employees (excluding the Chief Executive Officer and the members of the Corporate Committee)	26 months	0.76% of the share capital as of the date the Board of Directors' decision, without exceeding 0.50% of the share capital over a 12-month period.	None
Performance shares	30th – GM 05/29/2015 (1) / Allocation to the Chief Executive Officer and the members of the Corporate Committee	26 months	0.08% of the share capital as of the date the Board of Directors' decision, without exceeding 0.05% of the share capital over a 12-month period. Special cap imposed upon the allocation to the Chief Executive Officer and the two corporate officers: 15% of the allocations implemented pursuant to the 29th and 30th resolutions.	None

(1) Cancels and replaces, for the non-used portion, the resolutions voted in this respect during the previous General Meetings.

Share buy-back program

	Resolution number - General Meeting	Period	Maximum authorized amount	Use of the authorization in 2017 and until March 15, 2018
	Authorizations in force during 2017 fiscal year and until March 15, 2018			
Share repurchase	7th - GM 05/27/2016 (1)	18 months	10% of the share capital Maximum amount : €40 per share	None

(1) Cancels and replaces, for the non used portion, the resolutions voted in this respect during the previous General Meetings.

Capital reduction

	Authorizations in force during 2017 fiscal year and until March 15, 2018			
	Resolution number - General Meeting	**Period**	**Maximum authorized amount**	**Use of the authorization in 2017 and until March 15, 2018**
Share cancellation	19th - GM 05/27/2016 (1)	18 months	10% of the share capital	None
Reduction of the nominal value	19th - GM 11/13/2017	n.a.	€17,485,187.71	01/15/2018 : Share capital reduction amounting to €17,485,187.71
	18th - GM 06/27/2016	n.a.	€265,597,788	08/11/2016 : Share capital reduction amounting to €265,597,788

(1) Cancels and replaces, for the non used portion, the resolutions voted in this respect during the previous General Meetings.

11.3.1.5. Securities not giving access to the share capital

7.75 % Senior Notes due 2017: On February 9, 2007, we issued US$400 million principal amount of 7.75% senior notes due 2017. These senior notes were guaranteed by certain of our subsidiaries. They were listed on the Euro MTF market in Luxembourg. On June 2, 2014, these notes were partially repaid up to US$265 million. The balance was repaid on February 24, 2017.

On February 21, 2018, as part of the implementation of our financial restructuring plan, the senior notes that were outstanding in 2017 and are described below, were delisted from the Euro MTF market in Luxembourg. These senior notes were guaranteed by certain of our subsidiaries:

- ***6.50 % Senior Notes due 2021:*** these notes had been issued on May 31, 2011 for US$650 million principal amount. In addition, along with our Norwegian subsidiary Exploration Investment Resources II, we had agreed with the owners of certain of our cold-stacked vessels to significantly reduce the amount owed to them under these vessels' respective charter agreements (guaranteed by CGG) in exchange of a 6.50% Senior Notes due 2021 issue for a given agreed amount. In such scope, on January 20, 2017, we issued US$58.6 million principal amount of 6.50% Senior Notes due 2021 to the owners of the *Pacific Finder*, the *Ocean Phoenix* and the *Viking Vanquish*. On March 13, 2017, we issued an additional US$12.1 million amount of 6.50% Senior Notes due 2021 to the owner of the *Oceanic Champion*.

- ***5,875 % Senior Notes due 2020:*** these notes had been issued on April 23, 2014 for €400 million principal amount under an international private placement.

- ***6,875 % Senior Notes due 2022:*** these notes had been issued on May 1, 2014 for US$500 million principal amount under an international private placement.

11.3.1.6. General meetings

See "Item 9 – Memorandum and by laws – Attendance and voting at Shareholders' meetings" of our 2017 report on Form 20F.

11.3.2. MAIN SHAREHOLDERS

11.3.2.1. Current structure of the share capital and of voting rights

11.3.2.1.1. Share capital as of December 31, 2017

As of December 31, 2017, we had 715 shareholders under the registered form.

On March 9, 2012, Bpifrance Participations (formerly named Fonds Stratégique d'investissment) and IFP Energies Nouvelles announced that they had entered into a shareholders' agreement relating to their shareholding in order to implement a common approach on the matters relating to the Company. They announced on February 5, 2018, that they terminated this agreement.

On December 31, 2017, our Directors and the members of our Corporate Committee held 15,317 shares and 467 ADS, representing 18,439 voting rights, i.e. 0.07% of the share capital and 0.08% of the voting rights.

On December 31, 2017, the number of shares held by the employees of the Group, through the Group Employee Savings Plan instituted in 1997, amounted to 273 shares corresponding to 0.0012% of the share capital and 0.0024% of the voting rights of CGG.

On December 31, 2017, the Company held 24,996 of its own shares, acquired pursuant to the authorizations granted by the shareholders.

The table below sets forth certain information with respect to entities known to us or ascertained from public filings to beneficially own a significant percentage of our voting securities as of December 31, 2017:

	Number of shares	% capital	Number of theoretical voting rights	% theoretical voting rights	Number of voting rights to be exercized during General meetings	% voting rights to be exercized during General meetings
Bpifrance Participations	2,069,686	9.35	2,458,954	10.,90	2,458,954	10.91
IFP Énergies Nouvelles	107,833	0.49	107,833	0.48	107,833	0.48
Subtotal Bpifrance Participations – IFP Energies Nouvelles	*2 ,177,519*	*9.84*	*2,566,787*	*11.38*	*2,566,787*	*11.39*
DNCA Finance [(a)]	1,756,314	7.94	1,756,314	7.79	1,756,314	7.79
FCPE CGG Actionnariat	273	0.0012	546	0.0024	546	0.0024
Public	18,174,047	82.1088	18,210,205	80.7176	18,210,205	80.8176
Treasury stock	24,996	0.11	24,996	0.11	0	0
NUMBER OF SHARES IN CIRCULATION AND VOTING RIGHTS	**22,133,149**	**100%**	**22,558,848**	**100%**	**22,533,852**	**100%**

(a) Calculated on the basis of the number of shares owned by DNCA Finance as indicated in the notice of threshold crossing dated February 21, 2017.

To our knowledge, on December 31, 2017, there was no other shareholder holding, on an individual basis or pursuant to any agreement with another shareholder, more than 5% of the share capital or of the voting rights.

« Titres au porteur identifiable » (article 7.1 of our articles of association)

We may avail ourselves of the legal procedure known as *titres au porteur identifiables*, according to which we are entitled to request Euroclear France to disclose the name, nationality, address and the number of shares held by holders of those securities of ours which have, or which may in the future acquire, voting rights.

Double voting rights

As from May 22 1997, a double voting right is allocated to all registered and fully paid-up shares registered in the name of the same holder for at least two years.

In the event of an increase in capital by incorporation of reserves, profits or paid in capital, this double voting right is granted as soon as they are issued, to registered shares allocated free to a shareholder at the rate of the former shares for which he benefits from this right.

The double voting right ceases ipso jure for any share having been subject to a conversion to the bearer or a transfer of ownership subject to exceptions provided for by law.

In accordance with article L.225-99, paragraph 2, of the French Commercial Code, the Extraordinary General Meeting cannot withdraw the double voting rights without a prior authorization granted by a special meeting of the holders of these double voting rights.

Among our significant shareholders, on December 31, 2017, Bpifrance Participations held double voting rights for 389,268 shares.

Threshold crossings to be notified to the Company (article 7.2 of our articles of association)

Any shareholder who directly or indirectly (as per the provisions of article L.233-7 of the French Commercial Code) acquires ownership or control of shares representing 1% or any multiple thereof of our share capital or voting rights, or whose shareholding falls below any such limit, must inform us within five trading days of the crossing of the relevant threshold, of the number of shares then owned by such shareholder.

Failure to comply with these notification requirements may result, at the request, recorded in the minutes of the General Meeting, of one or several shareholders holding at least 1% of the capital, in the shares in excess of the relevant threshold being deprived of voting rights for all Shareholder Meetings until the end of a two-year period following the date on which the owner thereof has complied with such notification requirements.

Threshold crossings notified to the Company in the Course of 2017 and until March 15, 2018

Date of the notification	*Above/ Below*	*Threshold crossed*
By Caisse des dépôts (indirectly, through Bpifrance Participations)		
March 20, 2017	Below	11 % of the voting rights
February 5, 2018	Below	9 % of the share capital
	Below	8 % of the share capital
	Below	10 % of the voting rights
	Below	7 % of the share capital
	Below	9 % of the voting rights
	Below	8 % of the voting rights
	Below	7 % of the voting rights
	Below	6 % of the share capital and voting rights
	Below	5 % of the share capital and voting rights
	Below	4 % of the share capital and voting rights
	Below	3 % of the share capital and voting rights
By both IFP Énergies Nouvelles — Bpifrance Participations		
June 27, 2017	Below	10 % of the share capital
February 5, 2018	Below	9 % of the share capital
	Below	11 % of the voting rights
	Below	10 % of the voting rights
	Below	8 % of the share capital
	Below	7 % of the share capital
	Below	9 % of the voting rights
	Below	8 % of the voting rights
	Below	7 % of the voting rights
	Below	6 % of the share capital and voting rights
	Below	5 % of the share capital and voting rights
	Below	4 % of the share capital and voting rights
	Below	3 % of the share capital and voting rights
By the EPIC Bpifrance (through Bpifrance Participations)		
February 6, 2018	Below	10 % of the voting rights
	Below	5 % of the share capital and voting rights
February 22, 2018	Below	2 % of the share capital and voting rights
	Below	1 % of the share capital and voting rights
By IFP Énergies Nouvelles		
June 27, 2017	Below	1 % of the share capital
By AMS Energie		
July 21, 2017	Below	8 % of the share capital and voting rights
July 26, 2017	Below	7 % of the share capital and voting rights
July 31, 2017	Below	6 % of the share capital and voting rights
August 4, 2017	Below	4 % of the share capital and voting rights
August 11, 2017	Below	3 % of the share capital and voting rights
August 23, 2017	Below	2 % of the share capital and voting rights
August 31, 2017	Below	1 % of the share capital and voting rights
By DNCA Finance		
February 21, 2017	Below	8 % of the share capital and voting rights
February 14, 2018	Below	7 % of the share capital and voting rights
	Below	6 % of the share capital and voting rights
February 28, 2018	Above	6 % of the share capital and voting rights
March 9, 2018	Above	7 % of the share capital and voting rights
March 13, 2018	Above	8 % of the share capital and voting rights
March 19 2018	Below	8 % of the share capital and voting rights
By Aviva Investors France SA		
March 14, 2017	Below	2 % of the share capital
April 3, 2017	Below	1 % of the share capital
By Amundi		
March 30, 2017	Below	1 % of the share capital and voting rights
September 8, 2017	Above	1 % of the share capital and voting rights
October 31, 2017	Below	1 % of the voting rights
November 3, 2017	Below	1 % of the share capital
January 25, 2018	Above	1 % of the share capital and voting rights
February 15, 2018	Below	1 % of the share capital and voting rights
By Norges Bank Investment Management		
July 20, 2017	Below	1 % of the share capital

Date of the notification	Above/ Below	Threshold crossed
By Dimensional Fund Advisors LP		
October 4, 2017	Below	2 % of the share capital
October 26, 2017	Below	1 % of the share capital
By Citigroup Global Markets Ltd		
October 23, 2017	Below	1 % of the share capital
By Crédit Suisse Group AG		
February 7, 2018	Above	1 % of the share capital
February 23, 2018	Below	1 % of the share capital
February 27, 2018	Above	3 % of the share capital
March 12, 2018	Above	4 % of the share capital
By Westfield Investment LLC		
February 22, 2018	Above	1 % of the share capital and voting rights
February 28, 2018	Above	2 % of the share capital
By Attestor Capital LLP		
February 23, 2018	Above	5 % of the share capital and voting rights
March 8, 2018	Above	6 % of the share capital and voting rights
	Above	7 % of the share capital and voting rights
	Above	8 % of the share capital and voting rights
By Alden Global Capital LLC		
February 27, 2018	Above	5 % of the share capital and voting rights
March 12, 2018	Above	7 % of the share capital and voting rights
	Above	8 % of the share capital and voting rights
By Aurelius Capital Management LP		
February 27, 2018	Above	5 % of the share capital and voting rights
March 1, 2018	Below	5 % of the share capital and voting rights
March 12, 2018	Below	4 % of the share capital and voting rights
March 13, 2018	Below	3 % of the share capital and voting rights
March 14, 2018	Above	3 % of the share capital and voting rights
March 19, 2018	Below	3 % of the share capital and voting rights
By Boussard & Gavaudan Partners Limited		
February 27, 2018	Above	5 % of the share capital and voting rights
March 1, 2018	Above	9 % of the share capital and voting rights
By Contrarian Capital Management LLC		
February 27, 2018	Above	5 % of the share capital and voting rights
By Third Point LLC		
February 27, 2018	Above	5 % of the share capital and voting rights
March 2, 2018	Below	5 % of the share capital and voting rights
March 8, 2018	Below	4 % of the share capital and voting rights
	Below	3 % of the share capital and voting rights
March 14, 2018	Below	2 % of the share capital and voting rights
By Syquant Capital		
March 7, 2018	Above	1 % of the share capital and voting rights
By Thunderbird Partners LLP		
March 8, 2018	Above	1 % of the share capital
	Above	2 % of the share capital
	Above	3 % of the share capital
	Above	4 % of the share capital
By Melqart Asset Management (UK) Ltd		
March 13, 2018	Above	2 % of the share capital
By Morgan Stanley		
March 15, 2018	Above	5 % of the share capital
March 20, 2018	Below	5 % of the share capital and voting rights
March 21, 2018	Above	5 % of the share capital and voting rights
By Och-Ziff Management Europe Limited		
March 16, 2018	Above	1 % of the share capital
By Marshall Wace LLP		
March 16, 2018	Above	1 % of the share capital

Legal entity or natural person which/who may control the Company

As of the date of this report, no natural person nor any legal entity has control over the Company. As of the date of this report, there is no specific measure in place to prevent a potential attempt to take over the Company. The only existing control over the interest owned by each of our shareholders in our share capital is the notification imposed by our articles of association when crossing the threshold of 1% of the share capital or the voting rights.

Items likely to have an influence in the event of a take-over bid

Pursuant to article L.225-100-3 of the French Commercial Code, you will find below the elements which are likely to have an influence in case of a take-over bid.

Capital structure of the Company:

Notice of crossing of a statutory threshold:

Pursuant to article 7.2 of the by-laws of the Company, any shareholder holding directly or indirectly a portion amounting to 1% of the stock capital or of the voting rights or a multiple of this percentage, within the meaning of article L. 233-7 of the French Commercial Code, shall give notice to the Company of the number of shares or voting rights he holds, within five trading days from the date on which one of these thresholds was exceeded.

In the event of failure to comply with this notification requirement, and upon request of one or several shareholders holding at least 1 percent of the capital, such request being recorded in the minutes of the General Meeting, those shares in excess of the fraction that should have been declared shall be deprived of their voting rights from the date of said General Meeting and for any other subsequent General Meeting to be held until the expiry of a two-year period following the date on which the required notification of the passing of the threshold will have been regularized.

Similarly, any shareholder whose shareholding is reduced below one of these thresholds shall give notice thereof to the Company within the same five-day period.

Double voting right:

As from May 22 1997, a double voting right has been allocated to all registered and fully paid-up shares registered in the name of the same holder for at least two years.

Statutory restrictions concerning the exercise of voting rights and share transfers or clauses of agreements which the Company is aware of, in compliance with article L.233-11 of the French Commercial Code:

There is no statutory restriction to the exercise of voting right and share transfers. The Company is not aware of any agreement in compliance with article L.233-11 of the French Commercial Code.

Direct or indirect shareholding in the share capital of the Company notified pursuant to sections L.233-7 and L.233-12 of the French Commercial Code:

See “Item 7: Principal Shareholders – Major Shareholders” of our report on Form 20-F.

List of holders of any security with special control rights and related description:

There is no holder of securities with special rights.

Control mechanism included in a potential system of employees share ownership, when control rights are not exercised by them:

Not applicable

Agreements between shareholders which the Company is aware of and which are likely to restrict share transfers and the exercise of voting rights:

The agreement between Bpifrance and IFP Energies Nouvelles is referred to in “Item 7: Principal Shareholders – Major Shareholders” of our report on Form 20-F.

On February 5, 2018, Bpifrance and IFP Energies Nouvelles announced they terminated this agreement.

Rules applicable to the appointment and replacement of members of the Board of Directors as well as the modification of bylaws:

The rules applicable to the appointment and replacement of Board of Directors’ members are described in article 14 of the by-laws. The rules applicable to the modification of by-laws are described in article L.225-96 of the French Commercial Code.

None of these rules is likely to have an influence in case of a take-over bid.

Powers of the Board of Directors, in particular the issuance or re-purchase of shares:

The Board of Directors does not have any specific power likely to have an influence in case of a take-over bid. The delegations of competence currently in force cannot be used by the Board of Directors in case of a take-over bid.

Agreements entered into by the Company and modified or terminated in the event of change of control over the Company:

The indentures governing our outstanding senior notes and certain of our credit facilities provide for an early redemption of the loans, at the option of the lenders, in the event of a change of control, pursuant to the terms specified in each agreement.

Agreements providing for severance payments to employees who resign or who are dismissed without cause or employees whose employment is terminated in the event of a take-over bid:

In addition to the agreements referred to in “Item 6: Directors, Senior Management and Employees – Contractual Indemnity in case of termination” of our report on Form 20-F, with respect to the Company’s Executive Officers, we inform you that certain executives of the Group benefit from a protection letter providing for the payment of a severance payment in the event of dismissal or change of control. The amount of such severance payment depends upon the positions and classifications of each concerned persons.

11.3.2.1.2. Evolution of the share capital over the past three years – Share capital as of March 15, 2018

The table below sets forth certain information with respect to entities known to us or ascertained from public filings to beneficially own a significant percentage of our voting securities as of March 15, 2018 and December 31, 2017, 2016 and 2015:

	March 15, 2018		December 31, 2017		2016		2015	
	% of shares	**% of voting rights**	**% of shares**	**% of voting rights**	**% of shares**	**% of voting rights**	**% of shares**	**% of voting rights**
Boussard et Gavaudan Partners Ltd[(a)]	9.14	9.14	—	—	—	—	—	—
Contrarian Capital Management LLC[(b)]	8.91	8.91	—	—	—	—	—	—
Alden Global Capital LLC[(c)]	8.34	8.34	—	—	—	—	—	—
Attestor Capital LLP[(d)]	8.25	8.25	—	—	—	—	—	—
DNCA Finance[(e)]	7.94	7.94	7.94	7.72	8.27	8.05	7.07	6.37
Morgan Stanley[(f)]	5.05	5.05	—	—	—	—	—	—
Bpifrance Participations[(g)]	0.35	0.35	9.35	10.90	9.35	10.81	7.04	12.68
IFP Energies Nouvelles[(h)]	0.02	0.02	0.49	0.48	1.27	2.11	3.58	6.46
AMS Energie	—	—	—	—	8.30	8.08	—	—
Financière de l'Echiquier[(i)]	—	—	—	—	—	—	5.76	5.19
Treasury stock	0.00427	0	0.11	0	0.11	0	0.45	0
FCPE CGG Actionnariat	0.00005	0.00009	0.0012	0.0024	0.0012	0.0024	0.04	0.08
Public	51.99568	51.99991	82.1088	80.90	72.6988	70.95	71.24	69.22
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

(a) *Calculated on the basis of the number of shares owned by Boussard et Gavaudan Partners Ltd as indicated in the notice of threshold crossing dated March 1, 2018.*
(b) *Calculated on the basis of the number of shares owned by Contrarian Capital Management LLC as indicated in the notice of threshold crossing dated February 27, 2018.*
(c) *Calculated on the basis of the number of shares owned by Alden Global Capital LLC as indicated in the notice of threshold crossing dated March 12, 2018.*
(d) *Calculated on the basis of the number of shares owned by Attestor Capital LLP as indicated in the notice of threshold crossing dated March 8, 2018.*
(e) *Calculated on the basis of the number of shares owned by DNCA Finance as indicated in the notice of threshold crossing dated March 19, 2018.*
(f) *Calculated on the basis of the number of shares owned by Morgan Stanley as indicated in the notice of threshold crossing dated March 21, 2018.*
(g) *Calculated on the basis of the number of shares owned by Bpifrance Participations as indicated in the notice of threshold crossing dated February 22, 2018.*
(h) *Calculated on the basis of the number of shares owned by IFP Energies Nouvelles as indicated in the notice of threshold crossing dated June 28, 2017.*
(i) *Calculated on the basis of the number of shares owned by Financière de l'Echiquier as indicated in the notice of threshold crossing dated February 9, 2016.*

11.3.2.2. Stock market information

11.3.2.2.1. Places where CGG securities are listed

The trading market for our ordinary shares is Euronext Paris S.A. Paris (Compartment C) – SRD Long Only. Our ordinary shares will entitle their holders to all rights attached to them on January 1, 2017.

Since May 14, 1997, American Depositary Shares, or ADSs, representing ordinary shares have been traded on the New York Stock Exchange. As of December 31, 2017, our ADSs represented 1.49% of our share capital.

In addition, as part of the implementation of the Group financial restructuring plan:

- our Senior Notes issued in February 2007, May 2011, April and May 2014, which used to be listed on the Euro MTF market of the Luxembourg Stock Exchange, have been delisted from the Euro MTF market of the Luxembourg Stock Exchange and from Euronext Paris;
- our senior first lien secured notes due 2023 and our senior second lien secured notes due 2024, are listed on the Euro MTF market of the Luxembourg Stock Exchange; and,
- the Warrants #1 and Warrants #2 are listed on Euronext Paris.

11.3.2.2.2. Other market places

Our shares are not listed on any other market place than Euronext Paris (Compartment C) and New York Stock Exchange.

11.3.2.2.1. Shares and ADS price

	Share price		Volumes		ADS price		Volumes	
	Highest	Lowest	Shares	Amount *(in million euros)*	Highest	Lowest	ADS	Amount *(in million US dollars)*
	(in euros)				*(in US dollars)*			
2018								
February	3,01	1,41	58 492 698	103,05	7,15	3,27	1 161 137	5,41
January	4,10[(a)]	1,52[(a)]	28 723 569	117 032,74	6,66	4,45	305 037	1,75
2017								
December	4,35	3,68	6 983 891	27,44	7,50	4,08	185 652	0,90
November	4,89	3,52	11 261 325	45,66	5,12	4,13	37 628	0,17
October	5,09	3,57	16 661 650	73,30	5,66	4,30	92 798	0,47
September	5,60	4,24	22 149 680	110,48	6,44	5,20	275 593	1,62
August	6,27	2,83	43 912 034	211,38	7,14	3,26	356 614	2,03
July	4,43	3,72	4 527 851	18,19	4,77	4,36	53 397	0,24
June	6,32	3,95	10 859 380	55,40	7,67	4,37[(c)]	377 237	2,19
May	6,72	4,88	6 704 600	36,60	7,23	5,55	59 174	0,36
April	6,95	6,17	3 924 182	25,60	7,27	6,64	32 545	0,22
March	9,10	6,11	16 640 720	114,80	9,65	6,57	111 276	0,79
February	9,98	8,35	7 241 228	66,12	10,51	8,83	72 125	0,69
January	15,24	9,27	14 124 580	162,58	15,60	10,06	98 671	1,18
2016								
December	15,43	13,03	9 953 088	141,38	16,25	14,01	154 379	2,30
November	24,24	11,10	16 102 328	239,48	26,50	11,91	234 812	3,67
October	27,88	23,14	7 888 042	203,36	29,70	25,95	31 824	0,89
September	24,68	20,40	6 614 124	147,93	26,88	22,89	41 955	1,03
August	23,85	17,71	6 469 735	139,76	26,53	19,86	64 055	1,54
July[(b)]	23,36	19,52	68 288 987	91,19	25,21	21.76	862 954	1,73
June	0,86	0,56	218 446 930	150,26	0,94	0,66	1 610 567	1,23
May	0,82	0,59	199 742 891	136,62	1,00	0,73	931 703	0,77
April	0,87	0,59	191 112 316	139,61	1,00	0,73	1 351 570	1,18
March	0,89	0,56	394 500 821	279,10	1,00	0,70	1 963 466	1,73
February	0,75	0,43	310 794 292	168,10	1,23	0,59	2 220 063	1,65
January	1,32	0,71	108 543 921	110,28	2,95	0,95	1 231 182	1,89
2015								
December	3,22	2,44	40 858 275	110,07	3,53	2,55	717 179	2,24
November	4,24	3,01	53 213 050	178,83	4,53	3,30	495 740	1,74
October	4,33	3,03	56 747 192	213,69	4,82	3,45	275 179	1,21
September	4,35	3,06	37 496 881	139,77	4,70	3,50	243 472	1,01
August	4,58	3,21	57 581 632	229,02	4,89	3,63	383 121	1,67
July	5,13	4,30	53 066 819	244,01	5,71	4,80	573 514	2,94
June	6,48	5,00	38 397 877	224,47	7,18	5,62	371 724	2,41
May	7,07	6,13	42 230 682	279,44	7,98	6,70	345 593	2,53
April	6,98	5,21	56 503 558	353,53	7,35	5,71	439 971	2,97
March	6,77	5,22	61 475 705	360,31	7,31	5,64	426 605	2,66
February	6,56	5,05	62 063 100	369,42	7,44	6,09	648 117	4,45
January	5,72	4,51	49 025 293	242,56	6,65	5,31	593 311	3,42

(a) Restated further to the operations linked to the financial restructuring held in February 2018.

(b) On July 20, 2016, the Company carried out a reverse stock split (see Item 7 — "Major Shareholders" of our 2017 report on form 20F). The figures presented for the third quarter of 2016 are adjusted pursuant to this transaction.

(c) On June 14, 2017, the trading of our ADSs was suspended pending the announcement of the opening of safeguard proceedings and no trading took place during the day. The theoretical closing price of our ADSs was US$3.73 per ADS as of June 14, 2017.

12. REPORT ON THE PRINCIPLES AND CRITERIA FOR DETERMINATION, ALLOCATION AND DISTRIBUTION OF THE FIXED, VARIABLE AND EXCEPTIONAL ELEMENTS OF THE TOTAL REMUNERATION AND THE BENEFITS OF ALL KINDS THAT MAY BE GRANTED TO THE EXECUTIVE OFFICERS

(submitted to the Shareholders' approval pursuant to article L225-37-2 of the French Commercial Code)

This section is established in accordance with new Article L.225-37-2 of the French Commercial Code and present the principles of the compensation policy of the Senior Officers which will be submitted to the vote of the Ordinary General Meeting convened to approve the 2017 financial statements.

As of the date of this report, the Senior Executive Officers of the Company are Mr. Remi Dorval as Chairman of the Board of Directors and Mr. Jean-Georges Malcor as Chief Executive Officer.

For the purpose of this report and according to the recommendations of the Corporate Governance Code of Listed Corporations (the "AFEP-MEDEF Code"), the term "Senior Executive Officer" refers to the Chief Executive Officer and the Corporate Officers, and the term "Senior Non Executive Officer" refers to the Chairman of the Board of Directors".

12.1. PRINCIPLES OF THE COMPENSATION POLICY OF THE SENIOR OFFICERS

The compensation policy of the Senior Officers is determined by the Board of Directors, upon proposal from the Appointment-Remuneration Committee. This policy is regularly reviewed and discussed by the Board of Directors.

The following principles are applicable to the compensation of the Senior Executive Officers and are set up according to the provisions of the AFEP-MEDEF Code, which are the following:

- **Principle of balance:** it is ensured that there is an appropriate balance between the several remuneration components and no part of such components is disproportionate.

- **Principle of comparability:** the positioning of the compensation of the Senior Executive Officers is regularly reviewed against the Company's sector and comparable compensation markets on the basis of studies carried out by specialized external firms. As a result, the Group practices are compliant and competitive with market practices in order to ensure the retention of the key Executive Officers.

- **Principle of interest alignment and link with performance:** Generally, the Board of Directors and the Appointment-Remuneration Committee pay particular attention to ensure that the compensation policy of the Senior Executive Officers applied is linked to the performance of the Company and focused on creating long-term value (quantitative criteria) and the achievement of the individual objectives (qualitative criteria). As a result, the purpose of the compensation policy is to encourage the achievement of ambitious objectives through the setting of stringent strategic performance criteria whether short, medium or long-term.

The overall compensation policy of the Senior Executive Officers focuses on the variable part of their compensation at risk for the beneficiary. Therefore, the compensation structure includes a significant variable part in order to align more directly the compensation of the Executive Officers with the Group operational strategy and the interests of the shareholders, while rewarding performance. The long term incentives represent also a significant part in order to link the remuneration of the Senior Executive Officers with the shareholders' interests.

It is indeed critical in the cyclical industry of the Group to attract, motivate and retain talent and provide a high level of competitiveness of the compensation packages, in general.

12.2. COMPONENTS OF THE COMPENSATION OF THE CHAIRMAN OF THE BOARD OF DIRECTORS

The Chairman of the Board of Directors receives:

- Fixed remuneration; And/or
- Director's fees

No other form of remuneration is paid to the Chairman of the Board of Directors. In particular, no annual or multi-annual variable remuneration, no stock-options is paid or allocated to him.

Finally, the Chairman of the Board of Directors benefits from the general benefits plan applicable to all Company employees, where applicable, and from a company car (with or without a driver). The Chairman of the Board of Directors does not benefit from any supplementary pension plan, non-competition compensation, contractual departure indemnity.

12.3. COMPONENTS OF THE COMPENSATION OF THE SENIOR EXECUTIVE OFFICERS

The purpose of the compensation policy of the Senior executive officers is to reward performance measured in the short, medium or long-term, it being specified that the compensation components pursue various and consistent objectives.

12.3.1. FIXED REMUNERATION

Pursuant to the AFEP-MEDEF Code, the compensation of the Senior Executive Officers is reviewed annually by the Appointment-Remuneration Committee. However, the amount is not changed annually but may be reviewed after a relatively long period of time (every two or three years).

Any increase of the compensation is justified and explained. Any significant increase decided by the Board of Directors, upon proposal from the Appointment-Remuneration Committee, must be explained and must take into account market practices.
The fixed compensation is paid monthly.

12.3.2. ANNUAL VARIABLE REMUNERATION: GLOBAL PERFORMANCE INCENTIVE PLAN (GPIP)

The company has set up a short-term annual variable remuneration within the Group that benefits all employees. This policy may vary with respect to the Group's objectives and strategy. To date, the company has set up a program called the Global Performance Incentive Plan (GPIP), which is also applicable to Senior Executive officers.

The Board of Directors and the Appointment-Remuneration Committee pay particular attention to ensure that the compensation policy of the Senior Executive Officers is linked to the performance of the Company.

As a result, the cyclical business and the highly volatile market in which the Company operates are reflected in the short term variable compensation and represent a significant part of their overall remuneration.

Pursuant to the AFEP-MEDEF Code, the criteria used for determining the annual variable compensation are reviewed annually by the Board of Directors, without being necessarily changed in order to ensure that such criteria comply with the Company's short term strategy.

The annual variable remuneration of the Senior Executive Officers is composed of the two parts:

- The first one is based on the quantitative criteria
- The second one is based on the qualitative criteria

The quantitative criteria (financial objectives) are precisely defined by the Board of Directors pursuant to the Group budget objectives. In particular and not exclusively, they may relate to: (i) free cash flow, (ii) Group external revenues, (iii) Group EBIT, (iiii) EBITDA. The Board of Directors decides the weighting assigned to each performance criteria according to the context and their significance for the Group.

The qualitative criteria (individual objectives) are precisely defined by the Board of Directors pursuant to the annual priorities for the Group. In particular and not exclusively, they may relate to: (i) the Group governance, (ii) relations with major customers, relations with shareholders and financial community, (iii) promotion and development in the industry, (iiii) Group operational performance, (iiiii) human resources. The Board of Directors decides the weighting assigned to the performance of each criteria according to the context and their significance for the Group.

The amount of the target annual variable compensation (when 100 % of the quantitative and qualitative criteria are achieved) of the Senior Executive Officers is expressed as a percentage of the fixed compensation.

Finally, in order to incentivize for overachievement, the short term variable compensation plan allows payment of amounts exceeding the target compensation:

- the quantitative criteria (financial objectives) and
- the qualitative criteria (individual objectives).

The variable part of the compensation for a given financial year is determined by the Board of Directors approving the accounts for the previous year. It shall be paid within one month following the validation of this payment by the General Meeting ruling on the accounts of the previous year.

The level of achievement for each criteria is precisely determined by the Board of Directors but is not disclosed for confidentiality reasons.

The target objectives are not disclosed for confidentiality reasons.

The indicators are set annually by the Board of Directors for the Senior Executive Officers and are cascaded down to all Group employees in order to ensure a consistency between the amounts of variable compensation paid to the Senior Executive Officers, the executive managers and more broadly, the Group employees.

12.3.3. MULTI-ANNUAL VARIABLE REMUNERATION

Since 2013, the Board of Directors, upon proposal from the Appointment-Remuneration Committee, has implemented a multi-annual bonus system in the form of performance units for the C-COM members (including the Senior Executive Officers), executive management and employees which have contributed to the Group performance or presented a strong potential of evolution in the Group.

This system is based on a two-fold objective:

- Implement a globally harmonized remuneration mechanism consistent with the growing internalization of the Group; and
- Establish a closer link between the remuneration of the main senior executives and the share price performance and the economic performance of the Group taken as a whole on a mid-term basis (3 years).

The performance units vest upon the expiry of a 3-year period from the allocation date subject to a presence condition in the Group at the time of vesting and achievement of performance conditions.

The performance conditions are based on pre-established and precise quantitative criteria, which are not disclosed for confidentiality reasons. A weighting is assigned to each of those conditions depending on their significance. Those performance conditions are determined annually by the Board of Directors.

Performance conditions of such performance units plans have been implemented since 2013 and are based on the achievement of Group objectives related to the return on capital employed and balance sheet structure along with achievement of the business segments' financial objectives aligned with the Group strategic orientations over a 3-year period. The Board of Directors may decide on the application of any other type of performance condition with regard to the Group's medium-term strategic objectives.

12.3.4. LONG TERM REMUNERATION OF THE SENIOR EXECUTIVE OFFICERS

The Board of Directors, upon proposal from the Appointment-Remuneration Committee and with the authorization of the General Meeting, grants long-term compensation to Senior Executive officers in the form of stock options, performance shares in the framework of section L225-197-2 of the French Commercial code or any other plan linked to the increase in the share price.

The purpose of this mechanism is in particular to retain the Senior Executive Officers and to promote the alignment of their interest with the Group social's interest and the shareholders' interest. Such plans are not reserved to Senior Executive Officers and may benefit to employees who have contributed to performance or present a strong potential of evolution in the Group. In principle, the grants are carried out annually during the first semester of the following fiscal year.

No discount is applied on allocation date and the vesting of the options is closely linked to the fulfilment of performance conditions.

The Board of Directors may decide to apply demanding performance conditions that must be fulfilled over several consecutive years.

12.3.5. DIRECTOR FEES

The Senior Executive Officers that would also be Director do not receive any Director fees.

12.3.6. EXCEPTIONAL COMPENSATION

No exceptional compensation can be allocated to Senior Executive Officers by the Board of Directors unless it is expressly justified by an exceptional situation.

In view of the context of the financial restructuring of the company and the end of Jean Georges MALCOR's term of office, which will come to an end on October 1, 2018 at the latest, the Board of Directors decided on December 1, 2017:

- that an exceptional remuneration would be granted to him for a fixed gross amount of €75,000, the payment of which would be conditional on the completion, under certain conditions, of operations to issue financial securities enabling the Group's debt restructuring to be implemented.
- that an additional exceptional remuneration linked to the realisation, under certain conditions, of the effective refinancing of the debt, would be allocated to him for a fixed gross amount of €75,000€, which could be increased to €175,000 should this refinancing occur on or prior to February 21, 2018.

It is specified that these elements must be submitted to the approval of the Ordinary General Meeting called to approve the accounts for the financial year 2017. In addition, the payment of the exceptional remuneration and any additional exceptional remuneration may only be granted after approval of their amounts by the Ordinary General Meeting called to approve the financial statements for the financial year 2018.

12.3.7. SUPPLEMENTAL PENSION PLANS

i. Defined benefit scheme (Article 39 of the French Tax Code)

In order to allow the executive managers of the Group to complete the level of annuity provided by the French mandatory Schemes, a defined benefit pension plan has been implemented. It is a collective and random pension plan governed by Article L.137-11 of the French Social Security Code. It allows the life annuity payment and the reversion annuity payment to the spouse or ex-spouse, in the event of death.

The members of the Executive Committee of the Group as composed prior to February 1, 2013 and the Management Board of Sercel Holding as composed prior to April 19, 2012 benefit from this supplemental pension plan since December 8, 2004. This plan was closed to new joiners on July 1, 2014. The actual Chief Executive Officer benefits from this plan.

In accordance with the recommendations of the AFEP-MEDEF Code, the chosen category is broader than the Executive Officers category.

It is an additive defined benefit plan with a cap. Accruals are acquired per year of service, with a double limit:

- potential rights are applied in addition to the mandatory basic and supplemental pension schemes but cannot, however, procure in aggregate for all schemes, a replacement rate exceeding 50%;
- potential rights are calculated on the basis of seniority with an upper limit of 20 years. They are accrued up to:
  - 1.5% of the remuneration used as reference, per seniority year within the company and up to 20 years, for the portion of remuneration below 20 times the French Social security upper limit,
  - 1% of the remuneration used as reference, per seniority year within the company and up to 20 years, for the portion of remuneration above 20 times the French Social security upper limit.

This annual vesting is subject to the achievement of performance conditions measured over the three financial years preceding the date on which notice is given and will depend on the average rate of achievement of the objectives relative to the variable annual portion of the Chief Executive Officer's compensation for the three financial years ended above.

Finally, the Board of Directors must establish annually, pursuant to the Article L.225-42-1 of the French Commercial Code, that the performance conditions set by the Board of Directors are properly met.

The remuneration used as reference is composed of the average fixed remuneration received by the beneficiary over the last three years of activity, increased by the short-term variable remuneration based on annual performance, pursuant to current policies in place within the Company.
Considering the high cyclicity of the seismic market, which may result in a strong volatility in the variable remuneration, the average used is composed of the three highest payments over the past seven years preceding the date of retirement.

Further, to participate in the plan, the Beneficiaries must comply with the main following cumulative conditions:

- have liquidated their social security pension and all possible other rights to pensions;
- have at least five years of service as member of the Executive Committee of the Group (as composed prior to February 1, 2013) or of the Management Board of Sercel Holding (as composed prior to April 19, 2012) and until they were 55 years of age; and
- end their professional career when leaving the Company.

The conditions relating to the age and length of service are assessed taking into account the service continuity within the new governance bodies of the Group.

Nonetheless, it is specified that under specific cases (such as death/incapacity or dismissal after 55 years old without carrying any professional activity), the benefit of the scheme is maintained in accordance with the circular n°105/2004 of the social security direction dated March 8, 2014.

A provision is recorded the balance sheet during the constitution period (as long as the beneficiary is active), and once the beneficiary liquidates his pension, the constitutive capital is transferred to an insurer and is completely outsourced.

This scheme is financed by CGG, which pays contributions to a third-party insurer, entrusted with the management of the pension scheme.

ii. Defined contribution scheme (Article 83 of the French Tax Code)

The Senior Executive Officers benefit from the defined contribution scheme applicable to executive managers of the Group since January 1, 2005.

The annuities served under this additional scheme are deducted from the amount of annuities to be paid under the defined benefit pension scheme described above. It is capped as follows:

- "Tranche A" of the Social Security: 0.5% of the employee social security contribution and 1% of the employer social security contribution
- "Tranche B" of the Social Security: 2% of the employee social security contribution and 3% of the employer social security contribution
- "Tranche C" of the Social Security: 3.5% of the employee social security contribution and 5% of the employer social security contribution

The contribution base is assessed on the gross annual remuneration of a given year exclusively, base salary, annual variable remuneration and benefit in kind (company car). By principle, this base excludes any other component of the remuneration.

iii. Alternative pension scheme

As the defined benefit plan is closed to new entrants, the Board of Directors may decide to set up an alternative pension scheme for Senior Executive Officers.

Pursuant to the Article L. 225-42-1 of the French Commercial Code, this system would be subject to the fulfillment of stringent performance conditions defined by the Board of Directors.

12.3.8. INDIVIDUAL INSURANCE COVERING LOSS OF EMPLOYMENT

As The Corporate Executive Officer or any other Senior executive officer who does not benefit from an employment contract are not subject to the statutory legislation relating to individual insurance coverage for loss of employment, the Board of Directors authorize as a result, in accordance with the procedures applicable to related party agreements and provided for in Articles L. 225-38 et seq. of the French Commercial Code, the conclusion of a specific insurance covering loss of employment for their benefit.

12.3.9. OTHER COLLECTIVE BENEFITS

i. General benefits plan

The Senior Executive Officers may benefit from the general benefits plans applicable to all employees of the Group.

ii. Benefits in kind

The Senior Executive Officers may benefit from a company car (with or without a driver).

12.3.10. SEVERANCE PAY

The Senior Executive Officers may benefit from a contractual indemnity in case of departure from the Group, which the terms and conditions are set by the Board of Directors upon proposal from the Appointment-Remuneration Committee and in compliance with Article L. 225-42-1 of the French Commercial Code.

The contractual termination indemnity is exclusively payable in case of revocation, non-renewal of his term of office, or any other form of forced departure relating to a substantial change of situation resulting from a change of control or a change of strategy.

The amount of such indemnity is equal to the difference between (i) a gross amount of 200% of the reference annual compensation of the Corporate Executive Officer and (ii) any sum to which the Corporate Executive Officer may be entitled as a result of his departure from the Group, including any sums to be paid further to the application of his non-competition commitment. The indemnity global amount shall not exceed 200% of the reference annual compensation.

Pursuant to Article L. 225-42-1 of the French Commercial code, payment of the contractual termination indemnity is subject to the fulfilment of demanding performance conditions set by the Board of Directors.

The payment terms are also compliant with the recommendations of the AFEP-MEDEF Code.

Finally, pursuant to said Article L.225-42-1 of the French Commercial Code, the Board of Directors shall verify prior to the payment of the contractual termination indemnity (i) that the performance conditions set by the Board of Directors are duly fulfilled and (ii) that the payment of such contractual termination indemnity complies with the Corporate Governance Code applicable at the date of departure.

12.3.11. NON-COMPETE AGREEMENT

In order to protect the Group interest in the event of departure of certain executive managers including the Senior Executive Officers, the Company provides for non-compete provisions.

As such, the Board of Directors can decide, in accordance with procedures applicable to related party agreements and provided for by Article L.225-38 et seq. of the French Commercial Code, the signature of a non-compete agreement for the benefit of the Group Senior Executive Officers.

This agreement applies to any geophysical data acquisition, processing or interpretation services or the provision of equipment or products designed for the acquisition, processing or interpretation of geophysical data. Such agreement applies also to the contribution of projects or activities in the same field as those in which the interested party was involved at Group CGG.

In consideration of this non-compete agreement, for a period defined in the agreement, the Senior Executive Officers are entitled to receive a compensation corresponding to a percentage of their annual reference remuneration as defined in their protection letter related to payment of the contractual indemnity in case of termination of their office. The company determines these elements in compliance with the recommendations of the AFEP-MEDEF Code.

12.3.12. BENEFITS FOR TAKING UP A POSITION

Benefits for taking up a position may only be granted by the Board of Directors to a new Senior Executive Officer who has come from a company outside the Group, in accordance with the AFEP-MEDEF Code. Such indemnity, which may take different forms, is intended to compensate for the loss of benefits received by the executive. Payment of this benefit must be duly justified.

12.3.13 CONDITIONS OF COMPENSATION AND BENEFITS GRANTED TO THE CHIEF EXECUTIVE OFFICER FOLLOWING THE BOARD OF DIRECTORS' MEETING HELD ON DECEMBER 1, 2017

On December 1, 2017, the Board of Directors of the Company approved the conditions relating to the departure of Jean-Georges Malcor as Chief Executive Officer and, after taking into consideration the recommendations of the Appointment and Remuneration Committee, decided the following:

- no compensation or other benefits will be paid to Mr. Jean-Georges Malcor upon or after the termination of his duties as Chief Executive Officer;
- the 2018 compensation of Mr. Jean-Georges Malcor for his duties as Chief Executive Officer would consist of the following elements:
  - a fixed compensation of €52,500 gross monthly, unchanged from his 2017 fixed compensation;
  - no annual variable compensation subject to the achievement of qualitative objectives and quantifiable objectives will be attributed to him;
  - a special compensation payment of a gross fixed amount of €75,000 conditional upon the final completion, under certain conditions, of all the financial securities issuance operations allowing for the implementation of the Group's debt restructuring; and
  - an additional special compensation payment conditional upon the final completion, under certain conditions, of a refinancing of the debt, amounting to €75,000, which could be increased to €175,000 should such refinancing occur on or prior to February 21, 2018.

Mr. Jean-Georges Malcor will continue to benefit from the performance units set up in June 2015 and 2016, according to unchanged performance conditions and from the stock options granted to him by the Board of Directors and remaining outstanding to date, also in accordance with unchanged acquisition conditions.

Mr. Jean-Georges Malcor will remain subject to the non-compete commitment authorized by the Board of Directors on June 30, 2010 for a period of 18 months in return for an indemnity equal to 100% of his annual reference compensation, corresponding to the amount of (i) any gross fixed compensation received within the Group during the last 12 months and (ii) the annual average of the variable compensation due for the last three (3) years, it being specified that this non-compete commitment would be replaced by a new non-compete commitment for a period of 24 months and in return for an indemnity equal to the 16/12th of his reference compensation in the event the employment contract referred to below is concluded.

Mr. Jean-Georges Malcor will continue to benefit from the supplementary defined benefit pension scheme in effect within the Group for certain members of the Executive Committee and whose extension to Mr. Jean-Georges Malcor has been authorized by the Board of Directors during its meeting of June 30, 2010.

In the event that Mr. Jean-Georges Malcor's term of office is terminated before October 1, 2018, the Board of Directors has authorized, in accordance with Article L.225-38 and, as appropriate, Article L.225-42-1 of the French Commercial Code, the entering into of an employment contract with him in order to allow his continued collaboration with the Company as "Senior Advisor" until that date, under the same conditions of compensation as those applicable to his mandate as Chief Executive Officer (with the exception of the non-competition commitment which would in this case be for a period of 24 months and in return for an indemnity equal to the 16/12th of his reference compensation, as indicated above).

12.3.14. DRAFT RESOLUTIONS PROPOSED BY THE BOARD OF DIRECTORS TO THE GENERAL MEETING PURSUANT TO ARTICLE L.225-37-2 OF THE FRENCH COMMERCIAL CODE

Twelfth resolution

(Approval of the principles and criteria of determination, distribution and allocation of the fixed, variable and exceptional elements of the global compensation structure, and of all benefits of any kind granted to the Chairman of the Board of Directors for the 2018 financial year)

"Voting under the conditions of quorum and of majority required for ordinary general meetings, in accordance with article L.225-37-2 of the French Commercial Code, the shareholders approve the principles and the criteria of determination, distribution and allocation of the fixed, variable and exceptional components of the global compensation structure and of all benefits of any kind granted for the 2018 financial year to the Chairman of the Board of Directors for the 2018 financial year, as described in the Report on Corporate Governance prepared in accordance with article L.225-37 of the French Commercial Code and presented in the "2017 Additional Information" document."

Thirteenth resolution

(Approval of the principles and criteria of determination, distribution and allocation of the fixed, variable and exceptional elements of the global compensation structure, and of all benefits of any kind granted to the Chief Executive Officer for the 2018 financial year)

"Voting under the conditions of quorum and of majority required for ordinary general meetings, in accordance with article L.225-37-2 of the French Commercial Code, the shareholders approve the principles and the criteria of determination, distribution and allocation of the fixed, variable and exceptional components of the global compensation structure and of all benefits of any kind granted to the Chief Executive Officer for the 2018 financial year, as described in the Report on Corporate Governance prepared in accordance with article L.225-37 of the French Commercial Code and presented in the "2017 Additional Information" document."

13. SENIOR EXECUTIVE OFFICERS' REMUNERATION COMPONENTS SUBMITTED TO THE VOTE OF SHAREHOLDERS

The following tables reflect the Company's senior executive officers' remuneration components that will be submitted to the vote of shareholders during the Combined General Meeting to be held to approve the 2017 financial statements.

Mr. Remi DORVAL, Chairman of the Board of Directors

Elements of compensation paid or granted for the 2017 financial year to Mr. Remi Dorval, Chairman of the Board of Directors submitted to the Shareholders' approval:

Remuneration components paid or granted for the fiscal year	Amounts submitted to the vote	Presentation
Fixed remuneration	**€109,750**	In 2017, Mr. Dorval received a fixed remuneration of €109,750.
Annual variable remuneration	**N/A**	Mr. Dorval does not receive any variable remuneration.
Deferred annual variable remuneration	**N/A**	Mr. Dorval does not receive any deferred annual variable remuneration.
Multi-annual variable remuneration	**N/A**	Mr. Dorval does not receive any multi-annual variable remuneration.
Exceptional compensation	**N/A**	Mr. Dorval does not receive any exceptional compensation.
Value of options / performance shares granted during the fiscal year	**N/A**	Mr. Dorval does not benefit from any stock option or performance share plan.
Directors' fees	**€57,200**	The Board of Directors held on April 6, 2017 resolved that, as Chairman of the Board of Directors, Mr. Dorval would benefit from a fixed amount of Directors' fees, set at €57,200..
Value of benefits in kind	**€3,360**	Mr. Dorval benefits from a company car.

Remuneration components paid or granted for the fiscal year that are or were submitted to a vote during a General Meeting as part of the Agreements and Commitments approvals	Amounts submitted to the vote	Presentation
Severance pay	**N/A**	Mr. Dorval does not benefit from any severance agreement.
Non-compete clause	**N/A**	Mr. Dorval does not benefit from any non-compete agreement.
General benefits plan	**No amount paid in 2017**	Mr. Dorval benefits from the general benefits plan applicable to all employees.
Supplementary pension plan	**N/A**	Mr. Dorval does not benefit from any supplementary pension plan.

Mr. Jean-Georges MALCOR, Chief Executive Officer

Elements of compensation paid or granted for the 2017 financial year to Mr. Jean-Georges MALCOR, Chief Executive Officer, submitted to the Shareholders' approval:

Remuneration components paid or granted for the fiscal year	Amounts submitted to the vote	Presentation
Fixed remuneration	**€630,000**	In 2017, Mr. Malcor received a fixed remuneration of €630,000. This fixed remuneration was approved by the Board of Directors on April 6, 2017. It has remained unchanged since 2013.
Annual variable remuneration *(Payment of this annual variable remuneration will be subject to approval by the Annual General Meeting convened on April 26, 2018 in accordance with the conditions provided by article L. 225-100 of the French Commercial Code)*	**€914,885**	The annual variable remuneration of Mr. Malcor is based on the achievement of qualitative objectives (accounting for 1/3 of the variable compensation) and quantitative objectives (accounting for 2/3 of the variable compensation). The quantitative criteria are based on the achievement of Group budget objectives set by the Board of Directors. His target amount is set at 100 % of his fixed compensation. However, in case of overachievement, the allocation of the variable incentive remuneration may involve: • the quantitative criteria (financial objectives) for a maximum of 133.3% of the fixed salary, and • the qualitative criteria (individual objectives) for a maximum of 66.6% of the fixed salary. For 2017 : - The quantitative criteria based on the achievement of budget objectives were Group free cash flow (25% weighting), Group external revenues (25% weighting), Group operating income (25% weighting), and EBITDAS minus tangible and intangible investments made in the course of the fiscal year (25% weighting); - The qualitative criteria, based on the achievement of individual objectives, were focused on (i) the financial restructuring plan and, in particular, its negotiation with all stakeholders, the implementation of the legal proceedings in France and in the U.S. as well as the approval of the plan by the extraordinary shareholders' meeting – this objective included also the restructuring of our financial obligations un the Nordic credit facility; and (ii) the budgets' monitoring, our operational performance, ensuring cohesion and motivation of our employees (clients satisfaction, monitoring of the HSE/SD objectives, regular communication internally for our employees and externally for our clients and state governments). On March 8, 2018, based on the achievement of the hereinabove qualitative and quantitative targets and the final 2017 results, the Board of Directors, upon the Appointment-Remuneration Committee's proposal, set this variable remuneration at €914,885. This corresponds to an overall achievement rate of 145% of the target amount of his variable remuneration and of his fixed remuneration.

Remuneration components paid or granted for the fiscal year	Amounts submitted to the vote	Presentation
Deferred annual variable remuneration	**N/A**	Mr. Malcor does not receive any deferred annual variable remuneration.
Multi-annual variable remuneration	**N/A**	No multi-annual remuneration plan was implemented in 2017.
Exceptional compensation	**N/A**	Mr. Malcor did not receive any exceptional compensation in 2017.
Value of options / performance shares granted during the fiscal year	**Stock-options:** **N/A**	No stock-options plan was implemented in 2017.
	Performance shares : **N/A**	No performance shares plan was implemented in 2017.
Directors' fees	**N/A**	Mr. Malcor does not receive any Directors' fees.
Value of benefits in kind	**€11,880**	Mr. Malcor benefits from a company's car. This benefit was approved by the Board of Directors on April 6, 2017.

Remuneration components paid or granted for the fiscal year that are or were submitted to a vote during a General Meeting as part of the Agreements and Commitments approvals	Amounts submitted to the vote	Presentation
Severance pay	**N/A**	Pursuant to article L. 225-42-1 of the French Commercial Code, the amendment and the subsequent renewal of the protection letter related to payment of a contractual indemnity in case of termination of Mr. Malcor's office approved by the Board of Directors on January 4, 2017 and June 1, 2017, respectively, were submitted for ratification to the shareholders' annual general meeting held on October 31, 2017 under the 9th and 10th resolutions. The general meeting did not approve these resolutions.
Non-compete clause	**No amount paid in 2017**	This non-compete agreement applies to any geophysical data acquisition, processing or interpretation services or the provision of equipment or products designed for the acquisition, processing or interpretation of geophysical data. Mr. Malcor has agreed that he will not contribute to projects or activities in the same field as those in which he was involved at CGG for period of 18 months starting on the date on which he leaves the Group. In consideration of this undertaking, Mr. Malcor will be entitled to receive a compensation corresponding to 100% of his annual reference compensation. On June 30, 2010, the Board of Directors approved, in accordance with procedures applicable to related party agreements and provided for by section L.225-38 et seq. of the French Commercial Code, this non-compete agreement between the Company and Mr. Malcor. This agreement was ratified by the General Meeting held on May 4, 2011.
General benefits plan	**No amount paid in 2017**	On June 30, 2010, the Board of Directors approved, in accordance with procedures applicable to related party agreements and provided for by section L.225-38 et seq. of the French Commercial Code, the extension to Mr. Malcor of the benefit of the Group's general benefits plan applicable to all employees. This agreement was ratified by the General Meeting held on May 4, 2011.
Individual insurance covering loss of employment	**No amount paid in 2017**	Pursuant to the procedure applicable to related-parties agreement set forth by section L. 225-38 and seq. of the French Commercial Code, the Board of Directors authorized, on June 30, 2010, the Company to subscribe with GSC Gan, as from July 1, 2010, an individual insurance policy covering loss of employment, in favor of Mr. Malcor. This agreement was ratified by the General Meeting held on May 4, 2011. The annual subscription fee payable by the Company amounts to €10,738.67 for 2017. This insurance provides for the payment of a maximum of 13.7 % of his 2017 target compensation (corresponding to €172,603), for a duration of 12 months.

<table>
<tr><th>Remuneration components paid or granted for the fiscal year that are or were submitted to a vote during a General Meeting as part of the Agreements and Commitments approvals</th><th>Amounts submitted to the vote</th><th>Presentation</th></tr>
<tr><td>Supplementary pension plan</td><td>No amount paid in 2017</td><td>Mr. Malcor benefits from the supplemental retirement plan for the members of the Executive Committee of the Group (as composed prior to February 1, 2013) and the Management Board of Sercel Holding (as composed prior to April 19, 2012).

It is an additive defined benefit plan with a cap. Accruals are acquired per year of service, with a double limit:

• Potential rights are applied in addition to the mandatory basic and supplementary pension schemes but cannot, however, procure in aggregate for all schemes, a replacement rate exceeding 50%;

• Potential rights are calculated on the basis of seniority with an upper limit of 20 years. They are accrued up to:

- 1.5% of the remuneration used as reference, per seniority year within the company and up to 20 years, for the portion of remuneration below 20 times the Social security upper limit;

- 1% of the remuneration used as reference, per seniority year within the company and up to 20 years, for the portion of remuneration above 20 times the Social security upper limit;

Further, to participate in the plan, the Beneficiaries must comply with the main following cumulative conditions:

• have liquidated their social security pension and all possible other rights to pensions,

• have at least five years of service as member of the Executive Committee of the Group (as composed prior to February 1, 2013) or of the Management Board of Sercel Holding (as composed prior to April 19, 2012) and until they were 55 years of age, and

• end their professional career when leaving the Company.

The conditions relating to the age and length of service are assessed taking into account the service continuity within the new governance bodies of the Group. This plan was closed to new comers on July 1, 2014.

As of December 31, 2017, the Company's commitment under the supplemental retirement plan for Mr. Jean-Georges Malcor, Chief Executive Officer, corresponds to an annual pension equal to 13%, of his annual 2017 target compensation, respectively.

The aggregate present benefit value of this supplemental plan as of December 31, 2017 was €14,340,234 of which €773,523 has been recorded as an expense for fiscal year 2017 for all Beneficiaries.

Of such present benefit value, the portions relating to Mr. Jean-Georges Malcor, Chief Executive Officer, are €4,174,308 and €383,832 respectively.

The benefit of this plan was extended to Mr. Malcor by the Board of Directors on June 30, 2010 pursuant to section L. 225-38 and seq. of the Commerce code. Such extension was ratified by the annual general meeting held on May 4, 2011.</td></tr>
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Remuneration components paid or granted for the fiscal year that are or were submitted to a vote during a General Meeting as part of the Agreements and Commitments approvals	Amounts submitted to the vote	Presentation
		In addition, on June 1, 2017, upon renewal of the term of office of Mr. Jean-Georges Malcor as Chief Executive Officer, the Board decided, in accordance with section L225-42-1, paragraph 2 of the French Commerce code to submit, starting 2017, the acquisition of annual rights under the defined benefit pension plan benefitting to Mr. Jean-Georges Malcor to the following performance conditions : • If the average rate of achievement of the objectives relating to Mr. Jean-Georges Malcor's variable compensation calculated over the three financial years preceding the acquisition date is higher than 40% the annual rights will be acquired; • If such average rate is below 40%, the annual rights will not be acquired. Pursuant to Article L. 225-42-1 of the French Commercial Code, this amendment was ratified by the annual general meeting held on October 31, 2017 under the 11th resolution. On March 23, 2018, the Board of Directors confirmed that the performance condition was met for 2017 and that the corresponding annual rights were accrued.

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