

CGG
Form 20-F
March 29, 2018
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SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 20-F

**REGISTRATION STATEMENT PURSUANT TO SECTION 12(B) OR (G) OF THE SECURITIES EXCHANGE ACT OF 1934
OR**

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended December 31, 2017

OR

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934
OR**

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of Event Requiring this Shell Company Report

Commission File Number 001-14622

CGG

(Exact name of registrant as specified in its charter)

CGG

(Translation of registrant's name into English)

Republic of France

(Jurisdiction of incorporation or organization)

Tour Maine Montparnasse

33, avenue du Maine

75015 Paris France

(Address of principal executive offices)

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CGG

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Securities registered or to be registered pursuant to Section 12(b) of the Act.

Title of each class	Name of each exchange on which registered
American Depositary Shares representing	New York Stock Exchange
Ordinary Shares, nominal value 0.80 per share	

Securities registered or to be registered pursuant to Section 12(g) of the Act.

None

(Title of class)

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Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.

None

(Title of class)

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

22,133,149 Ordinary Shares, nominal value 0.80 per share

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes No

Note: checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those sections.

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).** Yes No

** This requirement is not currently applicable to the registrant.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of "accelerated filer," "large accelerated filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated filer Non-accelerated filer Emerging growth company
If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

The term "new or revised financial accounting standard" refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing: US GAAP

International Financial Reporting Standards as issued by the International Accounting Standards Board Other

If "other" has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow: Item 17 Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

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PRESENTATION OF INFORMATION

Unless the context otherwise requires, CGG refers to CGG S.A., and we, us, our and Group refers to CGG S.A. and its subsidiaries.

References to the financial restructuring are to the balance sheet restructuring transactions of CGG S.A and certain of its subsidiaries, effective February 21, 2018. References to the Safeguard Plan are to the plan prepared in the course of, and implemented as a result of, the safeguard proceeding of CGG S.A., as approved by the Commercial Court of Paris on December 1, 2017. References to the Chapter 11 Plan are to the Joint Chapter 11 Plan of Reorganization of CGG Holding (U.S.) Inc. and Certain Affiliates as confirmed by the United States Bankruptcy Court for the Southern District of New York on October 16, 2017. References to the Financial Restructuring Plan are to the Safeguard Plan and the Chapter 11 Plan, collectively. References to the first lien notes are to our senior first lien secured notes due 2023 issued through our wholly-owned subsidiary, CGG Holding (U.S.) Inc., on February 21, 2018 as part of the financial restructuring. References to the second lien notes are to our senior second lien secured notes due 2024 issued on February 21, 2018 as part of the financial restructuring.

References to Senior Notes are to our 5.875% Senior Notes due 2020, our 6.50% Senior Notes due 2021 and our 6.875% Senior Notes due 2022, which have been extinguished as part of the financial restructuring. References to convertible bonds are to our 1.75% convertible bonds due 2019 and our 1.25% convertible bonds due 2020, which have been extinguished as part of the financial restructuring. References to the US revolving facility are to the US\$165 million revolving credit facility under our senior secured New York-law credit agreement dated July 15, 2013, as amended from time to time, which has been extinguished as part of the financial restructuring. References to the French revolving facility are to the US\$325 million revolving credit facility under our senior secured French-law revolving facility agreement dated July 31, 2013, as amended from time to time, which has been extinguished as part of the financial restructuring. References to the Nordic credit facility are to the US\$250 million Norwegian-law agreement split into US\$150 million term loan and US\$100 million revolving facility dated July 1, 2013, which are no longer within our perimeter of consolidation following the Marine Fleet Restructuring (as defined herein). References to the 2019 secured term loans are to the US\$342 million term loan facility under our New York-law term loan credit agreement dated November 19, 2015, as amended from time to time, which has been extinguished as part of the financial restructuring. References to the Credit Facilities are to the French revolving facility, the US revolving facility and the 2019 secured term loans, collectively.

References to the Seabed JV are to Seabed GeoSolutions BV, a joint venture between us and Fugro N.V (Fugro) specializing in shallow water and ocean bottom systems. References to the Transformation Plan are to our ongoing transformation plan intended to transform CGG from a seismic acquisition company into an integrated geosciences group.

In this annual report, references to United States or US are to the United States of America, references to US dollars, \$ or US\$ are to United States dollars, references to France are to the Republic of France, references to Norway are to the Kingdom of Norway and references to euro or are to the single currency introduced at the start of the third stage of European Economic and Monetary Union pursuant to the Treaty establishing the European Union.

As our shares are listed on the New York Stock Exchange (in the form of American Depositary Shares), we are required to file an annual report on Form 20-F with the SEC. Our annual report includes our annual financial statements prepared in accordance with International Financial Reporting Standards (IFRS) and its interpretations as issued by the International Accounting Standards Board (IASB). These consolidated financial statements were also prepared in accordance with IFRS as adopted by the European Union.

Unless otherwise indicated, statements in this annual report relating to market share, ranking and data are derived from management estimates based, in part, on independent industry publications, reports by market

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research firms or other published independent sources. Any discrepancies in any table between totals and the sums of the amounts listed in such table are due to rounding.

FORWARD-LOOKING STATEMENTS

This annual report includes forward-looking statements within the meaning of the federal securities laws, which involve risks and uncertainties, including, without limitation, certain statements made in the sections entitled Information on the Company and Operating and Financial Review and Prospects. You can identify forward-looking statements because they contain words such as believes, expects, may, should, seeks, approximately, intends, plans, estimates, or anticipates or similar expressions that relate to our strategy, plans or intentions. These forward-looking statements are subject to risks and uncertainties that may change at any time, and, therefore, our actual results may differ materially from those that we expected. We have based these forward-looking statements on our current views and assumptions about future events. While we believe that our assumptions are reasonable, we caution that it is very difficult to predict the impact of known factors, and, of course, it is impossible for us to anticipate all factors that could affect our actual results. All forward-looking statements are based upon information available to us on the date of this annual report.

Important factors that could cause actual results to differ materially from our expectations (cautionary statements) are disclosed under Item 3: Key Information Risk Factors and elsewhere in this annual report, including, without limitation, in conjunction with the forward-looking statements included in this annual report. Some of the factors that we believe could affect our actual results include:

risks associated with third-party motions, recourses or other pleadings in any safeguard, chapter 11 or bankruptcy case, which, if approved, may lead to the retroactive cancellation of the implementation of the financial restructuring;

our ability to comply with the terms and conditions of the Safeguard Plan and the new financing agreements;

the impact of the current uncertain economic environment and the volatility of oil and natural gas prices;

the social, political and economic risks and other risks of our global operations;

our ability to integrate successfully the businesses or assets we acquire;

any write-downs of goodwill on our balance sheet;

our ability to sell our seismic data library;

exposure to foreign exchange rate risk and risks related to equities and financial instruments;

our ability to finance our operations on acceptable terms;

the weight of intra-group production on our results of operations;

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the timely development and acceptance of our new products and services;

difficulties and costs in protecting intellectual property rights and exposure to infringement claims by others;

our ability to attract and retain qualified employees;

exposure to counter-party risk;

our ability to maintain our relationship with creditors, customers, vendors, employees and other personnel and counterparties in light of the recent French and U.S. procedures of safeguard and Chapter 11;

ongoing operational risks and our ability to have adequate insurance against such risks;

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our liquidity and outlook;

the level of capital expenditures by the oil and gas industry and changes in demand for seismic products and services;

our clients' ability to unilaterally delay or terminate certain contracts in our backlog;

the effects of competition;

difficulties in adapting our fleet to changes in the seismic market;

our high level of fixed costs regardless of the level of business activity;

the seasonal nature of our revenues from marine seismic data acquisitions;

the costs of compliance with, or liabilities under, laws, governmental regulations, including for environmental, health and safety and taxation;

the risks related to our information technology, including cyber security risks and risks of hardware and software failures;

our indebtedness and the restrictive covenants in our debt agreements;

our ability to access the debt and equity markets during the periods covered by the forward-looking statements, which will depend on general market conditions and on our credit ratings for our debt obligations;

disruptions in our supply chain and third-party suppliers;

exposure to interest rate risk; and

our success at managing the foregoing risks.

We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. We caution you that the foregoing list of important factors may not contain all of the material factors that are important to you. In addition, in light of these risks, uncertainties and assumptions, the forward-looking events discussed in this annual report might not occur. When considering forward-looking statements, you should keep in mind the risk factors and other cautionary statements included in this annual report, including those described in Item 3: Key Information – Risk Factors of this annual report.

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Not applicable.

Item 2: OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

Item 3: KEY INFORMATION**Selected Financial Data**

The selected financial data included below should be read in conjunction with, and are qualified in their entirety by reference to, our consolidated financial statements and Item 5: Operating and Financial Review and Prospects included elsewhere in this annual report. The selected financial data for each of the years in the five-year period ended December 31, 2017 have been derived from our audited consolidated financial statements prepared in accordance with IFRS.

	At December 31,				
	2017	2016	2015	2014	2013
	(In millions of US\$ except per share data)				
Statement of operations data:					
Operating revenues	1,320.0	1,195.5	2,100.9	3,095.4	3,765.8
Other revenues from ordinary activities	0.8	1.4	1.4	1.5	2.1
Cost of operations	(1,239.4)	(1,250.4)	(1,817.2)	(2,510.8)	(2,977.2)
Gross profit	81.4	(53.5)	285.1	586.1	790.7
Research and development expenses, net	(28.8)	(13.6)	(68.7)	(101.2)	(105.9)
Marketing and selling expenses	(55.5)	(62.2)	(87.2)	(113.9)	(118.6)
General and administrative expenses	(81.7)	(84.3)	(98.5)	(146.6)	(215.9)
Other revenues (expenses)	(178.9)	(182.9)	(384.5)	(506.9)	(105.2)
Impairment of goodwill			(803.8)	(415.0)	(640.0)
Operating income	(263.5)	(396.5)	(1,157.6)	(697.5)	(394.9)
Cost of financial debt, net	(211.0)	(174.2)	(178.5)	(200.6)	(191.7)
Other financial income (loss)	4.2	(11.4)	(54.5)	(43.0)	(22.3)
Income taxes	(23.7)	13.7	(77.0)	(123.8)	(82.9)
Net income (loss) from consolidated companies	(494.0)	(568.4)	(1,467.6)	(1,064.9)	(691.8)
Equity in income of affiliates	(20.1)	(8.2)	21.4	(81.7)	0.6
Net income (loss)	(514.1)	(576.6)	(1,446.2)	(1,146.6)	(691.2)
Attributable to owners of CGG S.A.	\$ (514.9)	(573.4)	(1,450.2)	(1,154.4)	(698.8)
Attributable to owners of CGG S.A. ⁽¹⁾	(458.6)	(518.6)	(1,302.0)	(866.1)	(527.2)
Attributable to non-controlling interests	\$ 0.8	(3.2)	4.0	7.8	7.6
Net income (loss) per share:					
Basic ⁽²⁾	\$ (11.18)	(13.26)	(114.66)	(91.31)	(55.35)
Basic ⁽¹⁾	(9.96)	(11.99)	(102.94)	(68.51)	(41.76)
Diluted ⁽²⁾	\$ (11.18)	(13.26)	(114.66)	(91.31)	(55.35)
Diluted ⁽¹⁾	(9.96)	(11.99)	(102.94)	(68.51)	(41.76)

(1) Converted at the average exchange rate of US\$1.1227, US\$1.1057, US\$1.1138, US\$1.3328 and US\$1.3254 per for 2017, 2016, 2015, 2014 and 2013 respectively.

(2) Basic and diluted per share amounts have been calculated on the basis of 46,038,287, 43,255,753, 12,647,881, 12,642,174 and 12,624,294 weighted average outstanding shares in 2017, 2016, 2015, 2014 and 2013 respectively.

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As a result of the February 5, 2016 CGG S.A. capital increase via an offering of preferential subscription rights to existing shareholders, the calculation of basic and diluted earnings per shares for 2015, 2014 and 2013 has been adjusted retrospectively. Number of ordinary shares outstanding has been adjusted to reflect the proportionate change in the number of shares.

As a result of the July 20, 2016 reverse stock split the calculation of basic and diluted earnings per share for 2015, 2014 and 2013 has been adjusted retrospectively. Number of ordinary shares outstanding has been adjusted to reflect the proportionate change in the number of shares.

As a result of the February 21, 2018 CGG S.A. capital increase via an offering of preferential subscription rights to existing shareholders, the calculation of basic and diluted earnings per share for 2017, 2016, 2015, 2014 and 2013 has been adjusted retrospectively. Number of ordinary shares outstanding has been adjusted to reflect the proportionate change in the number of shares.

	2017	At December 31,			
		2016	2015	2014	2013
	(In millions of US\$)				
Balance sheet data:					
Cash and cash equivalents	315.4	538.8	385.3	359.1	530.0
Working capital ⁽¹⁾	375.8	334.6	428.5	539.4	532.0
Property, plant & equipment, net	330.3	708.6	885.2	1,238.2	1,557.8
Multi-client surveys	831.4	847.9	927.1	947.4	818.0
Goodwill	1,234.0	1,223.3	1,228.7	2,041.7	2,483.2
Total assets	4,264.2	4,861.5	5,513.0	7,061.0	8,262.8
Gross financial debt ⁽²⁾	2,955.3	2,850.4	2,884.8	2,778.9	2,747.6
Equity attributable to owners of CGG S.A.	489.1	1,120.7	1,312.2	2,693.0	3,799.9

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- (1) *Working capital* is defined as net trade accounts and notes receivable, net inventories and work-in-progress, tax assets, other current assets and assets held for sale less trade accounts and notes payable, accrued payroll costs, income tax payable, advance billings to customers, deferred income, current provisions and other current liabilities.
- (2) *Gross financial debt* is defined as financial debt, including current maturities and bank overdrafts.

	At December 31,				
	2017	2016	2015	2014	2013
	(In millions of US\$ except per ratios)				
Other financial historical data and other ratios:					
EBIT ⁽¹⁾ before RC ⁽⁶⁾	(97.3)	(220.9)	82.3	160.2	423.1
EBIT ⁽¹⁾ after RC ⁽⁶⁾	(283.6)	(404.7)	(1,136.2)	(779.2)	(394.3)
EBITDAS ⁽²⁾ before RC ⁽⁶⁾	372.4	327.9	660.6	993.7	1,187.0
EBITDAS ⁽²⁾ after RC ⁽⁶⁾	186.1	273.6	452.8	775.7	1,139.7
Operating income before RC ⁽⁶⁾	(77.2)	(212.7)	60.9	241.9	422.5
Operating income after RC ⁽⁶⁾	(263.5)	(396.5)	(1,157.6)	(697.5)	(394.9)
Free-cash flow before RC ⁽⁶⁾	(95.7)	(6.7)	(8.9)	(76.4)	5.0
Free-cash flow after RC ⁽⁶⁾	(197.0)	(174.0)	(129.7)	(137.2)	(55.8)
Capital expenditures ⁽³⁾	81.2	104.5	145.6	281.9	347.2
Investments in multi-client surveys, net cash	251.0	295.1	284.6	583.3	479.4
Net financial debt ⁽⁴⁾	2,639.9	2,311.6	2,499.5	2,419.8	2,217.7
Gross financial debt ⁽⁵⁾ / EBITDAS ⁽²⁾	15.9x	10.4x	6.4x	3.6x	2.4x
Net financial debt ⁽⁴⁾ / EBITDAS ⁽²⁾	14.2x	8.4x	5.5x	3.1x	1.9x
EBITDAS ⁽²⁾ / Cost of financial debt, net	0.9x	1.6x	2.5x	3.9x	5.9x

- (1) *Earnings before interest and tax (EBIT)* is defined as operating income plus our share of income in companies accounted for under the equity method. As a complement to Operating Income EBIT may be used by management as a performance indicator for segments because it captures the contribution to our results of the significant businesses that we manage through our joint ventures. However, other companies may present EBIT and related measures differently than we do. EBIT is not a measure of financial performance under IFRS and should not be considered as an alternative to cash flow from operating activities or as a measure of liquidity or an alternative to net income as indicators of our operating performance or any other measures of performance derived in accordance with IFRS. See Item 5: Operating and Financial Review and Prospects – Liquidity and Capital Resources – EBIT and EBITDAS for a reconciliation of EBIT to operating income.
- (2) *EBITDAS* is defined as earnings before interest, tax, income from equity affiliates, depreciation, amortization net of amortization costs capitalized to multi-client surveys and share-based compensation cost. Share-based compensation includes both stock options and shares issued under our share allocation plans. EBITDAS is presented as additional information because we understand that it is one measure used by certain investors to determine our operating cash flow and historical ability to meet debt service and capital expenditure requirements. However, other companies may present EBITDAS and similar measures differently than we do. EBITDAS is not a measure of financial performance under IFRS and should not be considered as an alternative to cash flow from operating activities or as a measure of liquidity or an alternative to net income as indicators of our operating performance or any other measures of performance derived in accordance with IFRS. See Item 5: Operating and Financial Review and Prospects – Liquidity and Capital Resources – EBIT and EBITDAS for a reconciliation of EBITDAS to net cash provided by operating activities.
- (3) *Capital expenditures* is defined as total capital expenditures (including variation of fixed assets suppliers, excluding multi-client surveys) from our statement of cash flows.
- (4) *Net financial debt* is defined as gross financial debt less cash and cash equivalents. Net financial debt is presented as additional information because we understand that certain investors believe that netting cash against debt provides a clearer picture of the financial liability exposure. However, other companies may present net financial debt differently than we do. Net financial debt is not a measure of financial performance under IFRS and should not be considered as an alternative to any other measures of performance derived in accordance with IFRS. See Item 5: Operating and Financial Review and Prospects – Liquidity and Capital Resources – Financial Debt for a reconciliation of net financial debt to certain financing items on our balance sheet.
- (5) *Gross financial debt* is defined as financial debt, including current maturities and bank overdrafts.
- (6) *RC* is defined as restructuring costs related to the Transformation Plan. In 2017, 2016, 2015 and 2014, the restructuring costs correspond to the costs related to the industrial transformation of the Group and the Financial Restructuring, including the cost of downsizing the Group's fleet, changes of ownership and renegotiation of the vessel chartering contracts, personnel costs, site closure costs and fees and expenses related to the Financial Restructuring. The restructuring costs for 2013 relate to our acquisition of most of the Geoscience Division of Fugro.

Capitalization and Indebtedness

Not applicable

Reasons for the Offer and Use of Proceeds

Not applicable

Capitalization and Indebtedness

Not applicable

Reasons for the Offer and Use of Proceeds

Not applicable

Risk Factors

RISKS RELATED TO OUR FINANCIAL RESTRUCTURING

Certain of our creditors have appealed the judgment approving the Safeguard Plan.

The Company's draft Safeguard Plan was approved by the bank and financial institutions committee and the general meeting of bondholders on July 28, 2017, and the resolutions necessary for its implementation were

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approved by the shareholders of CGG S.A. during the extraordinary general meeting convened on second notice on November 13, 2017.

The Commercial Court of Paris approved the Company's Safeguard Plan by a ruling on December 1, 2017.

Articles L. 661-1 I(6), R. 661-3 and R. 662-1 of the French Commercial Code provide for the possibility of appealing a judgment approving a safeguard plan within 10 days of the publication of the judgment, which may be potentially extended to two months, taking into account the distance (which period, in the case of our safeguard proceedings, has expired), provided by Article 643 of the French Civil Procedure Code (except in the case of the public prosecutor, for whom the 10-day period runs from the date of receipt of a notification of the judgment). Judgments may be appealed by the obligor, the trustee, the receiver (*mandataire judiciaire*), the works council (*comité d'entreprise*) or, in its absence, the staff representatives, and the public prosecutor. Appeals may also be filed by individual creditors, provided they have voiced an objection to the voting procedure at the bank and financial institutions' committee or at the general meeting of bondholders. Only an appeal by the public prosecutor automatically causes the proceeding to be suspended.

Also, articles L. 661-3 and R. 661-2 of the French Commercial Code govern how third parties may object to a judgment approving a safeguard plan. Third parties may only challenge a decision approving the safeguard plan, but not a decision rejecting it. Such recourse may be filed by any person with an interest in the matter, provided that they were not a party to and were not represented in the judgment they challenge and that they rely on specific remedies or on the fact that they were fraudulently deprived of their rights. Challenges by third parties must be filed with the clerk of the court no later than ten days after the publication of the judgment in the *Bulletin officiel des annonces civiles et commerciales* (BODACC), which period may be extended up to two months, taking into account the distance (which period, in the case of our safeguard proceedings, expired on March 2, 2018), as provided for in article 643 of the French Code of Civil Procedure.

On August 4, 2017, certain holders of convertible bonds (Keren Finance, Delta Alternative Management, Schelcher Prince Gestion, La Financière de l'Europe, Ellipsis Asset Management and HMG Finance) filed a claim against the Safeguard Plan approved by the bank and financial institutions committee and the general meeting of bondholders on July 28, 2017.

Without disputing the results of the general meeting of bondholders' vote, these holders of convertible bonds challenged the treatment of their claims under the Safeguard Plan, arguing that the differences in treatment between the holders of convertible bonds and the holders of Senior Notes were not justified by the differences in their situations and would be, in any event, disproportionate.

On December 1, 2017, the Commercial Court of Paris declared that the claims filed by the holders of convertible bonds were inadmissible and approved the Safeguard Plan.

Four of these holders of convertible bonds (Delta Alternative Management, Schelcher Prince Gestion, La Financière de l'Europe and HMG Finance) have appealed against the judgment that rejected the admissibility of their claims, which appeal shall be examined by the Court of Appeal of Paris during the hearing of pleadings on March 29, 2018.

As this appeal does not stay implementation, the restructuring transactions provided for under the Safeguard Plan have been implemented in accordance with the expected time table.

If the Court of Appeal of Paris were to approve the appellants' requests and reverse the judgment approving the Safeguard Plan, this decision could theoretically lead to the cancellation of the implementation of the Safeguard Plan with retroactive effect. However, such a cancellation may be impossible to implement in the context of a transaction which has involved a public offering.

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As of the date of this annual report, no assurance can be given concerning the decision of Court of Appeal of Paris regarding the aforementioned appeal.

We remain subject to the terms and conditions of the Safeguard Plan and our new financing agreements.

Until November 30, 2027, we must comply with the terms and conditions of the Safeguard Plan, including, among others, debt maturities and, more generally, the terms and conditions of the new financing agreements. For more details on these new financing agreements, please refer to risk factor entitled *Risks related to our indebtedness* below and *Item 4 Information on the Company History and development of the Company Financial restructuring process*.

In case of our non-compliance with the terms and conditions of the Safeguard Plan, the Commercial Court of Paris may decide to cancel the Safeguard Plan after having obtained the opinion of the public prosecutor and the trustee (*commissaires à l'exécution*) upon presentation of its report. If we were to be insolvent (*cessation des paiements*) at that time or during the implementation of the Safeguard Plan, the Commercial Court of Paris would open a judicial reorganization proceeding (*redressement judiciaire*), or if such reorganization was obviously impossible, a judicial liquidation proceeding (*liquidation judiciaire*) (after, as the case may be, having cancelled the Safeguard Plan).

Taking into account the undertakings we made pursuant to the letters exchanged with the *Direction Générale des Entreprises*, which were acknowledged in the judgment approving the Safeguard Plan and described in *Item 4 Information on the Company History and development of the Company Financial restructuring process*, we could be limited in our ability to adapt to market developments and, more generally, may have less flexibility in our operational management. In addition, certain amendments to the Safeguard Plan may be necessary.

To the extent the contemplated amendments to the Safeguard Plan would not be considered material for the purposes and means of the plan within the meaning of article L.626-26 of the French Commercial Code, we may be able to make such amendments, although any amendment to the new financing agreements would require the consent of the contractually required majority creditors who are parties to those agreements.

Nevertheless, any material amendment within the meaning of article L.626-26 of the French Commercial Code would first require the prior authorization of the banks and financial institutions committee and the general meeting of bondholders, and the subsequent approval of the Commercial Court of Paris.

RISKS RELATED TO OUR BUSINESS

Current economic uncertainty and the volatility of oil and natural gas prices could have a significant adverse effect on us.

Global market and economic conditions are uncertain and volatile. In recent periods, economic contractions and uncertainty have weakened demand for oil and natural gas while the introduction of new production capacities have increased supply, resulting in lower prices, and consequently a reduction in the levels of exploration for hydrocarbons and demand for our products and services. These developments have had a significant adverse effect on our business, revenue and liquidity resulting not only in a decline in activity levels but also in the prices we can charge. The price of Brent decreased from US\$110.80 per barrel as of December 31, 2013 to US\$37.28 per barrel as of December 31, 2015 and US\$56.82 as of December 31, 2016 to reach US\$66.87 as of December 31, 2017. It is difficult to predict how long the current economic conditions and imbalance between supply and demand will persist, whether oil prices will remain at a low level, whether the current market conditions will deteriorate further, and which of our products and services may be adversely affected. The reduction in demand for our products and services and the resulting pressure on pricing in our industry could continue to negatively affect our business, results of operations, financial condition and cash flows.

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Uncertainty about the general economic situation and/or the mid-term level of hydrocarbons prices has had and is likely to continue to have a significant adverse impact on the commercial performance and financial condition of many companies, which may affect some of our customers and suppliers. The current economic and oil industry climate may lead customers to cancel, delay or choose not to renew orders or leave suppliers unable to provide goods and services as agreed. Our governmental clients may face budget deficits that prohibit them from funding proposed and existing projects or that cause them to exercise their right to terminate our contracts with little or no prior notice. If our suppliers, vendors, subcontractors or other counterparties are unable to perform their obligations to us or our customers, we may be required to provide additional services or make alternate arrangements on less favorable terms with other parties to ensure adequate performance and delivery of service to our customers. These circumstances could also lead to disputes and litigation with our partners or customers, which could have a material adverse impact on our reputation, business, financial condition and results of operations.

Turmoil in the credit markets, such as has been experienced in prior periods, could also adversely affect us and our customers. Limited access to external funding has in the past caused some companies to reduce their capital spending to levels supported by their internal cash flow. Some companies have found their access to liquidity constrained or subject to more onerous terms. In this context, our customers may not be able to borrow money on reasonable terms or at all, which could have a negative impact on their demand for our products, and impair their ability to pay us for our products and services on a timely basis, or at all.

In addition, the potential impact on the liquidity of major financial institutions may limit our ability to fund our business strategy through borrowings under either existing or new debt facilities in the public or private markets and on terms we believe to be reasonable. Persistent volatility in the financial markets could have a material adverse effect on our ability to refinance all or a portion of our indebtedness and to otherwise fund our operational requirements. We cannot be certain that additional funds will be available if needed to make future investments in certain projects, take advantage of acquisitions or other opportunities or respond to competitive pressures. If additional funds are not available, or are not available on terms satisfactory to us, there could be a material adverse impact on our business, financial condition and results of operations.

We are subject to risks related to our international operations.

With operations worldwide, including in emerging markets, our business and results of operations are subject to various risks inherent in international operations. These risks include:

instability of foreign economies and governments, which can cause investment in capital projects by our potential clients to be withdrawn or delayed, reducing or eliminating the viability of some markets for our services;

risks of war, terrorism, riots and uprisings, which can make it unsafe to continue operations, adversely affect budgets and schedules and expose us to losses;

risk of piracy, which may result in delays carrying out customer contracts in affected areas or their termination;

difficulties in protection and enforcement of intellectual property rights;

increased risk of fraud and political corruption;

changes in legal and regulatory requirements;

seizure, expropriation, nationalization or detention of assets, or renegotiation or nullification of existing contracts;

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foreign exchange restrictions, import/export quotas, sanctions, boycotts and embargoes and other laws and policies affecting taxation, trade and investment; and

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availability of suitable personnel and equipment, which can be affected by government policy, or changes in policy, that limit the movement of qualified crew members or specialized equipment to areas where local resources are insufficient.

We are exposed to these risks in all of our international operations to some degree, particularly in emerging markets where the political, economic and legal environment is less stable. Our risk management procedures, internal controls and policies may not be adequate to identify, evaluate and effectively manage all the risks that we may encounter. Any failure of these systems could materially adversely impact our business, results of operations and financial conditions. We are subject to the risk of adverse developments with respect to certain international operations and any insurance coverage we have may not be adequate to compensate us for any losses arising from such risks.

Revenue generating activities in certain foreign countries may require prior United States government and/ or European Union authorities approval in the form of an export license and may otherwise be subject to tariffs and import/export restrictions. These laws can change over time and may result in limitations on our ability to compete globally. Thus, in the case of U.S. legislation, non-U.S. persons employed by our separately incorporated non-U.S. entities may conduct business in some foreign jurisdictions that are subject to U.S. trade embargoes and sanctions by the U.S. Office of Foreign Assets Control (OFAC), including countries that have been designated by the U.S. government as state sponsors of terrorism. We have typically generated revenue in some of these countries through the performance of marine surveys, the provision of data processing and reservoir consulting services, the sale of software licenses and software maintenance and the sale of Sercel equipment. We have current and ongoing relationships with customers in these countries.

We have procedures in place to conduct these operations in compliance with applicable U.S. and European laws. However, failure to comply with U.S. or European laws on equipment and services exports could result in material fines and penalties, damage our reputation, and negatively affect the market price of our securities. In addition, our presence in these countries could reduce demand for our securities among certain investors.

Certain of our clients and suppliers, and certain tax, social security or customs authorities may request us or certain of our subsidiaries or affiliates to post performance bonds or guarantees issued by financial institutions, including in the form of standby letters of credit, in order to guarantee our or their legal or contractual obligations. As of December 31, 2017, the amount of bank guarantees or guarantees granted by us amounted to approximately US\$597 million (excluding the guarantees granted to financial institutions and the guarantees related to the bareboat charters undertakings). Our financial position has led financial institutions to revise their policies by phasing out existing guarantees and requiring the establishment of cash collateral (or its equivalent in the relevant jurisdiction) for any new guarantee or renewal of existing guarantees. As of December 31, 2017, the amount of the guarantees granted by financial institutions in favor of our clients amounted to approximately US\$69 million. As of the same date, the amount of the cash collateral (or its equivalent) we had implemented amounted to approximately US\$21 million (reported in the financial statements as fixed assets and financial investments).

However, there is a risk that we will not be able to provide these performance bonds or guarantees in the amounts or durations required or for the benefit of the necessary parties. Failure to comply with these requests could reduce our capacity to conduct business or perform our contracts. In addition, if we provide these bonds or guarantees, our clients or the relevant authorities may call them under circumstances that we believe to be improper, and we may not be able to challenge such actions effectively in local courts.

We and certain of our subsidiaries and affiliated entities also conduct business in countries where there is government corruption. We are committed to doing business in accordance with all applicable laws and codes of ethics, but there is a risk that we, our subsidiaries or affiliates or our or their respective officers, directors, employees or agents may act in violation of such codes and applicable laws, including the Foreign Corrupt Practices Act of 1977. We cannot always prevent or detect corrupt or unethical practices by third parties, such as

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subcontractors, agents, partners or customers, which may result in substantial fines and penalties, in addition to reputational damage to us. Any such violations could result in substantial civil and criminal penalties and might materially adversely affect our business, results of operations, financial condition or reputation.

Further, operations in developing countries are subject to decrees, laws, regulations and court decisions that may change frequently or be retroactively applied and could cause us to incur unanticipated or unrecoverable costs or delays. The legal systems in developing countries may not always be fully developed and courts or other governmental agencies in these countries may interpret laws, regulations or court decisions in a manner which might be considered inconsistent or inequitable in developed countries, and may be influenced by factors other than legal merits, which could have a material adverse effect on our business, financial condition and results of operations.

We are subject to certain risks related to acquisitions.

In the past we have grown by acquisitions, some of which, such as the merger with Veritas in 2007, the acquisition of Wavefield in 2008 or the acquisition of Fugro Geoscience Division in 2013, were quite significant. If similar transactions were to be contemplated or completed in the future, they could present various financial and management-related risks that could be material, such as acquisition costs and delays or inability to close acquisitions, including as a result of third-party consents or approvals, integration of the acquired businesses in a cost-effective manner, implementation of a combined business strategy, diversion of management's attention; outstanding or unforeseen legal, regulatory, contractual, labor or other issues arising from the acquisitions; additional capital expenditure requirements, retention of customers, combination of different company and management cultures, operations in new geographic markets, the need for more extensive management coordination, and retention, hiring and training of key personnel. Should any of these risks associated with acquisitions materialize, they could have a material adverse effect on our business, financial condition and results of operations.

We may need to write down goodwill from our balance sheet.

We have been involved in a number of business combinations in the past, leading to the recognition of large amounts of goodwill on our balance sheet. Goodwill on our balance sheet totaled US\$1,223 million as of December 31, 2016 and US\$1,234 million as of December 31, 2017 due to exchange rate variations (see note 19 to our consolidated financial statements). Goodwill is allocated to cash generating units (CGUs) as described in note 11 to our consolidated financial statements. The recoverable amount of a CGU is estimated at each balance sheet date and is generally determined on the basis of a group-wide estimate of future cash flows expected from the CGU in question. The estimate takes into account, in particular, the removal from service of certain assets used in our business (such as decommissioning or cold-stacking vessels), or change in purpose of a given asset (such as the use of a seismic vessel as a source-vessel), or any significant underperformance in cash generation relative to previously expected results, which may arise, for example, from the underperformance of certain assets, a deterioration in industry conditions or a decline in the economic environment. At each balance sheet date, if we expect that a CGU's recoverable amount will fall below the amount of capital employed recorded on the balance sheet, we may write down some value on given assets and/or the goodwill in part or in whole. Such a write-down would not in itself have an impact on cash flow, but could have a substantial negative impact on our operating income and net income, and as a result, on our shareholders' equity and net debt/equity ratio. As of December 31, 2015, in response to the continuing deterioration of market conditions and the drastic reduction of our fleet, we wrote down US\$365 million of goodwill in our marine acquisition activity and US\$439 million of goodwill in our Geology, Geophysics & Reservoir (GGR) activity, for a total of US\$804 million for 2015. In 2016 and 2017, we did not write down any goodwill and the only movement in goodwill was linked to exchange rate variations. Particularly in light of our financial condition and difficult market dynamics, no assurance can be given that we will not be required to make future potentially significant goodwill write downs.

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We invest significant amounts of money in acquiring and processing seismic data for multi-client surveys without knowing precisely how much of the data we will be able to sell or when and at what price we will be able to sell the data.

We invest significant amounts of money in acquiring and processing the seismic data that we own. See note 10 to our consolidated financial statements. By making such investments, we are exposed to the following risks:

We may not fully recover the costs of acquiring and processing the data through future sales. The amounts of these data sales are uncertain and depend on a variety of factors, many of which are beyond our control, including the market prices of oil and gas, customer demand for seismic data in our library and the availability of similar data from competitors. In addition, the timing of these sales is unpredictable, and sales can vary greatly from period to period. Each of our individual surveys has a limited book life based on its location, so a particular survey may be subject to significant amortization even though sales of licenses associated with that survey are weak or non-existent, thus reducing our net income.

Technological or regulatory changes or other developments could also materially adversely affect the value of the data. For example, regulatory changes such as limitations on drilling could affect the ability of our customers to develop exploration programs, either generally or in a specific location where we have acquired seismic data, and technological changes could make existing data obsolete.

The value of our multi-client data could be significantly adversely affected if any adverse change occurs in the general prospects for oil and gas exploration, development and production activities in the areas where we acquire multi-client data or more generally.

Any reduction in the economic value of such data will require us to write down its recorded value, which could have a material adverse effect on our results of operations. We wrote down the value of our multi-client data library by US\$23 million in the year 2017.

In addition, there are a number of geoscience companies that create, market and license seismic data and maintain seismic libraries. Competition for acquisition of new seismic data among geoscience service providers has been historically intense and we expect this competition will continue to be intense. The above risks could have a material adverse effect on our business, results of operations or financial condition, in particular in the competitive data acquisition environment in which we operate.

Our results of operations may be significantly affected by currency fluctuations.

We derive a substantial portion of our revenues from international sales, subjecting us to risks relating to fluctuations in currency exchange rates. Our revenues and expenses are mainly denominated in US dollars, and to a significantly lesser extent, in euros, Canadian dollars, Mexican pesos, Brazilian reais, Australian dollars, Norwegian kroner, British pounds and Chinese renminbi-yuan. Historically, a significant portion of our revenues that were invoiced in currencies other than US dollars related to contracts that were effectively priced in US dollars, as the US dollar often serves as the reference currency when bidding for contracts to provide geophysical services.

Fluctuations in the exchange rate of other currencies, particularly the euro, against the U.S. dollar, have had in the past and will have in the future a significant effect upon our results of operations. We attempt to reduce the risks associated with such exchange rate fluctuations through our hedging policy. We cannot assure you that fluctuations in the values of the currencies in which we operate will not materially adversely affect our future results of operations. As of December 31, 2017, we estimate our annual recurring expenses in euros to be approximately 350 million and as a result, an unfavorable variation of US\$0.10 in the average yearly exchange rate between the US dollar and the euro would reduce our profit before tax and our shareholders' equity by approximately US\$35 million. See *Market and Other Risks* We are exposed to exchange rates fluctuations.

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Our working capital needs are difficult to forecast and may vary significantly, which could result in additional financing requirements that we may not be able to meet on satisfactory terms, or at all.

It is difficult for us to predict with certainty our working capital needs. This difficulty is due primarily to working capital requirements related to the marine seismic acquisition business, multi-client projects and the development and introduction of new lines of geophysical equipment products. For example, under specific circumstances, we may have to extend the length of payment terms we grant to customers or may increase our inventories substantially. We may therefore be subject to significant and rapid increases in our working capital needs that we may have difficulty financing on satisfactory terms, or at all, due notably to limitations in our debt agreements or market conditions.

Our results of operations may be affected by the weight of intra-group production.

We dedicate a significant part of our production capacity to intra-group sales. For example, the Marine, Land and Multi-Physics Acquisition business lines may purchase Sercel equipment as well as acquire multi-client data, to be processed by the Subsurface Imaging business line. The relative size of our intra-group sales and our external sales has a significant impact both on our revenues and our operating results. With respect to intra-group sales, we capitalize only the direct production costs, and we treat the corresponding general and administrative costs as expenses in our income statement, which decreases operating profit for the period when the sales occur.

Technological changes and new products and services are frequently introduced in the market, and our technology could be rendered obsolete by these introductions or by evolving industry and regulatory standards, or we may not be able to develop and produce new and enhanced products on a cost-effective and timely basis.

Technology changes rapidly in the seismic industry and new and enhanced products are frequently introduced in the market in which we operate, particularly in the equipment manufacturing and data processing and geoscience sectors. Our success depends to a significant extent upon our ability to develop and produce new and enhanced products and services on a cost-effective and timely basis in accordance with industry demands. While we commit substantial resources to research and development, we may encounter resource constraints or technical or other difficulties that could delay the introduction of new and enhanced products and services in the future. In addition, the continuing development of new products risks making our older products obsolete. Currently accepted industry and regulatory standards are also subject to change, which may contribute to the obsolescence of our products or services. New and enhanced products and services, if introduced, may not gain market acceptance or correctly address new industry standards and may be materially adversely affected by technological changes or introductions of other new products or services by one of our competitors.

We depend on proprietary technology and are exposed to risks associated with the misappropriation or infringement of that technology.

Our ability to maintain or increase prices for our products (such as Sercel equipment and GGR software) and services depends in part on our ability to differentiate the value delivered by our products and services from those delivered by our competitors. Our proprietary technology plays an important role in this differentiation. We rely on a combination of patents, trademarks and trade secret laws to establish and protect our proprietary technology. Patents last up to 20 years, depending on the date of filing and the protection accorded by each country. In addition, we enter into confidentiality and license agreements with our employees, customers and potential customers which limit access to and distribution of our technology. Our customer data license and acquisition agreements also identify our proprietary, confidential information and require that such proprietary information be kept confidential. While these steps are taken to strictly maintain the confidentiality of our proprietary and trade secret information, it is difficult to ensure that unauthorized use, misappropriation or disclosure will not occur. However, actions that we take to protect our proprietary rights may not be adequate to deter the misappropriation or independent third-party development of our technology. In addition, we may have

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lawsuits filed against us claiming that certain of our products, services, and technologies infringe the intellectual property rights of others. Although we do not have any current litigation involving our intellectual property rights or the intellectual rights of others which may have an impact on us, such litigation may take place in the future. In addition, the laws of certain foreign countries do not protect proprietary rights to the same extent as, in particular, the laws of France or the United States, which may limit our ability to pursue third parties that misappropriate our proprietary technology.

Our failure to attract and retain qualified employees may adversely affect our future business and operations.

Our future results of operations will depend in part upon the continued service of our executive officers and other key management personnel, as well as our ability to retain certain of our highly skilled employees and to attract new ones. A number of our employees are highly skilled scientists and technicians. A limited number of such skilled personnel is available, and demand from other companies may limit our ability to fill our human resources needs. If we are unable to hire and retain a sufficient number of qualified employees, this could impair our ability to compete in the geophysical services industry and to develop and protect our know-how. Our success also depends to a significant extent upon the abilities and efforts of our executive officers and members of our senior management, the loss of whom could materially adversely affect our business, financial condition and results of operations.

We have had losses in the past and there is no assurance we will be able to restore profitability in the coming years.

We have experienced losses in the past. In 2015, 2016 and 2017, we recorded a net loss attributable to shareholders of US\$1,146.2 million, US\$576.6 million and US\$514.1 million, respectively. There is no assurance that we will be able to restore profitability in the coming years.

In addition, we have had in the past and may have in the future impairment losses as events or changes in circumstances occur that reduce the fair value of an asset below its book value. We may also have write-offs and non-recurring charges or restructuring costs. For 2015, 2016 and 2017, such asset impairments, write-offs and restructuring costs net of gains on sales of assets related to our Transformation Plan totaled US\$1,218 million, US\$184 million and US\$186 million (not including the acceleration of historical issuing fees amortization for US\$23 million), respectively. These losses and changes could have a material adverse effect on our business, results of operations and financial condition.

The recent French and U.S. procedures of safeguard and Chapter 11 may have affected our ability to maintain our relationships with creditors, customers, vendors, employees and other personnel and counterparties which could adversely affect our business, financial condition and results of operations.

Notwithstanding the implementation of the financial restructuring, the recent French and U.S. procedures of safeguard and Chapter 11 may have affected our relationships and our ability to negotiate favorable terms with creditors, customers, vendors, employees and other personnel and counterparties and our ability to maintain normal credit conditions with our suppliers. Moreover, public perception of our continued viability may lead to new and existing customers choosing not to enter into or continue their agreements or arrangements with us. The failure to maintain any of these important relationships could adversely affect our business, financial condition and results of operations.

We are exposed to commercial risk and counter-party risk.

Our receivables and investments do not represent a significant concentration of credit risk due to the wide variety of customers and markets in which we sell our services and products and our presence in many

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geographic areas. While we seek to reduce commercial risk by monitoring our customer credit profile in 2017, our two most significant customers accounted for 10.4% and 8.6% of our consolidated revenues, compared with 6.7% and 6.4% in 2016 and 5.0% and 4.9% in 2015. The loss of any of our significant customers or deterioration in our relations with any of them could materially and adversely affect our business, results of operations and financial condition.

RISKS RELATED TO OUR INDUSTRY

The volume of our business depends on the level of capital expenditures by the oil and gas industry, and reductions in such expenditures may have a material adverse effect on our business.

Demand for our products and services has historically been dependent upon the level of capital expenditures by oil and gas companies for exploration, production and development activities. These expenditures are discretionary in nature and are significantly influenced by oil and gas prices and by expectations regarding future hydrocarbon prices, which may fluctuate based on relatively minor changes in the supply of and demand for oil and gas, expectations regarding such changes and other factors beyond our control. Lower or volatile hydrocarbon prices tend to limit the demand for seismic services and products. In 2015 and 2016, oil and gas companies reduced their planned exploration and production spending due notably to falling oil prices, affecting demand for our products and services. Exploration and production spending remained at a low level in 2017, in light of uncertainties concerning the oil price recovery.

Factors affecting prices and, consequently, demand for our products and services, include:

change in supply and demand for hydrocarbons;

worldwide political, military and economic conditions, including political developments in the Middle East and North Africa, the Ukraine crisis, economic sanctions and economic growth levels;

the ability of non-OPEC countries to increase their oil and gas production;

actions by the members of the Organization of the Petroleum Exporting Countries (OPEC) with respect to oil production levels and announcements of potential changes in such levels, including the failure of such countries to comply with production cuts;

the ability of oil and gas companies to raise equity and debt financing;

technical advances affecting energy consumption;

laws or regulations restricting the use of fossil fuels or taxing such fuels and governmental policies regarding atmospheric emissions and use of alternative energy;

technological developments increasing oil and gas extraction capacity or reducing costs;

levels of oil and gas production, changes in those levels and the estimated current and future level of excess production capacity;

the rate of depletion of existing oil and gas reserves and delays in the development of new reserves;

more appetite for onshore activities given that offshore activities usually have a higher break-even level;

the pressure imposed by equity markets on oil and gas companies to maintain a dividend distribution policy which could lead them to significantly reduce their capital expenditure plans in the short term;

available pipeline, storage and other transportation capacity;

the price and availability of alternative fuels;

policies of governments regarding the exploration for and production and development of oil and gas reserves in their territories;

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shareholder activism or activities by non-governmental organizations to restrict the exploration, development and production of oil and natural gas; and

general weather conditions, with warmer temperatures decreasing demand for products such as heating oil and extreme weather events potentially disrupting oil and gas exploration or production operations over a wide area.

Increases in oil and natural gas prices may not increase demand for our products and services or otherwise have a positive effect on our financial condition or results of operations. Forecasted trends in oil and gas exploration and development activities may not materialize and demand for our products and services may not reflect the level of activity in the industry. In particular, with respect to the marine acquisition market, prices remain very dependent upon the balance between supply and demand. They can thus fluctuate only slightly or even decline, despite demand increases if, at the same time, the available production capacity in the market increases to a greater degree.

Our backlog includes contracts that can be unilaterally delayed or terminated at the client's option.

In accordance with industry practice, contracts for the provision of seismic services typically can be delayed or terminated at the sole discretion of the client without payment of significant cancellation costs to the service provider. As a result, even if contracts are recorded in backlog, there can be no assurance that such contracts will be wholly executed by us and generate actual revenue, or even that the total costs already borne by us in connection with the contract would be covered in full pursuant to any cancellation clause. Furthermore, there can be no assurance that contracts in backlog will be performed in line with their original timetable and any possible delay could result in operating losses as most of our costs are fixed.

We are subject to intense competition in the markets where we carry out our operations, which could limit our ability to maintain or increase our market share or maintain our prices at profitable levels.

Most of our contracts are obtained through a competitive bidding process, which is standard for our industry. Competitive factors in recent years have included price, crew availability, technological expertise and reputation for quality, safety and dependability. The recent low oil price environment has resulted in increased pricing pressure, with certain of our competitors aggressively bidding lower prices in an effort to maintain volumes. While no single company competes with us in all of our segments, we are subject to intense competition in each of our segments. We compete with large, international companies as well as smaller, local companies. In addition, we compete with major service providers and government-sponsored enterprises and affiliates. Some of our competitors operate more crews than we do and have greater financial and other resources than we do. These and other competitors may be better positioned to withstand and adjust more quickly to volatile market conditions, such as fluctuations in oil and gas prices and production levels, as well as changes in government regulations. In addition, if geophysical service competitors increase their capacity (or do not reduce capacity if demand decreases), the excess supply in the seismic services market could apply further downward pressure on prices. The negative effects of the competitive environment in which we operate could have a material adverse effect on our business, financial condition and results of operations.

We have taken significant measures to adapt our fleet to changes in the seismic market, and depending on the seismic market in the future, we may make further adjustments that could impose exceptional charges.

Our fleet of marine seismic acquisition vessels has evolved in the past mainly in reaction to changes in the seismic contractual market and our marine strategy. In February 2014, we announced our intention to reduce the fleet from 18 to 13 3D high-end vessels before the end of 2016 and decided in mid-2014 to accelerate the implementation of this plan to have it completed by the end of 2014. Consequently, we stopped operating the *Symphony*, the *Princess*, the *Viking II* and the *Vantage* in 2014. The *Viking II* and the *Vantage* were returned to their owner at the end of their leasing period. The *Viking* and the *Geowave Voyager* were converted into source vessels.

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In February 2015, as the market environment deteriorated further, we announced our intention to reduce our operated fleet from 13 to 11 3D high-end vessels. Then in November 2015, when we announced the next step of our Transformation Plan, we stated our objective to reduce our operated fleet to five vessels, principally dedicated to multi-client production. As of December 31, 2015, our operational fleet was composed of eight 3D high-capacity vessels (12 or more streamers), one source vessel and one 3D/2D lower capacity vessel. We ceased operating the *CGG Alizé* and the *Geo Celtic* in early 2016 and the *Viking Vision* in fall 2016, which has since been returned to her owner. As of December 31, 2016, the seismic fleet operated five high-end vessels as targeted. In March 2017, we re-delivered the *Pacific Finder* to its owner and halted the operations of the *Geo Caspian* as a seismic vessel at the expiration of the charter agreement. In April 2017, we carried out certain transactions in order to change the ownership structure of our marine fleet and restructure the related financial obligations under the Nordic credit facility related thereto, and re-introduced the *Geo Coral* on April 1, 2017, as per the plan to keep the fleet at five seismic vessels. See Item 4: Information on the Company Contractual Data Acquisition Marine Data Acquisition Business Line Group's fleet of seismic vessels for more information.

Past fleet reductions have generated, and we expect that the current and any future reductions will generate, non-recurring charges and could hinder our operational scope in marine acquisition activity. Restructuring charges and fixed assets impairments related to fleet reduction amounted to US\$288 million in 2015, US\$34 million in 2016 and US\$87 million in 2017 (including net income impact of US\$69.4 million linked to Global Seismic Shipping AS (GSS) and US\$12.1 million linked to the proactive management of maritime liabilities). See note 2 to our consolidated financial statements.

We have high levels of fixed costs that are incurred regardless of our level of business activity, including in relation to bareboat charters.

We have high fixed costs and seismic data acquisition activities that require substantial capital expenditures and long-term contractual commitments. As a result, downtime or decreased productivity due to reduced demand, weather interruptions, equipment failures, permit delays or other circumstances that affect our ability to generate revenue could result in significant operating losses.

We have implemented our Transformation Plan in an effort to reduce our high fixed costs in light of the difficult market environment, with a focus on high value-added activities and a reduction of our fleet to five vessels principally dedicated to multi-client activity, as well as cost saving actions and a reduction in investments. However, we cannot assure you that this plan will be sufficient to respond to market pressures, which could have a material adverse effect on our business, financial condition and results of operations.

After the implementation of the Transformation Plan, we continue to operate certain of our marine acquisition vessels under long-term bareboat charters, which generate significant fixed costs that cannot easily be reduced during the term of the charters. In 2017, we took steps to reduce our annual charter costs, as described in Item 4: Information on the Company Contractual Data Acquisition Marine Data Acquisition Business Line Group's fleet of seismic vessels. As a result of these measures, and as of December 31, 2017, the aggregate amount of our off-balance sheet commitment for bareboat charters for our fleet was US\$460.2 million. Of this amount, US\$397.0 million corresponded to vessels operated by GSS, US\$13.8 million corresponded to vessels that have already been cold-stacked and US\$49.4 million corresponded to other vessels we operate. These costs cannot be reduced further before the charters expire. The charters of the vessels operated by GSS expire in 2027, the last charter of the cold-stacked vessels expires in 2020 and the last charter of the other operated vessels expires in 2020. While we believe that these steps will make our marine acquisition activity more competitive, we will continue to have high levels of fixed costs in a market with historically low levels of demand and pricing, which could have a material adverse effect on our business, financial condition and results of operations.

The revenues we derive from marine seismic data acquisition vary significantly during the year.

Our seismic data acquisition revenues, in particular in the marine market, are partially seasonal in nature. In the marine market notably, certain basins can be very active and absorb higher capacity during a limited period

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of the year (such as the North Sea between April and September), triggering significant volatility in demand and price in their geographical markets throughout the year. The marine data acquisition business is, by its nature, exposed to unproductive interim periods due to vessel maintenance and repairs or transit time from one operational zone to another during which revenue is not recognized. Other factors that cause variations from quarter to quarter include the effects of weather conditions in a given operating area, the internal budgeting process of some important clients for their exploration expenses, and the time needed to mobilize production means or obtain the administrative authorizations necessary to commence data acquisition contracts.

Our business and that of our customers are subject to complex laws and governmental regulations, which may adversely affect our operations or demand for our products and services in the future.

Our operations are subject to a variety of international, federal, regional, national, foreign and local laws and regulations, including for flight clearances (for airborne activities), environmental, health and safety and labor laws. We invest financial and managerial resources to comply with these laws and related permit requirements. Our failure to comply could result in fines, enforcement actions, claims for personal injury or property damages, or obligations to investigate and/or remediate contamination. Failure to obtain the required permits on a timely basis may in some cases also prevent us from operating, resulting in increased crew downtime and operating losses. Further, changes in such laws and regulations could affect the demand for our products or services or result in the need to modify our services and products, which may involve substantial costs or delays in sales and could have an adverse effect on our results. Moreover, if applicable laws and regulations, including environmental, health and safety requirements, or the interpretation or enforcement thereof become more stringent in the future, we could incur capital or operating costs beyond those currently anticipated. The adoption of laws and regulations that directly or indirectly curtail exploration by oil and gas companies could also adversely affect our operations by reducing the demand for our geophysical products and services. In addition, our customers' operations are also significantly impacted by laws and regulations concerning the protection of the environment. To the extent that our customers' operations are disrupted by future laws and regulations, our business, financial condition and results of operations may be materially and adversely affected.

In the United States, new regulations governing oil and gas exploration were put in place following the Deepwater Horizon platform disaster in the Gulf of Mexico in 2010. These new regulations have had a significant financial and operational impact on oil and gas companies that carry out exploration projects in deep-water Gulf of Mexico. Our client mix could be altered in the event of a disappearance of small and medium-sized players that may not be able to bear the increased cost of compliance with complex regulations, which could decrease our sales of multi-client data.

We are exposed to environmental risks.

We are subject to various laws and regulations in the countries where we operate, particularly with respect to the environment. These laws and regulations may require Group companies to obtain licenses or permits prior to signing a contract or beginning our operations. Our management believes that we comply in all material respects with applicable environmental laws; however, frequent changes in such laws and regulations make it difficult to predict their cost or impact on our future operations. We are not involved in any legal proceedings relating to environmental matters, and are not aware of any claim or any potential liability in this area, that could have a significant effect on our business or financial position.

Furthermore, laws or regulations intended to limit or reduce emissions of gases, such as carbon dioxide and methane, which may be contributing to climate change, or nitrogen oxides, may affect our operations or, more generally, the production and demand for fossil fuels such as oil and gas. The European Union has already established greenhouse gas regulations, and many other countries, including the United States, may do so in the future. This could impose additional direct or indirect costs on us as our suppliers incur additional costs that get passed on to us. In addition, because our business depends on the level of activity in the oil and gas industry, existing or future laws and regulations related to emissions of gases and climate change, including incentives to

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conserve energy or use alternative energy sources, could have a negative impact on our business if such laws or regulations reduce demand for oil and gas.

We are subject to risks related to our information technology, including cyber security risks and risks of hardware and software failures.

The oil and natural gas and geothermal industries have become increasingly dependent on digital technologies to conduct certain processing activities. For example, we depend on digital technologies to perform many of our services and to process and record financial and operating data. At the same time, cyber incidents, including deliberate attacks, have increased. The U.S. government has issued public warnings that indicate that energy assets might be specific targets of cyber security threats. Our technologies, systems and networks, and those of our vendors, suppliers and other business partners, may become the target of cyberattacks or information security breaches that could result in the unauthorized release, gathering, monitoring, misuse, loss or destruction of proprietary and other information, or other disruption of business operations. In addition, certain cyber incidents, such as surveillance, may remain undetected for an extended period. Our systems for protecting against cyber security risks may not be sufficient and we have no insurance policy in place to provide coverage for cyberattacks. As cyber incidents continue to evolve, we will likely be required to expend additional resources to continue to modify or enhance our protective measures or to investigate and remediate any vulnerability to cyber incidents.

In addition, any our success depends on the efficient and uninterrupted operation of our computer and communications systems. A failure of our network or data gathering procedures could impede the processing of data, delivery of databases and services, client orders and day-to-day management of our business and could result in the corruption or loss of data. Despite any precautions we may take, damage from fire, floods, hurricanes, power loss, telecommunications failures and similar events at our computer facilities could result in interruptions in the flow of data to our servers and from our servers to our clients.

Similarly, failure by our computer environment to provide our required data communications capacity could result in interruptions in our service. In the event of a delay in the delivery of data, we could be required to transfer our data collection operations to an alternative provider of server hosting services. Such a transfer could result in significant delays in our ability to deliver our products and services to our clients and could be costly to implement. Additionally, significant delays in the planned delivery of system enhancements and improvements, or inadequate performance of the systems once they are completed, could damage our reputation and harm our business, results of operations and financial condition.

RISKS RELATED TO OUR INDEBTEDNESS

Our new debt agreements entered into in the context of the financial restructuring contain restrictive covenants that may limit our ability to respond to changes in market conditions or pursue business opportunities.

Following the completion of our financial restructuring, our borrowings are subject to the provisions of the indentures governing the first lien notes and the second lien notes, which contain restrictive covenants that limit our ability to, among others:

incur or guarantee additional indebtedness or issue preferred shares;

pay dividends or make other distributions;

purchase equity interests or reimburse subordinated debt prior to its maturity;

create or incur certain liens;

enter into transactions with affiliates;

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issue or sell capital stock of subsidiaries;

engage in sale-and-leaseback transactions;

sell assets or merge or consolidate with another company; and

proceed with acquisitions or joint venture transactions.

Complying with the restrictions contained in the indenture governing the first lien notes requires us to maintain our aggregate amount of cash and cash equivalents at no less than US\$185 million at the end of each financial quarter.

The requirement to comply with these provisions may adversely affect our ability to react to changes in market conditions, take advantage of business opportunities we believe to be desirable, obtain future financing, sell assets, fund capital expenditures, or withstand a continuing or future downturn in our business.

If we are unable to comply with the restrictions and covenants in the indentures governing the first lien notes and the second lien notes and other current and future debt agreements, we could be in default under the terms of these indentures and agreements, which could result in an acceleration of repayment.

If we are unable to comply with the restrictions and covenants in the indentures governing the first lien notes and the second lien notes or in other current or future debt agreements, there could be a default under the terms of these indentures and agreements.

Our ability to comply with these restrictions and covenants, including meeting financial ratios and tests, may be affected by events beyond our control. As a result, we cannot assure you that we will be able to comply with these restrictions and covenants or meet such financial ratios and tests. In certain events of default under these agreements, lenders could terminate their commitments to lend or accelerate the loans or bonds and declare all amounts outstanding due and payable. Borrowings under other debt instruments that contain cross-acceleration or cross-default provisions may also be accelerated and become due and payable. If any of these events occur, our assets might not be sufficient to repay in full all of our outstanding indebtedness and we may be unable to find alternative financing. Even if we could obtain alternative financing, it might not be on terms that are favorable or acceptable to us.

We and our subsidiaries may incur additional debt.

We and our subsidiaries may incur additional debt (including secured debt) in the future. The terms of the indentures governing our first lien notes and second lien notes limit, but do not prohibit, us and our subsidiaries from doing so.

If new debt is added to our current debt levels, the related risks for us could intensify. See Our debt adversely affects our financial health and poses risks to our liquidity .

As of December 31, 2017, we had no long term confirmed and undrawn credit lines.

Our debt may adversely affect our financial health and pose risks to our liquidity.

As of December 31, 2017, our net financial debt (defined as gross financial debt less cash and cash equivalents) amounted to US\$2,640 million out of the total capital employed of US\$3,190 million. Our gross financial debt, as of December 31, 2017, amounted to US\$2,955 million (including 330 million related to the debt component of the convertible bonds, according to IFRS, and US\$115 million of bank overdrafts and accrued interest). As of December 31, 2017, our available financial resources amounted to US\$217 million (including cash, cash equivalents and marketable securities and excluding trapped cash). As of the same date, we had debt redeemable in cash or shares in the amount of US\$2,620 million (defined as net financial debt less financial leases, and before IFRS accounting adjustments related to convertible bonds and issuing fees).

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In the context of a difficult market environment for the seismic industry, which started during the second half of 2013 with a significant decrease in investments by our clients outside North America and intensified with the sharp decline in oil prices since the fall of 2014, we confronted a reduction in the demand for our products and services and significant downward pressure on pricing, which ultimately led to heavy losses in our activities.

In light of the delay in market recovery and the persisting deterioration in the economic environment and our results and in order to address our high level of debt, on February 21, 2018, we finalized the implementation of our Financial Restructuring Plan, which meets our objectives of strengthening our balance sheet and providing financial flexibility to continue investing in the future. See Item 4: Information on the Company History and development of the Company Financial restructuring process and note 2 to our consolidated financial statements. However, continued difficult conditions in the markets where we operate or volatility in the financial markets could have a material adverse effect on our ability to service or refinance all or a portion of our indebtedness or otherwise fund our operational requirements. We cannot be certain that additional funds will be available if needed to make future investments in certain projects, take advantage of acquisitions or other opportunities or respond to competitive pressures. If additional funds are not available, or are not available on terms satisfactory to us, there could be a material adverse impact on our business, financial condition and results of operation.

We are exposed to interest rate risk.

Following the financial restructuring effective as of February 21, 2018, the total amount of our first lien notes and second lien notes are subject to variable interest rates. On a pro forma basis as of December 31, 2017, we had US\$1,135 million of debt bearing variable interest, and an increase of 1% in the applicable three-month interest rate would have had a negative impact on our net results before taxes of US\$11.4 million.

Following the financial restructuring, we have a new debt structure. Our ability to manage our new debt structure, finance our working capital and make capital expenditures depends on certain factors beyond our control.

Following the implementation of the financial restructuring, our indebtedness is composed of the first lien notes and the second lien notes. The first lien notes have been issued by CGG Holding (U.S.) Inc. and the second lien notes have been issued by CGG S.A., in each case, with security interests granted over certain collateral and guarantees provided by certain other Group entities.

Our ability to manage our indebtedness and fund our working capital needs and planned capital expenditures depends, among other things, on our future operating results, which will be partly the result of economic, financial, competitive and other factors beyond our control.

We may not be able to generate sufficient cash flows to service our debt, finance our working capital and make research and development and other capital expenditures. If we are unable to satisfy our debt obligations, we may have to seek alternative financing plans, such as refinancing or restructuring our indebtedness, selling assets, reducing or delaying capital investments or seeking to raise additional capital. Our ability and the conditions under which we may borrow funds to refinance existing debt or finance our operations depend on many factors, including conditions in credit markets, perceptions of our business and the ratings attributed to us by rating agencies.

We cannot assure you that any refinancing or debt restructuring would be possible, that any assets could be sold or that, if sold, the timing of the sales and the amount of proceeds realized from those sales would be favorable to us or that additional financing could be obtained on acceptable terms. Any disruptions in the capital and credit markets could adversely affect our ability to meet our liquidity needs or to refinance our indebtedness. Furthermore, changes in the monetary policies of the US Federal Reserve and the European Central Bank may increase our financing costs and consequently adversely impact our ability to refinance our indebtedness, which could have a negative impact on our ability to grow our business and restore profitability.

Table of Contents**MARKET AND OTHER RISKS***We are exposed to exchange rates fluctuations.*

Our financial debt is partly denominated in euro and converted in US dollars at the closing exchange rate. As of December 31, 2017, our US\$2,640 million of net debt included euro-denominated debt of 917 million based on the closing exchange rate of US\$1.1993.

From one year end closing to another, a variation of US\$0.10 in the closing exchange rate between the US dollar and the euro would impact our net debt by approximately US\$92 million.

Following the financial restructuring, the euro-denominated portion of our gross debt would have amounted to approximately 128 million on a pro forma basis as of December 31, 2017. After including cash denominated in euros and net proceeds from our capital increase, we would have had net surplus euros of around 61 million on a pro forma basis as of December 31, 2017. Therefore, from one year end closing to another, a variation of US\$0.10 in the closing exchange rate between the US dollar and the euro would impact our net debt, on a pro forma basis as of December 31, 2017, by approximately US\$6 million.

Our policy is to manage our balance sheet exposures by maintaining our monetary assets and liabilities in the same currency to the extent practicable and adjust imbalances through spot currency sales or equity purchases or transactions. This policy could not be enforced during our Safeguard and Chapter 11 processes, but will be progressively reinstated.

The following table shows our exchange rate exposure as of December 31, 2017:

	As of December 31, 2017						
	Assets	Liabilities	Currency commitments	Net position before hedging		Off-balance sheet positions	Net position after hedging
(Converted in millions of US\$)	(a)	(b)	(c)	(d) = (a)	(b) ± (c)	(e)	(f) = (d) + (e)
US\$ ⁽¹⁾	1,469.6	1,869.9			(400.3)	0.0	(400.3)

⁽¹⁾ US\$-denominated assets and liabilities in the entities whose functional currency is the euro.

	As of December 31, 2017						
	Assets	Liabilities	Currency commitments	Net position before hedging		Off-balance sheet positions	Net position after hedging
(In millions of US\$)	(a)	(b)	(c)	(d) = (a)	(b) ± (c)	(e)	(f) = (d) + (e)
EUR ⁽¹⁾	71.9	170.5			(98.6)		(98.6)

⁽¹⁾ Euro-denominated assets and liabilities in the entities whose functional currency is the US\$.

Our net foreign exchange exposure is principally linked to the euro. We seek to reduce our foreign-exchange position by selling the future receivables surplus over euro costs of our Equipment division as soon as they enter the backlog and taking out dollar-denominated loans supported by long-term assets. Although we attempt to reduce the risks associated with exchange rate fluctuations, we cannot assure you that fluctuations in the values of the currencies in which we operate will not materially adversely affect our future results of operations. Our annual recurring expenses in euros are equal to approximately 350 million and as a consequence, an unfavorable variation of US\$0.10 in the average yearly exchange rate between the US dollar and the euro would reduce our profit before tax and our shareholders' equity by approximately US\$35 million.

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Sensitivity Analysis Table

Impact of US\$ variation in expenses in euros

As of December 31, 2017 In millions of US\$	Impact on result before taxes		Impact on shareholders' equity before taxes	
	Increase of 10 cents	Decrease of 10 cents	Increase of 10 cents	Decrease of 10 cents
	35	(35)	35	(35)
Total	35	(35)	35	(35)

With respect to exchange rate risk related to investments in operating subsidiaries, we consider such risk to be low, since the functional currency of the majority of operating entities is the US dollar.

We are exposed to risk related to equities and financial instruments.

We are exposed to risk of fluctuations in the value of equities and other financial instruments we may hold.

Any transactions involving our own shares are decided by management in accordance with applicable regulations.

As of December 31, 2017, we owned 24,996 of our own shares with a balance sheet value at CGG S.A.'s level of 0.2 million (US\$0.3 million). Those shares are not valued in our consolidated financial statements.

Our investment policy does not authorize short term investment in the equities of other companies.

The fair value of our own shares as of December 31, 2017 is as follows:

As of December 31, 2017	At fair value	Available for sales	Held to maturity	Derivatives	Total
Shares	US\$ 0.3 million				US\$ 0.3 million
Total	US\$ 0.3 million				US\$ 0.3 million

We are subject to risks that are not fully insured.

The nature of our business involves ongoing and significant operating risks for which we are not always insured, and in respect of which we may not be able to obtain adequate insurance at commercially reasonable rates, if at all.

Our seismic data acquisition activities, particularly in deepwater marine areas, are often conducted under harsh weather and other hazardous operating conditions, including the detonation of dynamite. These operations are subject to the risk of downtime or reduced productivity, as well as to the risks of loss to property and injury to personnel resulting from fires, accidental explosions, mechanical failures, spills, collisions, stranding, ice floes, high seas and natural disasters. In addition to losses caused by human errors or accidents, we may also be subject to losses resulting from, among other things, war, terrorist activities, piracy, political instability, business interruption, strikes and severe weather events.

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Our extensive range of seismic products and services expose us to the risk of litigation and legal proceedings, including those related to product liability, personal injury and contract liability.

We produce and sell highly complex products. Our extensive product development, manufacturing controls and testing may not be adequate and sufficient to detect all defects, errors, failures, and quality issues that could affect our customers, which could result in claims against us, order cancellations or delays in market acceptance.

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We have put in place insurance coverage against certain operating hazards, including product liability claims and personal injury claims, damage, destruction or business interruption of data processing centers, manufacturing centers and other facilities, in amounts we consider appropriate in accordance with industry practice. Our risk coverage policy reflects our objective of covering major claims that could affect our facilities and equipment, as well as third-party liability claims that we may be exposed to as a result of our activities. We review the adequacy of insurance coverage for risks we face periodically.

Whenever possible, we obtain agreements from customers that limit our liability.

However, our insurance coverage may not be sufficient to fully indemnify us against liabilities arising from pending and future claims or our insurance coverage may not be adequate in all circumstances or against all hazards. We may not be able to maintain adequate insurance coverage in the future at commercially reasonable rates or on acceptable terms.

We are subject to disruptions in our supply chain and third party suppliers.

Disruptions to our supply chain and other outsourcing risks may adversely affect our ability to deliver our products and services to our customers.

Our supply chain is a complex network of internal and external organizations responsible for the supply, manufacture and logistics supporting our products and services around the world. We are vulnerable to disruptions in this supply chain from changes in government regulations, tax and currency changes, strikes, boycotts and other disruptive events as well as from unavailability of critical resources. These disruptions may have an adverse impact on our ability to deliver products and services to our customers.

Within our Group, Sercel makes particular use of subcontracting. Our French manufacturing sites outsource part of their production to local third-party companies selected according to certain criteria, including quality and financial soundness. Outsourced operations are distributed among several entities, each having a small proportion of aggregate outsourced activity in order to limit risk related to the failure of any one of our subcontractors. For our services business, our policy is not to rely on outsourcing for any of our activities, except in special cases where there is a lack of available capacity.

If our suppliers, vendors, subcontractors or other counterparties are unable to perform their obligations to us or our customers, we may be required to provide additional services or make alternate arrangements on less favorable terms with other parties to ensure adequate performance and delivery of service to our customers. These circumstances could also lead to disputes and litigation with our partners or customers, which could have a material adverse impact on our reputation, business, financial condition and results of operations.

RISK RELATING TO THE IMPLEMENTATION OF IFRS 15

The application of IFRS 15 will change our recognition of certain revenues from contracts with customers.

Generally, we obtain commitments from a limited number of customers before a seismic project is completed. These pre-commitments cover part or all of the survey area blocks. In return for the commitment, the customer typically gains the right to direct or influence the project specifications, advance access to data as it is being acquired, and favorable pricing terms. Until the application of IFRS 15, we recognized pre-commitments as revenue when production started based on the physical progress of the project, as services were rendered.

In light of the introduction of IFRS 15, a new revenue recognition standard by IASB, revenue recognition for multi-clients original participants contracts (formerly pre-commitments) has been subject to an in-depth analysis of the industry practice and of the multi-client business model with our auditors. In line with what was disclosed recently by other seismic players, a preliminary analysis, based purely on the text of IFRS 15 and applied to the written terms of present contracts, is showing that there is a high risk that all the revenues related to multi-clients original participants contracts would, under the new norm, have to be recognized only at delivery

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of the final processed data, which may be more than one year after acquisition of the data. Subject to certain contractual documentation improvements and clarifications and consistent with former accounting applied throughout the seismic industry that differentiates original participants from after sales revenue recognition, we concluded that original participants contracts contain two different performance obligations. The first is an obligation to provide services for which revenue should be recognized over time based on the data acquisition and processing progress of the survey. The second obligation is to deliver the license for the final processed data, for which revenue should be recognized at final delivery. The value of the license delivery would represent 10% of the total contract on average, potentially rising to 20% or falling to 5% depending on the complexity level of the survey. This conclusion has been shared and discussed with other seismic companies. However, this conclusion has not yet been endorsed by our auditors and the regulators of the financial markets where our securities are publicly listed.

Our revenues related to multi-client original participants amounted to US\$269 million in 2017. The implementation of IFRS 15 could have a material effect on our results of operations and financial condition by delaying recognition of revenue from multi-client original participants in 2018 and future years and by applying the impact of delayed recognition during prior periods with limited retrospective effect. Furthermore, the description of the application of IFRS 15 above is subject to change as a result of exchanges with auditors, regulators or other relevant stakeholders. See note 1 to our consolidated financial statements for more information.

RISKS RELATED TO TAXATION

We are subject to complex tax rules in various jurisdictions, and our interpretation and application of these rules may differ from those of relevant tax authorities, which could result in additional tax liabilities.

We operate in a number of countries, and will accordingly be subject to the tax laws of several jurisdictions. The tax rules to which the Group is subject are complex, and we must make judgements (including based on external advice) as to the interpretation and application of these rules. Our total tax expense could be affected by changes in tax rates in various jurisdictions, changes in the valuation of deferred tax assets and liabilities or changes in tax laws or their interpretation. Additionally, our tax affairs will in the ordinary course be reviewed by tax authorities. Those tax authorities may disagree with our interpretation and/or application of relevant tax rules. There can be no assurance as to the outcome of these examinations. If a taxing authority disagrees with the positions we have taken, we could face additional tax liability, including interest and penalties, which could adversely affect our financial results.

U.S. federal income tax reform could adversely affect us.

On December 22, 2017, the United States enacted new tax legislation, the Tax Cuts and Jobs Act of 2017 (U.S. Tax Reform) which provides for substantial changes to the U.S. taxation of businesses and individuals. U.S. Tax Reform, among other things, significantly reduces the U.S. federal tax rate applicable to corporations, imposes significant additional limitations on the deductibility of interest, imposes a new base erosion anti-abuse tax (intended to prevent international groups from earnings stripping through certain payments to non-U.S. affiliates), temporarily allows for the expensing of certain capital expenditures, and limits the deduction for net operating losses and net operating loss carryforwards (U.S. NOLs) to 80% of current year taxable income and eliminates net operating loss carrybacks, in each case, for losses arising in taxable years beginning after December 31, 2017 (though any such U.S. NOLs may be carried forward indefinitely).

We do not expect, for the time being, U.S. Tax Reform to have a material adverse impact on our projected cash taxes payable or on our net operating losses. However, since the legislation is new and unclear in many respects, we expect additional rules and regulations to be issued in the medium term. This could entail risks that cannot be fully assessed at this point in time. We continue to examine the impact U.S. Tax Reform may have on our business. For additional information on the impact of U.S. Tax Reform on the Group for 2017, see note 24 to our consolidated financial statements. The impact of U.S. Tax Reform on holders of our shares is uncertain and could be adverse. We urge investors to consult with their legal and tax advisors with respect to such legislation and the potential tax consequences of investing in our shares.

Table of Contents***Our ability to use U.S. NOLs to offset future income may be limited.***

We have generated significant U.S. NOLs. We generally are able to carry U.S. NOLs forward to reduce our tax liability in future years. Federal U.S. NOLs generated on or before December 31, 2017 can generally be carried back two years and carried forward for up to twenty years and can be applied to offset 100% of taxable income in such years. Under U.S. Tax Reform, however, federal U.S. NOLs incurred in 2018 and in future years may be carried forward indefinitely, but may not be carried back and the deductibility of such federal U.S. NOLs is limited to 80% of taxable income in such years. It is uncertain whether state and local laws governing the treatment of NOLs will follow the federal treatment under U.S. Tax Reform.

In addition, our ability to use existing U.S. NOLs generated is subject to the rules of Section 382 of the U.S. Internal Revenue Code of 1986, as amended (the "IRC"). This section generally restricts the use of U.S. NOLs for corporations that experience an ownership change as defined under Section 382 of the IRC. In general, an ownership change occurs if a corporation's 5-percent shareholders, as defined under Section 382 of the IRC, collectively increased their ownership in us by more than 50 percentage points over a rolling three-year period. CGG Holding (US) Inc. and its subsidiaries (the "Holding U.S. Group") likely underwent a change of ownership on the effective date of CGG's financial restructuring. A corporation that experiences an ownership change generally will be subject to an annual limitation on the use of its pre-ownership change U.S. NOLs equal to the equity value of the corporation immediately before the ownership change, multiplied by the long-term tax-exempt rate for the month in which the ownership change occurs, and increased by a certain portion of any built-in-gains.

The application of IRC Section 382 will be materially different from that described above if Holding U.S. Group is subject to special rules provided under IRC Section 382(l)(5) that apply to certain corporations who undergo an ownership change while under the jurisdiction of a bankruptcy court. Holding U.S. Group generally would qualify for these special rules if the historic holders of CGG common stock and certain holders of Holding U.S. Group's debt, taken together, own equity interests representing at least 50% of the voting power and equity value of Holding U.S. Group following CGG's financial restructuring. In that case, the Holding U.S. Group's ability to use its pre-effective date U.S. NOLs would not be limited as described in the preceding paragraph. However, several other limitations would apply to the Holding U.S. Group under IRC Section 382(l)(5), including (a) the Holding U.S. Group's U.S. NOLs would be calculated without taking into account deductions for interest paid or accrued in the portion of the current tax year ending on the effective date and all other tax years ending during the three-year period prior to the current tax year with respect to the debt securities that are exchanged pursuant to the financial restructuring, and (b) if the Holding U.S. Group undergoes another ownership change within two years after the effective date, the Holding U.S. Group's Section 382 limitation following that ownership change will be zero. It is uncertain whether the provisions of Section 382(l)(5) are available and, if available, how they would apply to the Holding U.S. Group. If the Holding U.S. Group qualifies for the special rule under Section 382(l)(5), the use of the Holding U.S. Group's U.S. NOLs will be subject to Section 382(l)(5) of the IRC unless the Holding U.S. Group affirmatively elects for the provisions not to apply. The Holding U.S. Group has not yet determined whether, if it qualifies for the special rules under Section 382(l)(5), it would be advantageous for Section 382(l)(5) to apply to the ownership change resulting from consummation of the financial restructuring, or whether the Holding U.S. Group will elect not to have the provisions of Section 382(l)(5) apply to the ownership change arising from the consummation of the financial restructuring.

If the Holding U.S. Group does not qualify for, or elects not to apply, the special rule under Section 382(l)(5) of the IRC described above, the provisions of IRC Section 382(l)(6) applicable to corporations under the jurisdiction of a bankruptcy court may apply in calculating the annual Section 382 limitation. Under this rule, the limitation will be calculated by reference to the lesser of the value of the Holding U.S. Group's equity (with certain adjustments) immediately after the ownership change or the value of the Holding U.S. Group's assets (determined without regard to liabilities) immediately before the ownership change. Although such calculation may increase the annual Section 382 limitation, the Holding U.S. Group's use of any U.S. NOLs or other tax attributes, including tax credits, remaining after implementation of the financial restructuring may still be substantially limited after an ownership change.

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Item 4: INFORMATION ON THE COMPANY

Introduction

We are a global participant in the geoscience industry, as a manufacturer of geophysical equipment, as a provider of marine, land and airborne data acquisition services, and as a provider of a wide range of other geoscience services, including data imaging, seismic data characterization, geoscience and petroleum engineering consulting services, and collecting, developing and licensing geological data. Our clients are principally in the oil and gas exploration and production industry.

We have more than 100 years of combined operating experience (through CGG, Veritas and Fugro Geoscience) and a recognized track record of technological leadership in the science of geophysics and geology. We believe we are well placed to capitalize on the growing importance of seismic and geoscience technologies to enhance the exploration and production performance of our broad base of clients, which includes independent, international and national oil companies.

CGG S.A. is the parent company of the Group. We are a *société anonyme* incorporated under the laws of the Republic of France and operating under the French Commercial Code. Our registered office is at Tour Maine Montparnasse, 33, avenue du Maine, 75015 Paris, France. Our telephone number is (33) 1 64 47 45 00.

Organization

As of December, 31, 2017, CGG was organized in eight business lines, as follows:

Equipment (which includes all the Sercel business entities or trademarks, such as Metrolog, GRC and De Regt);

Marine Acquisition;

Land Acquisition (including Land Electromagnetics and General Geophysics);

Multi-Physics;

Multi-Client and New Ventures (MCNV);

Subsurface Imaging;

GeoSoftware (including the software sales and development of Jason and Hampson-Russell); and

GeoConsulting (including the consulting activities of Jason and Hampson-Russell combined with the consulting and geologic library business of Robertson, as well as data management services).

These activities are organized into three active segments for financial reporting purposes since September 1, 2015: (i) Equipment, (ii) Contractual Data Acquisition (which includes Marine Acquisition, Land Acquisition and Multi-Physics) and (iii) GGR (which includes MCNV, Subsurface Imaging, GeoSoftware and GeoConsulting). In addition, we have a fourth segment for financial reporting purposes, Non-Operated Resources, which comprises the costs of our non-operated marine resources as well as all the costs of our Transformation Plan (mainly restructuring provisions and provision for onerous contracts).

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We believe that these eight business lines allow us to cover the spectrum from exploration to production, giving us more opportunities to create value for our shareholders, customers and partners.

Our six Corporate functions, at the Group level, ensure a global transverse approach and provide support across all activities: (i) the Finance Function, (ii) the Human Resources Function, (iii) the Global Operational Excellence/Internal Audit/Risk Management, Health, Safety and Environment & Sustainable Development

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Function, (iv) the General Secretary, (v) the Geomarkets, Sales and Marketing Function and (vi) the Technology Function.

Our two Group Departments are, respectively, in charge of (i) Communication and (ii) Investor Relations.

Recent developments

On February 21, 2018, we finalized the implementation of our Financial Restructuring Plan, which meets our objectives of strengthening our balance sheet and providing financial flexibility to continue investing in the future. This plan comprised (i) the equitization of nearly all of our unsecured debt, (ii) the extension of the maturities of our secured debt and (iii) the provision of additional liquidity to meet various business scenarios. For more detailed information, see Item 4 Information on the Company History and development of the Company Financial restructuring process and note 2 to our consolidated financial statements.

Our Strategy

We intend to continue to provide leading geological, geophysical and reservoir solutions and services to our broad base of customers primarily from the global oil and gas industry. Our goal is to capitalize on innovative opportunities resulting from the application of new technologies in every sector of the oil and gas business from exploration to production and reservoir management and from the worldwide presence of our three complementary business segments: Equipment, Contractual Data Acquisition, and GGR.

To achieve this objective, we have adopted the following strategies:

Rebalance our profile towards more profitable and less capital intensive businesses

Our Contractual Data Acquisition businesses, which are cyclical, highly capital-intensive and have generated lower profitability in recent years, have been very significantly downsized with respect to marine operations. We position the Acquisition businesses more on the high-end of the market, where technological differentiation is a critical factor, in order to increase profitability. This also increases the relative weight of the Equipment and GGR segments contributions to Group results, which we believe will increase our overall profitability, reduce the volatility of our earnings and improve our cash generation.

The capacity of our Marine Data Acquisition business was reduced as our operated fleet decreased from eleven to five 3D mid/high capacity vessels at the end of the first quarter of 2016, which led to a further reduction in fixed costs and capital expenditure. We have mostly repositioned our fleet towards the production of multi-client studies that are sufficiently pre-funded (at above 70%), which means operating five 3D vessels for the next years. The marine seismic acquisition activity and its high-end broadband capabilities will therefore be mainly a high technological tool for the acquisition of multi-client high-quality data.

In the Land Acquisition business, we intend to focus and concentrate our presence on high-end niche markets, adopting a technology provider business model to the extent possible. In the Multi-Physics Acquisition business, our plan is to focus on higher-margin market segments. In both businesses, we intend to achieve the expected results under the implemented cost savings and restructuring plans.

Improve our operational efficiency, profitability and cash generation

In line with what has been achieved over the last four years as a result of the performance plan that we launched at the end of 2013, we intend to continue our tight cost control, maintain a low level of general and administrative expenses and, more generally, reduce our fixed cost base. We expect notably to reduce our break-even point in line with the right-sizing of our Contractual Data Acquisition businesses and particularly our marine assets.

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We will also continue to maintain a strong focus on operational performance and on cash generation through tight monitoring of working capital and capital expenditure.

Focus on growth areas

We intend to focus on developing our technological capabilities in emerging markets for geoscience-related services, including reservoir appraisal and production monitoring. We also believe that we have unique experience and expertise in very dense and productive seismic acquisition projects, such as high channel count land crews in the Middle East and full azimuth high resolution offshore surveys in the Gulf of Mexico, and have unique capabilities to partner with customers to develop customized solutions to address specific geophysical & geological challenges, as demonstrated by the recent development of our TopSeis acquisition technology. Furthermore, we believe our geographic footprint in various different geologies will allow us to respond to the growing demand for all kinds of seismic imaging and reservoir solutions.

We also intend to maintain our position in the onshore and offshore seismic multi-client markets by developing our multi-client data library. We believe that a strong position in this market segment enhances our global competitive position and may provide opportunities for continuing future sales. In developing our multi-client data library, we carefully select survey opportunities in order to maximize our return on investment. We also intend to apply the latest advances in depth imaging and wide azimuth technologies to a selected part of our existing library.

Given the growing importance of geophysics in reservoir characterization, and the strong reputation of Jason and Robertson, we intend to further develop the synergies between our leading network of 28 data processing centers. We pursue continuous innovation to allow for increased integration of data processing into reservoir studies, which will provide enhanced reservoir knowledge and allow for improved exploitation. This approach places us in a better position to meet the requirements of our clients with an extensive range of integrated solutions.

With the increasing use of wide-azimuth and high-resolution surveys and the growing demand for advanced imaging capabilities, we also intend to increase our processing capability in developing disciplines, such as reservoir description and monitoring, including wide-azimuth, multi-component and 4D studies. We also plan to continue promoting and developing our dedicated subsurface imaging centers within our clients' offices and developing our regional centers.

We plan as well to develop reservoir interpretative solutions, notably through our two business lines, GeoSoftware and GeoConsulting, within our GGR segment. GeoSoftware is the worldwide leader in advanced seismic reservoir characterization technology. It brings together CGG's commercial software, including Jason and Hampson-Russell, and the associated sales, marketing and product services, such as training, product support and product mentoring. GeoConsulting is a full-spectrum geological and geophysical consulting services organization. In addition to our seismic reservoir characterization services, GeoConsulting offers our unique line of Robertson geoscience consulting services and multi-client products, including a full range of geological, petroleum engineering and economic disciplines. It also contains NPA Satellite Mapping, a full range of data management services such as Diskos (Norwegian petroleum database), and the global training services relating to GeoConsulting.

We expect to extend cross-divisional strengths within our organization and to leverage our relationships with external partners. We signed a technology alliance with Halliburton to develop next-generation geoscience workflows and we set up a joint venture with Wood Mackenzie (EV²) to provide a value modelling tool for undiscovered reserves, both in 2015.

Develop technological synergies for products and capitalize on new generation equipment

We believe Sercel is the leading manufacturer of land, marine and subsea geophysical equipment. We plan to continue developing synergies among the technologies portfolio and to capitalize fully on our position as a

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market leader. Through our research and development, we seek to improve existing products and maintain an active new product development program in all segments of the geophysical equipment market (land, marine and ocean-bottom).

Develop and utilize innovative technology

The significant technological developments in seismic services over the last decade have produced a marked change in the sector. The development of 4D and wide-azimuth techniques (providing time lapse views and enhanced illumination of the reservoir as well as improved image resolution) now allows operators to better locate and monitor reservoir performance. This possibility broadens the use of seismic techniques from pure exploration (early cycle) into a tool for reservoir development, management and production (late cycle).

Over the last few years, our Marine business line has developed a portfolio of broadband technologies: CGG's BroadSeis solution delivers the most detailed high-resolution subsurface images with the best low frequencies from a combination of advanced equipment, proprietary variable-depth streamer profiles and innovative deghosting and imaging technology. As a consequence of the unique, streamer configuration, BroadSeis is able to deliver the deepest tow in the industry, up to 50 meters. Combining this with the exceptional low-noise characteristics of Sentinel solid streamers delivers the lowest frequencies with the best signal to noise ratio available. BroadSource, our synchronized multi-level broadband source complements BroadSeis by removing the source ghost notch and extending the high frequencies so that over 6 octaves of data (2.5-200Hz) are recorded.

TopSeis is a next-generation marine towed-streamer acquisition solution, delivering a step-change in imaging for shallow to intermediate depth targets by providing massively increased near-offset coverage from a split spread with zero offsets. It is the latest addition to our broadband portfolio and is the most recent outcome from over eight years of technical collaboration between CGG and Lundin Norway AS.

We believe that demand for geophysical services will continue to be driven in part by the development of new technologies. The industry is increasingly demanding clearer seismic imaging and better visibility, particularly in complex geologies. We expect multi-azimuth, wide azimuth, multi-component (3C/4C) surveys and time-lapse (4D) surveys to become increasingly important for new production-related applications, particularly in the marine sector, and expect specialized recording equipment for difficult terrain to become more important in land seismic data acquisition, particularly in transition zones, shallow water and arctic areas. We believe that to remain competitive, geophysical services companies will need to combine advanced data acquisition technology with consistently improving processing capacity in order to further reduce delivery times for seismic services.

Our strategy is to continue our high level of investment in research and development to reinforce our technological leadership. We also intend to take advantage of our full range of integrated geoscience services to enhance our position as a market leader in:

manufacturing of land, marine and subsea data acquisition equipment;

innovative acquisition systems and services (Marine, Land, Airborne); and

seismic imaging and reservoir services.

Emphasize client service

We believe it is important to operate in close proximity to our clients to develop a better understanding of their individual needs and to add measurable value to their business processes. We respond to these needs by creating new products or product enhancements that improve the quality of data and reduce the data delivery time to clients. We believe that our regional multi-client and dedicated data processing centers in our clients

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offices provide us with an advantage in identifying contract opportunities, optimizing service to clients and developing products responsive to new market demands, such as seismic techniques applied to reservoir management. We believe that we are well positioned to benefit from the industry trend towards increased outsourcing. This trend is leading oil and gas companies to place greater emphasis on relationships and service quality (including health, safety and protection of the environment) in their selection of third party service providers, including geophysical services providers.

Provide integrated services

We are committed to providing clients with a full array of seismic data services, from acquisition and processing to data interpretation and management. We believe that integration of compatible technology and equipment increases the accuracy of data acquisition and processing, enhances the quality of our client service and thereby improves productivity in oil and gas exploration and production. Our clients increasingly seek integrated solutions to better evaluate known reserves and improve the ratio of recoverable hydrocarbons from producing fields. We are continuing to develop our ability to provide geoscience solutions through a combination of various exploration and production services, including reservoir characterization and interpretation of well information.

Develop well-positioned data libraries

We strive to develop large contiguous multi-client libraries located in key basins leveraging the Group technology portfolio. Historically, our libraries have been focused in the Deepwater US Gulf of Mexico, pre-salt Brazil and the Central Graben of the UK North Sea. We look for opportunities to design new libraries in areas where we can apply geologically appropriate advanced technology to develop a large position, such as our recent entry in Norway's North Viking Graben. In the US Gulf of Mexico, our StagSeis multi-client coverage of more than 20,000 square kilometers, provides unrivalled full wide-azimuth and long offsets, designed to illuminate complex subsalt geologies. CGG's multi-client business is uniquely advantaged due to the advanced processing and reservoir analysis capabilities of our SIR business when designing new surveys. A prime example is our 38,000 square kilometers survey in the newly opened Deepwater Perdido area of Mexico, where we are using the latest SIR technology to reprocess recent vintage seismic data into a state of the art product. In keeping with our strategy to expand our current libraries, this product is a large seamless extension of our US Gulf of Mexico footprint. In Brazil, which is an area with high potential, we have a total of almost 16,000 square kilometers of newly acquired and imaged pre-salt coverage. We also enlarged our high-quality coverage across the Espirito Santo Basin (approximately 10,000 square kilometers), enhancing the industry understanding of exploration potential in this promising region with the committed lease rounds (2017, 2018 and 2019).

Onshore, our land library business offers excellent potential in North America, particularly in the new oil plays of West Texas (Permian and Delaware basins) and Oklahoma (SCOOP and STACK plays) where we have invested significantly during 2016. There is also significant customer interest in our recent large surveys aimed toward unconventional gas plays in the Haynesville (Louisiana) and the Marcellus (Pennsylvania) and we expect those to contribute to our revenue growth.

Develop reservoir applications

While seismic data was historically used primarily by oil and gas companies for exploration purposes, it has become a recognized tool for field development and reservoir management. We are progressively extending our core business towards compiling and analyzing seismic data of existing reservoirs in response to this trend. Through high-resolution images and our expertise in 4D seismic and permanent monitoring, we aim to assist hydrocarbon producers in better characterizing and predicting the static properties and dynamic behavior of their reservoirs.

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Following the acquisition of the Geoscience Division of Fugro, we are now organized in three operational segments, including the GGR segment, which is fully dedicated to the development of reservoir software, services and applications. Through GeoSoftware, we intend to further improve our products and services, provide our customers with a better understanding of their reservoirs and deliver unsurpassed expertise to optimize our customers' decision-making. Through GeoConsulting, we intend to further enhance our geological and geophysical multi-client products and reports, and expand our high-end consulting services across the exploration and production value chain.

Industry conditions

2013 was a contrasting year with the first half of the year seeing growth in the oil services segment and, hence, the seismic sector, followed by a significant slowdown during the second half of the year, chiefly due to the majors deciding to cut investments in exploration and production projects to improve cash generation on a short-term basis. This trend should be considered in the global exploration and production context: projects were becoming increasingly costly due to their complexity; oil and gas prices remained relatively stable; and oil and gas companies were under constant pressure to maintain the expected level of dividends for their shareholders.

This situation escalated during 2014 with oil and gas companies pursuing their efforts to reduce costs in order to preserve their ability to maintain shareholder returns. Global exploration and production spending in 2014 was steady but fell by 10% in seismic.

During the second half of 2014, after Saudi Arabia decided to maintain its market share and let supply and demand set the market price, oil prices fell sharply and quickly. In the space of six months, the Brent oil price fell by 59% from US\$115 per barrel to US\$47 per barrel. This severe reduction had a large impact on the 2015 budgets that oil and gas companies were in the process of preparing, and consequently exploration and production spending for 2015 decreased by 23%, with a similar trend for seismic. In 2016, the fall in crude oil prices in the second half of 2015 led the oil companies to reduce by 23% exploration and production investments. Despite the increase in crude oil prices by 22% in 2017 (Brent oil average price of US\$54 per barrel in 2017), oil companies remain very cautious in their spending. Although these investments increased by 4% in 2017, driven by the 35% increase in North American spending, international spending decreased slightly by 3%. In 2018, an 8% increase is expected for global spending, with North American spending once again driving the global growth with an expected increase of 21% and international spending turning the corner with an expected increase of 4% after four years of decline (*Source: Barclays Global 2018 E&P spending outlook dated December 14, 2017*).

Longer term, we believe that the outlook for a fully integrated geoscience company is fundamentally positive for a number of reasons:

First, oil and gas companies (including both international and national oil companies) and the large oil and gas consuming nations have perceived a growing and potentially lasting imbalance between reserves and future demand for hydrocarbons. A rapid rise in world consumption requirements, particularly in China and India, has resulted in a growth in demand for hydrocarbons that is expected to continue in the long term despite being slowed down in the short term. In response to this future growth, we expect oil and gas companies to restart their exploration and production investments in the future in order to improve existing reservoirs and regularly replace reserves.

Client demand is changing as clients use geophysical data in new ways. The geological and geophysical challenges they face require new geoscience solutions. From the very early exploration phase to the optimization of existing reservoirs, and throughout the entire development and production cycle, the demand for improved understanding of complex subsurface structure is increasing. This requires higher technology content, higher resolution, better illumination, and overall better imaging. In such a market environment, the Group, with its assets, expertise, people and track record, is now firmly established on the three solid technological pillars represented by its Equipment, high-end Contractual

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Data Acquisition and GGR business segments. We benefit from the unique scope of our geoscience activities, the unrivalled expertise of our imaging teams, our modern worldwide fleet of recently built, high-capacity vessels, the cutting-edge leadership of Sercel on the equipment market, and our strong commercial positions in key multi-client areas. We believe we are therefore well positioned to capitalize on our unique integrated portfolio and to meet our customers' needs for innovative products and services and for global solutions, as achieved recently with BroadSeis and StagSeis, with Sercel's 508⁺ land acquisition system and now with TopSeis unique marine acquisition solution.

Each year, three to four million barrels of new oil per day have to be produced in order to offset the declining rates of the existing reserves. Gas and oil production from shale rocks, where seismic studies are used to enhance the yield, has developed remarkably well in North America, and may expand to other continents. We expect these fundamental trends to continue to drive increased demand for high-end seismic equipment and services in the medium-term. We believe that we are in a strong position to benefit from these long term trends.

History and development of the Company

CGG was established on July 23, 1931 under the name *Compagnie Générale de Géophysique*, to develop and market geophysical techniques for appraising underground geological resources. Since that time, CGG gradually specialized in seismic techniques adapted to oil and gas exploration and production, while continuing to develop a broad range of other geophysical and geological activities. In 2007, CGG acquired Veritas DGC Inc. and was renamed *Compagnie Générale de Géophysique Veritas*. In 2013, CGG acquired Fugro's Geoscience Division and changed its name to *CGG*. CGG is a *société anonyme* incorporated under the laws of the Republic of France and operating under the French Code de commerce, with a duration until 2030.

Financial restructuring process

Financial difficulties relating to the unprecedented crisis affecting the oil and oil-services industries

We have been severely hit by the unprecedented crisis impacting the oil and oil-services industries since 2013. Our business volume is dependent on the level of investments made by our customers in the field of exploration and production (oil and gas), which is directly impacted by the fluctuations in the price of a barrel of crude oil. The price of a barrel has continued to drop since 2013 to reach levels below those anticipated by analysts. Between 2014 and 2015, the price of Brent dropped by 45%. The market conditions remained difficult in 2016 and the first half of 2017, with no prospect of a short-term recovery. Our annual consolidated revenues in 2016 fell to a third of what was recorded in 2012.

Given this crisis, we began implementing the Transformation Plan starting in 2014. The implementation of this operational restructuring plan, which was completed at the end of 2017, resulted in, in particular, (i) the reshaping of the fleet of vessels operated by us, (ii) the repositioning of our business in high value-added market segments, such as the GGR or Equipment division, (iii) a reduction of our workforce by 50%, (iv) an enhanced cost control through rigorous cash management, which resulted in a reduction by close to 80% of our monthly marine costs and a reduction by close to 60% of overhead costs, and (v) a reduction of our annual investments by close to 60%. This operational restructuring plan was financed in part by the capital increase completed in February 2016 for a gross amount of approximately 350,000,000.

Despite these operational efforts, in a stagnant market that continued to weigh on business volume and prices, our debt level was no longer in line with our financial capacities. We announced at the beginning of 2017 that our financial performance would not enable us to generate sufficient cash flows to service our then-current level of debt in the years to come.

In this context, we began discussions with the various stakeholders in order to establish a financial restructuring plan and requested the appointment of a *mandataire ad hoc* to assist us in our negotiations. By a

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court order dated February 27, 2017, SELARL FHB, acting through Ms. H  l  ne Bourbouloux, was appointed as *mandataire ad hoc* for a period of five months.

Discussions with the stakeholders resulting in the draft Safeguard Plan

Numerous meetings were held under the aegis of the *mandataire ad hoc* and in the presence of the main stakeholders, namely:

the Company;

representatives of several secured lenders under the Credit Facilities (the Secured Lenders) which formed an *ad hoc* committee directly or indirectly representing 52.7% of the total principal amount due under the Credit Facilities (including funds or assets managed by Goldman Sachs, Makuria, Och Ziff and T. Rowe Price (with T. Rowe Price having left the committee since then));

representatives of a group of holders of Senior Notes which formed an *ad hoc* committee representing approximately 52.4% of the total principal amount of the Senior Notes (including funds managed by the companies Alden Global Capital, LLC, Attestor Capital LLP, Aurelius Capital Management, LP, Boussard & Gavaudan Asset Management, LP, Contrarian Capital Management, L.L.C. and Third Point LLC, respectively);

one of the representatives of each series of the convertible bonds (*repr  sentant de chacune des masses*); and

on the one hand, the representatives of the then two largest shareholders of the Company, Bpifrance Participations and AMS   nergie, holding approximately at the time 9.4% and 8.3%, respectively, of the Company's total share capital and approximately 10.8% and 8.1%, respectively, of the Company's voting rights (by a letter dated August 31, 2017, AMS   nergie declared that it had since crossed below the threshold of 1% for both the share capital and voting rights), and on the other hand, DNCA Finance and DNCA Invest (together DNCA), our long-term institutional partners holding approximately 5.5% of the total principal amount of the Senior Notes, approximately 20.7% of the total principal amount of the convertible bonds, approximately 7.9% of the share capital and 7.7% of the voting rights of the Company.

Following long negotiations, on June 1, 2017, we, the *ad hoc* committee of the Secured Lenders, the *ad hoc* committee of the holders of Senior Notes and DNCA reached an agreement in principle regarding a financial restructuring plan. On June 13, 2017, the agreement in principle was confirmed by legally binding documents (the lock-up agreement and the restructuring support agreement) whereby the parties thereto committed to undertake any action reasonably required to implement and carry out the financial restructuring. The terms and conditions of the lock-up agreement were relatively customary and included, in particular, the requirement for the creditors to vote in favor of the Safeguard Plan and the Chapter 11 Plan (subject to receiving appropriate disclosure material), provide various waivers, enter into the required documentation to effect the financial restructuring and not to sell their debt holdings unless the transferee entered into the lock-up agreement or was already a signatory thereto. According to the restructuring support agreement entered into with DNCA Invest and certain entities managed by DNCA Finance (together, the DNCA Entities), as shareholders, the DNCA Entities committed to take, as shareholders, any step and action reasonably necessary to implement and carry out the financial restructuring, including voting in favor of the appropriate resolutions at the shareholders general meeting and not selling their holdings of the Company's shares during the restructuring process.

In this context, we filed a petition with the Commercial Court of Paris to benefit from safeguard proceedings, which were opened by a ruling dated June 14, 2017. The Commercial Court of Paris appointed the former *mandataire ad hoc* as judicial administrator of CGG S.A. with the mission to supervise the debtor in its management and SELAFA MJA, acting through Ms. Lucile Jouve as creditors' representative. JG Capital Management SAS, acting through its legal representative Mr. Gatty, was appointed as controller by a decision of the Paris supervisory court judge (*juge commissaire*) on September 14, 2017.

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Because the Senior Notes were governed by the laws of the State of New York and the courts of such State had jurisdiction over any disputes relating thereto, we requested to benefit from the provisions of Chapter 15 of the United States Bankruptcy Code in order to have the effects of the safeguard proceedings recognized in the United States.

Accordingly, the application to have the safeguard proceedings recognized through Chapter 15 proceedings was filed with the U.S. Bankruptcy Court for the Southern District of New York on June 14, 2017 and the related order was obtained on July 13, 2017.

In addition, 14 foreign subsidiaries of the Group that are debtors or guarantors under our financial debt (namely CGG Holding BV, CGG Marine BV, CGG Holding I (UK) Ltd, CGG Holding II (UK) Ltd, CGG Holding (U.S.) Inc., CGG Services (U.S.) Inc., Alitheia Resources Inc., Viking Maritime Inc., CGG Land (U.S.) Inc., Sercel Inc., Sercel-GRC Corp, CGG Marine Resources Norge AS, CGG Canada Services Ltd. and Sercel Canada Ltd.) voluntarily applied for and obtained on June 14, 2017 the opening of reorganization proceedings under the Chapter 11 of the United States Bankruptcy Code in the U.S. Bankruptcy Court for the Southern District of New York.

As part of these judicial proceedings, the holders of claims under the Credit Facilities, Senior Notes and convertible bonds (whose principal aggregate amount amounted to approximately US\$2.8 billion) were not allowed to accelerated their claims, which provided protection for us to carry out our operational activities while leaving the stakeholders a limited timeframe to approve a financial restructuring plan.

The draft Safeguard Plan was approved on July 28, 2017 by the committee of banks and financial institutions, and by the general meeting of holders of Senior Notes. In addition, the different classes of affected creditors in the context of the Chapter 11 proceedings voted in favor of the Chapter 11 Plan, which was confirmed by the U.S. Bankruptcy Court for the Southern District of New York by an order dated October 16, 2017. The works council of the Company, which was also consulted with respect to the draft Safeguard Plan, rendered a favorable opinion during its meeting held on October 2, 2017.

In order to implement the draft restructuring plan, the necessary resolutions were approved by the Company's general meeting of shareholders on November 13, 2017. The draft Safeguard Plan was then approved by a judgment of the Commercial Court of Paris on December 1, 2017. Lastly, the judgment of the Commercial Court of Paris relating to the Safeguard Plan was recognized and made enforceable in the United States under the Chapter 15 proceeding on December 21, 2017. The implementation of the Financial Restructuring Plan was finalized on February 21, 2018.

Description of the Safeguard Plan

The Safeguard Plan was aimed at restructuring our financial debt while complying with its main industrial goals, namely:

preserving our integrity;

giving us leeway to (i) pursue our technological and business development and (ii) face the uncertainties in the oil market; and

maintaining and developing in France an internationally recognized center of excellence in the seismic and geoscience fields.

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The Safeguard Plan was based on the following main characteristics:

(a) Substantial reduction of our financial indebtedness level

This reduction was carried out by way of equitization, under the following conditions, of the principal amounts and accrued but unpaid interest as of February 2, 2018 (being the last day of the subscription period of the Rights Issue (as defined below)), in respect of:

- (i) the Senior Notes, which were reduced by an amount of US\$86 million (which, at the holders' election, either was repaid by way of set-off at their face value as part of the subscription for the second lien notes (without Warrants #3) or will be repaid in cash over a ten-year period subject to certain terms. The equitization of the remaining claims under the Senior Notes was carried out through a share capital increase with removal of the shareholders' preferential subscription right in favor of the holders of Senior Notes at a subscription price of 3.12 per new share. The capital increase was subscribed for by way of set-off at their face value against the amount of the claims under the Senior Notes (the Senior Note Equitization), which were converted into euros in accordance with the Safeguard Plan at the exchange rate of US\$1.1206 per euro.
- (ii) the convertible bonds, which were reduced by an amount of approximately 4.46 million (the euro equivalent of US\$5 million converted in accordance with the Safeguard Plan at the exchange rate of US\$1.1206 per euro), which was paid in cash on February 21, 2018. The equitization of the remaining claims under the convertible bonds was carried out via a share capital increase with removal of the shareholders' preferential right in favor of the holders of convertible bonds at a subscription price of 10.26 per new share. The subscription to the share capital increase was carried out by way of set off at their face value against the claims under convertible bonds (the Convertible Bond Equitization).

(b) New money injection up to a maximum amount of approximately US\$500 million

The parties agreed to inject new money of approximately US\$500 million on the basis of a negative outlook for 2018 and 2019, relying in particular on a less favorable assumption for the oil price stabilizing at US\$50-55 per barrel, and a lower level of increase in the exploration expenses. Such new money injection was carried out by way of (i) the Rights Issue, and (ii) the issuance of the new money portion of the second lien notes, as follows:

- (i) The Safeguard Plan provided for a share capital increase with preferential subscription right in an amount of up to approximately 112 million (including share premium) (corresponding to approximately US\$125 million on the basis of the exchange rate provided for in the Safeguard Plan of US\$1.1206 per euro), by way of an issue of shares of the Company, each with a share warrant attached (the Rights Issue) at a subscription price of 1.56 for each new share with a share warrant attached. Three of these share warrants (the Warrants #2) give the right to subscribe to two new shares at a subscription price of 4.02 per new share for a five-year period as from February 21, 2018. The Rights Issue had cash backstop commitments from the DNCA Entities for approximately 71.39 million (including the share premium) (euro equivalent of US\$80 million converted using the exchange rate provided in the Safeguard Plan of US\$1.1206 per euro) and additional backstop commitments by the holders of Senior Notes by way of set-off against part of their claims under the Senior Notes (which would have been triggered only if the backstop commitments by the DNCA Entities had not been sufficient to ensure the full subscription of the Rights Issue). These backstop commitments were not called, as the total subscription demand amounted to 132.5 million (20.3 million higher than the target amount) with a subscription rate of 118.06%.
- (ii) The Safeguard Plan provided for new money of up to US\$375 million, subscribed pursuant to a private placement agreement dated June 26, 2017, by way of the issuance by the Company of new high yield notes governed by New York-law, benefitting from second-ranking security interests, bearing interest at a rate including a variable component indexed on the LIBOR (for the tranche

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denominated in US dollars) and EURIBOR (for the tranche denominated in euros), in each case, with a floor of 1%, plus a margin of 4.0% per annum, and payment-in-kind interest (PIK interest) of 8.5% per annum (such notes, the second lien notes and such issuance, the New Notes Issuance). The second lien note were issued together with share warrants (the Warrants #3) which are exercisable within a six-month period from February 21, 2018 and give the right to subscribe, at a subscription price of 0.01 per new share, for new shares representing in the aggregate 16% of the share capital of the Company, after dilution resulting from the issuance of shares as part of the Senior Note Equitization, the Convertible Bond Equitization, the Rights Issue, the exercise of all of the Backstop Warrants (as defined below), Coordination Warrants (as defined below) and Warrants #3, but prior to the exercise of the Warrants #1 (as defined below) and Warrants #2. Certain eligible holders of Senior Notes undertook to subscribe for the New Notes Issuance, in accordance with the terms of the private placement agreement. These subscribers received a subscription commitment fee equal to 7% of the total amount of the New Notes Issuance they subscribed. The New Notes Issuance was backstopped by the members of the ad hoc committee of the holders of Senior Notes (or their transferees, subject to certain conditions), who received: (x) a backstop commitment fee equal to 3% of the total amount of the New Notes Issuance (such fee having been paid by way of set-off against the subscription price of the second lien notes), and (y) share warrants with a six-month exercise period as from February 21, 2018 giving the right to subscribe, at a subscription price of 0.01 per new share, for new shares representing 1.5% of the share capital of the Company, after dilution resulting from the issuance of shares as part of the Senior Note Equitization, the Convertible Bond Equitization, the Rights Issue, the exercise of all of the Backstop Warrants (as defined below), Coordination Warrants (as defined below) and Warrants #3 but prior to the exercise of the Warrants #1 (as defined below) and Warrants #2 (the Backstop Warrants). As a result, on February 21, 2018, the Company issued US\$355.1 million and 80.4 million in principal amounts of second lien notes (comprising US\$275 million and 80.4 million as new money and US\$80.2 million in exchange for part of the accrued interest claims under the Senior Notes, with the US dollar-denominated second lien notes issued as new money notes and the second lien notes issued in exchange for the accrued interest claims under the Senior Notes being fungible).

(c) Free allocation of share warrants to the shareholders and certain holders of Senior Notes

The Safeguard Plan also provided for the following:

- (i) the issuance and free allocation by the Company of share warrants in favor of the historical shareholders of the Company, with a four-year exercise period from February 21, 2018, with one such share warrant being allocated to each existing share and three of such share warrants giving the right to subscribe for four new shares of the Company at a subscription price of 3.12 per new share (the Warrants #1).
- (ii) the issuance and free allocation by the Company of share warrants in favor of the members of the *ad hoc* committee of the holders of Senior Notes with a six-month exercise period from February 21, 2018, giving the right to subscribe, at a subscription price of 0.01 per new share, for new shares representing 1% of the share capital of the Company, after dilution resulting from the issuance of shares as part of the Senior Note Equitization, the Convertible Bond Equitization, the Rights Issue, the exercise of all of the Backstop Warrants, Coordination Warrants (as defined below) and Warrants #3 but prior to the exercise of the Warrants #1 and Warrants #2 (the Coordination Warrants).

(d) Significant extension of the maturity of the secured debt by way of an exchange

This extension of the maturity of our secured debt allows us not to be under any repayment obligation until 2023. It was carried out by way of a cancellation of the principal amount of the claims under the Credit Facilities, reduced by the US\$150 million initial cash repayment from the net proceeds of the Rights Issue and the New Notes Issuance, in exchange for the first lien notes. As a result, on

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February 21, 2018, CGG Holding (U.S.) Inc. issued US\$663.6 million in principal amount of first lien notes, bearing floating rate interest at LIBOR (with a floor of 1%) plus 6.5% per annum in cash, and 2.05% per annum PIK interest in exchange for the remaining claims under Credit Facilities, reduced by the cash payment of US\$150 million. The Company may, at any time prior to May 21, 2018, redeem these first lien notes, in whole but not in part, at 100% of their principal amount and then until August 21, 2018 at 103% of their principal amount. Beyond this date and until February 21, 2021, the Company will have the option to redeem these first lien notes in whole or in part at a redemption price of 103% of the principal amount thereof plus an applicable premium until February 21, 2021.

The new money raised as part of the Rights Issue and the New Notes Issuance (net of backstop and commitment fees and other fees related to the Rights Issue and the New Notes Issuance) was and will be used as follows:

first, and up to an amount of US\$250 million (calculated using the exchange rate provided for in the Safeguard Plan of US\$1.1206 per euro), for the financing of our corporate and financial needs (including (i) the payment of the accrued and unpaid interests as of February 2, 2018 under the convertible bonds not equitized as part of the Convertible Bonds Equitization for an amount of approximately 4.46 million (calculated using the exchange rate provided for in the Safeguard Plan of US\$1.1206 per euro) and (ii) the payment of costs and fees in connection with the financial restructuring, other than backstop costs and fees and other fees related to the Rights Issue and the New Notes Issuance);

second, to make the US\$150 million initial cash repayment to the Secured Lenders on a *pro rata* basis; and

the remainder being kept by us to face (i) our financial needs (including the payment of fees and costs in connection with the financial restructuring other than the subscription and backstop fees and costs) and (ii) any delay in our redeployment.

The Chapter 11 Plan has the same characteristics as that set out above and applicable to the Safeguard Plan for the concerned creditors, namely the creditors under the Credit Facilities and the Senior Notes.

Undertakings of the Company and certain of its creditors in the framework of the safeguard proceedings

(i) Undertakings of the Company

Bpifrance Participations (which held, as of December 31, 2017, 9.35% of the share capital and 10.90% of the voting rights of the Company) voted in favor of the resolutions required to implement the Financial Restructuring Plan at the general meeting of shareholders held on November 13, 2017 on second convening, in light of the undertakings made by the Company, upon authorization from its board of directors, in a letter dated October 16, 2017 sent to the supervising judge of the Paris Commercial Court (*juge commissaire*) and the judicial administrator (*administrateur judiciaire*). Pursuant to such letter, the Company:

undertook to refrain from any form of disposal of its significant assets until December 31, 2019, pursuant to article L. 626-14 of the French Commercial Code, as such disposals are not provided for by its three-year business plan (the Business Plan); consequently, should such disposals appear necessary due to the evolution of market conditions that would impede implementation of the Business Plan, the Company would have to request the prior authorization of the Commercial Court of Paris;

confirmed that the Business Plan does not provide for any form of disposal of significant assets held in France or abroad, including by its direct or indirect subsidiaries; should the disposal of such significant assets be foreseen and likely to result in a substantial change to the means or goals of the draft Safeguard Plan, the Company would have to request the prior authorization from the Commercial Court of Paris, pursuant to article L.626-26 of the French Commercial Code; the Company will keep the necessary flexibility to take an active part, as the case may be, in the potential consolidation or other form of evolution that may occur in the seismic acquisition market;

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confirmed that pursuant to the draft Safeguard Plan and in light of the underlying market assumptions of its Business Plan, no social or industrial restructuring is contemplated in France, and that the Transformation Plan, which implementation was completed by the end of 2016, had already led to the reduction of the Group's workforce by half compared to the end of 2013; more precisely, unless otherwise authorized by the Commercial Court of Paris, the Company undertook to refrain from any redundancy plan in France until December 31, 2019 and to maintain, and to do what is necessary for the French law subsidiaries it controls within the meaning of article L.233-3 of the French Commercial Code to maintain the decision centers currently located in France, including the Company's registered office, until December 31, 2022; and

undertook (i) not to take any measure to oppose the governance undertakings made by the Signatory Creditors (as defined below), it being specified however, that the Company assumes no responsibility, and the Safeguard Plan will not be at risk of being terminated pursuant to articles L.626-25 and L.626-27 of the French Commercial Code in the event one or more third parties separate from the Signatory Creditors were to hold a sufficient number of voting rights to impose a composition of the board of directors of the Company that would differ from the one provided for under these undertakings, and (ii) to have Bpifrance Participations participate in the discussions that will take place notably with the Signatory Creditors with respect to the new composition of the Company's board of directors, in accordance with the provisions of the lock-up agreement referred to above.

The trustees in charge of overseeing the implementation of the plan (*commissaires à l'exécution du plan*), appointed by the Commercial Court of Paris, will issue a yearly report on the compliance with the undertakings that the Company makes under the Safeguard Plan and this letter, which have been acknowledged by the Commercial Court of Paris in its judgment approving the Safeguard Plan; any breach may potentially lead to the termination of the Safeguard Plan, in accordance with applicable laws and regulations. In accordance with article L. 626-26 of the French Code de commerce, any substantial change in the goals or the means of the Safeguard Plan can only be decided by the Court, further to a report by the *commissaires à l'exécution du plan*.

(ii) Undertakings of certain Senior Notes holders creditors

Each of (i) Attestor Capital LLP, (ii) Boussard & Gavaudan Asset Management LP, and (iii) DNCA Finance, Oralie Patrimoine and DNCA Invest SICAV (each, a Signatory Creditor) agreed to give the following undertakings on October 16, 2017, upon a request from the *Direction Générale des Entreprises*, which have been acknowledged by the Commercial Court of Paris in its judgment approving the Safeguard Plan on December 1, 2017:

to have Bpifrance Participations involved in the discussions that will be notably held with each of the Signatory Creditors regarding the Company's board of directors' new composition, in accordance with the provisions of the lock-up agreement referred to above;

to vote, during the first ordinary shareholders' meeting of the Company that will occur after the closing of the financial restructuring, in favor of the designation as director of candidates which will have been agreed between the Company's current board of directors and the relevant Signatory Creditor in the context of the above referred process;

neither the relevant Signatory Creditor nor its affiliates or related persons will be represented on the Company's board of directors unless such Signatory Creditor or the funds, entities or accounts managed or advised directly or indirectly by it or its affiliates (i) hold together 10% or more of the Company's share capital or (ii) demonstrate the existence of fiduciary duties (including the duties of the relevant funds' management companies to manage the money entrusted to them by investors in the best interest of such investors);

to vote in favor of any draft resolutions and, if necessary and subject to holding a sufficient shareholding in compliance with article L. 225-105 of the French Commercial Code, to submit any draft resolutions to the shareholders' meeting in order to maintain the Company's board of directors

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composed of 60% of independent directors and that such composition of the board continues to reflect, in accordance with the current situation, the diversity of geographical origins of the members of the board of directors, while complying with the Company's registered office location;

to vote in favor of any draft resolutions and, if necessary and subject to holding a sufficient shareholding in compliance with article L. 225-105 of the French Commercial Code, to submit any draft resolutions to the shareholders' meeting in order to ensure that the Company's articles of association provide that any chief executive officer (*directeur général*) succeeding, as the case may be, the current chief executive officer (*directeur général*), will have his main place of residence located in France.

The abovementioned undertakings of each of the Signatory Creditors became effective when all the transactions for the implementation of the Safeguard Plan were completed (with the exception of the first undertaking, which took effect as from countersignature of the letter by the Signatory Creditors). The undertakings will remain valid until December 31, 2019, subject to the corresponding Signatory Creditor remaining a shareholder of the Company, it being specified that no undertaking to keep shares of the Company has been entered into.

The trustees in charge of overseeing the implementation of the plan (*commissaires à l'exécution du plan*) appointed by the Commercial Court of Paris, will issue a yearly report on the compliance with the undertakings that the Signatory Creditors make under the abovementioned letters; any breach potentially leading to the termination of the Safeguard Plan, in accordance with applicable laws and regulations.

Each of the Signatory Creditors also declared that it does not act in concert with any other Signatory Creditor, with Bpifrance Participations, or with any other third party.

Business overview

The following is an overview of the business activities of our Equipment, Contractual Data Acquisition and GGR business segments. Our views regarding the state of the market in 2017 and the outlook for 2018 are forward-looking statements, based upon information available to us on the date of this annual report and are subject to risks and uncertainties that may change at any time.

Operating Revenues Data*Revenues by Activity*

The following table sets forth our consolidated operating revenues by activity in millions of dollars, and the percentage of total consolidated operating revenues represented thereby, for the periods indicated:

	2017	2016	2015
	MUS\$	MUS\$	MUS\$
Marine Contractual Data Acquisition	186	133	439
Land and Multi-Physics Acquisition	102	105	177
Contractual Data Acquisition segment revenues	288	238	616
Multi-client Data	469	383	546
Subsurface Imaging and Reservoir	351	401	562
Geology, Geophysics & Reservoir segment revenues	820	784	1,108
Equipment segment revenues	241	255	437
Eliminated revenues and others	(29)	(81)	(60)
Total operating revenues	1,320	1,196	2,101

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The following table sets forth our consolidated operating revenues by region in millions of dollars, and the percentage of total consolidated operating revenues represented thereby, for the periods indicated:

	2017		2016		2015	
	MUS\$	%	MUS\$	%	MUS\$	%
North America	353	27%	357	30%	528	25%
Central and South Americas	331	25%	170	14%	233	11%
Europe, Africa and Middle East	424	32%	482	40%	876	42%
Asia Pacific	212	16%	187	16%	464	22%
Total operating revenues	1,320	100%	1,196	100%	2,101	100%

The Group's clients can be broadly categorized as national oil companies, international oil companies (the Majors) and independent companies. In 2017, our top two clients represented respectively 10.4% and 8.6% of consolidated revenues, respectively.

During 2017, our French subsidiary CGG Services SAS, generated revenues equivalent to US\$31 thousand from software training provided to employees of an Iranian entity involved in the petroleum industry, and our French subsidiary Sercel SAS generated revenues equivalent to US\$36 thousand from repair and maintenance work on gauges for Iranian entities involved in the petroleum industry. We do not believe that any net profit is attributable to these activities. These subsidiaries may continue carrying out these activities in the future.

Figures relating to the geophysical market and to the competitive positioning of the Group's Equipment, Contractual Data Acquisition and GGR segments or the activities of these segments provided in this section have been derived from internal Group data.

Contractual Data Acquisition

Our Contractual Data Acquisition activity encompasses our geophysical acquisition services offering, including land, marine, airborne and seabed, being operated either directly or through joint ventures. Our worldwide crews operate in all environments. In land and marine environments, they use the latest geophysical equipment manufactured by Sercel.

Total revenues of the Contractual Data Acquisition segment amounted to US\$288 million in 2017.

Marine Data Acquisition Business Line*Overview*

Using the fleet described below, CGG provides a complete range of marine seismic 2D and 3D services, focusing on the Gulf of Mexico, the North Sea, West Africa and Brazil, as well as the Asia Pacific region. CGG also delivers marine seismic contract data acquisition in frontier areas.

Activity description

Marine seismic surveys are conducted through the deployment of submersible cables (streamers) and acoustic sources (airguns) from specialized vessels. These streamers are up to 12 kilometers long and carry hydrophone groups normally spaced 12.5 meters apart along the length of the streamer. The recording capacity of a vessel is dependent upon the number of streamers she tows and the number of acoustic sources she carries, as well as the configuration of her data recording system. By increasing the number of streamers and acoustic sources used, a vessel can perform surveys more rapidly and efficiently and acquire higher resolution data.

The commercial business model of this business line consists of working on an exclusive contractual basis with the client. The contract generally stipulates that we shall be paid according to a fixed rate, such as a daily fee or a fee per square kilometer acquired. The contract may protect us against operational elements beyond our control, such as bad weather or interference from other activities carried out in the oil field. The client owns the acquired data and pays us on the agreed basis. Our operating income from this activity is the difference between the cost to us and the final price of the survey.

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Group's fleet of seismic vessels

Fleet ownership changes

In April 2017, we entered into agreements with Eidesvik Shipping AS (Eidesvik), the lenders under our Nordic credit facility and the lenders under the credit facilities of Eidesvik Seismic Vessels AS (ESV) and Oceanic Seismic Vessels AS (OSV), in order to change the ownership structure of our marine fleet and restructure the related financial obligations under the Nordic credit facility related thereto (the Marine Fleet Restructuring). Under the new arrangements, GSS, a company organized under the laws of Norway and 50% owned by us (through our subsidiary, Exploration Investment Resources II AS) and 50% owned by Eidesvik, holds (i) CGG Geo Vessels AS (renamed Geo Vessels AS), our former wholly-owned subsidiary, which owns the five previously cold-stacked vessels (*Geo Coral* (having been re-rigged), *Geo Caribbean*, *Geo Celtic*, *CGG Alizé* and *Oceanic Challenger*), and (ii) ESV and OSV (in which we previously held direct 49% stakes), which respectively own the *Oceanic Vega* and *Oceanic Sirius* (together, the X-bow Vessels). GSS is not a subsidiary of CGG.

As part of the Marine Fleet Restructuring, the charter agreements for the X-bow Vessels were amended to, among other things, reduce the charter day-rate to a rate in line with the prevailing market rate in exchange for an extension of the charter agreements and certain payment obligations to ESV and OSV, which we settled through the Marine Fleet Restructuring. Through our subsidiary, CGG Services SAS, we continue to charter the X-bow Vessels from ESV and OSV, respectively, under the amended charter agreements. The obligations of CGG Services SAS under the amended charter agreements are subject to parent guarantees provided by CGG S.A. in favor of ESV and OSV.

The Marine Fleet Restructuring has also allowed us to complete the termination of the charter relating to the vessel *Viking Vanquish*, which had been cold-stacked, in exchange for a cash payment of a settlement amount to Eidesvik.

In addition, through CGG Services SAS, we also entered into an umbrella agreement with Geo Vessels AS to further reduce our charter costs, mainly through the re-profiling of the reimbursement schedule of the debt related to the vessels, together with an extension of the vessel employment commitments to ten years through charters of a duration of no more than 12 months. We provided a parent guarantee in respect of the obligations of CGG Services SAS (and any of our subsidiaries which enters into a charter under the umbrella agreement) under such umbrella agreement and bareboat charters thereunder. Under the umbrella agreement, we have begun to charter the *Geo Coral* from April 20, 2017. Furthermore, once the charters of the other vessels that we operate expire, we will charter the *Geo Caribbean* and the *Geo Celtic* from Geo Vessels AS.

In connection with the Marine Fleet Restructuring, Geo Vessels AS continues to be the borrower of the loan outstanding under our Nordic credit facility. The removal of Geo Vessels AS from our consolidated perimeter resulted in a reduction of the gross debt of the Group by US\$182.5 million, corresponding to the principal amount of loans under the Nordic credit facility outstanding as of March 31, 2017. We expect that the Marine Fleet Restructuring will further improve our competitiveness through the reduction of the charter day-rate for the X-bow Vessels and the 3D high-capacity seismic vessels and increase our cost-savings due to the reduction of charter liabilities of certain non-operated vessels and the externalization of cold-stacking costs, thus improving our liquidity in the short- and medium-term.

Proactive management of vessel charter costs

In addition to the Marine Fleet Restructuring, on January 20, 2017, we issued US\$58.6 million in aggregate principal amount of our 6.50% Senior Notes due 2021 to the relevant charter counterparties to reduce the cash burden of the charter agreements in respect of three cold-stacked seismic vessels, namely the *Pacific Finder*, the *Oceanic Phoenix*, and the *Viking Vanquish*. On March 13, 2017, we also issued US\$12.1 million in aggregate principal amount of our 6.50% Senior Notes due 2021 to the relevant charter counterparty to reduce the cash burden of the charter agreement in respect of the *Oceanic Champion*, an active seismic vessel.

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Status of the operated fleet as of December 31, 2017

On December 31, 2017, our operated fleet consisted of five 3D high-capacity seismic vessels (12 or more streamers), down from eight vessels at the end of 2015 as a result of our fleet reduction plan. This capacity is to a large extent dedicated to Multi-Client production.

All 3D high capacity vessels are equipped with Sentinel solid streamers, which provide several advantages over other industry streamers, such as acquiring surveys in tougher sea conditions, improving the frequency content and improving signal-to-noise ratio of the recorded data, and minimizing environmental impacts. All our vessels can deploy our broadband marine solutions, which combine industry-leading equipment, unique variable depth streamer acquisition techniques and proprietary deghosting and imaging technology. 100% of our fleet is also capable of deploying BroadSource, which, combined with BroadSeis, provides the ultimate in broad-bandwidth, ghost-free seismic data, achieving a bandwidth of 2-200 Hz. QuietSea, the most advanced passive acoustic monitoring (PAM) system designed to detect the presence of marine mammals during seismic operations, which enables superior performance in minimizing environmental impact, is installed on four vessels.

In connection with the fleet downsizing plans initiated in 2014 and our adaptation to market conditions, which remain extremely difficult, the following measures were taken during the year 2017:

The *Pacific Finder*, which halted operations in April 2016, was re-delivered to its owner in March 2017;

The *Geo Caspian* halted operations as a seismic vessel in March 2017 and was re-delivered thereafter;

The *Geo Coral* was re-introduced on April 1, 2017, as per the plan to keep the fleet at five seismic vessels.

Maritime management of the operated fleet

On December 31, 2017, the maritime management of the seismic fleet operated by the Group (*Oceanic Sirius*, *Oceanic Vega*, *Oceanic Endeavour*, *Oceanic Champion*, and *Geo Coral*) was managed by our joint venture ship managers CGG Eidesvik Ship Management AS.

Bourbon Offshore operates six support and chase vessels (ancillary services including refueling, food and equipment delivery, crew change, storage, assistance and support during in-sea maintenance operations, protection of streamers from interactions with third party vessels and fishing devices), designed specifically for CGG, chartered individually for a minimum period of five years since their initial progressive deployment between 2013 and 2014.

Ownership status of the fleet

At December 31, 2017, we owned the *Geowave Voyager* and 50% shares in GSS which directly holds 100% of the shares of the companies that own the *Oceanic Sirius*, *Oceanic Vega*, *Geo Coral*, *Geo Caribbean*, *Geo Celtic*, *CGG Alizé* and the *Oceanic Challenger*.

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The following table provides certain information concerning the seismic vessels operated by CGG or cold stacked as of December 31, 2017.

Vessel name	Year built	Year upgraded	Year joined fleet	Time charter / Bareboat expiry	Extension options ^(a)	2D/3D	Maximum no. of streamers ^(b)	Vessel length (m)
<u>Operated vessels</u>								
<i>Oceanic Champion</i>	1994	2012	2009	June 2020	n.a.	3D	14	107
<i>Oceanic Endeavour</i>	2007	2011	2009	April 2018 ^(c)	1 year and then 2 × 5 years ^(c)	3D	16	92
<i>Oceanic Vega</i>	2010	n.a.	2010	March 2027	4 × 5 years	3D	20	106
<i>Oceanic Sirius</i>	2011	n.a.	2011	March 2027	4 × 5 years	3D	20	106
<i>Geo Coral</i>	2010	n.a.	2013	March 2018 ^(c)	n.a. ^(d)	3D	16	108
<u>Stacked vessels</u>								
<i>Geowave Voyager</i>	2005	2009	2009	Owned	n.a.	3D	12	83
<i>Oceanic Phoenix</i>	2000	2011	2009	March 2019	10 × 1 year	3D	14	101
<i>Viking Vanquish</i>	1999	2007	2007	November 2020	n.a.	3D	12	93

^(a) In years.

^(b) Equal to number of tow points.

^(c) An addendum no. 2 to the bareboat charter was signed on December 21, 2017 in order to allow for the extension of the charter duration until December 31, 2018, at a reduced rate of US\$25,000 per day from April 11, 2018, with the possibility of early termination any time after such date with 30-day notice and without penalties.

^(d) Within the framework agreement in the joint venture with Eidesvik, we committed to charter a certain number of vessel months per year until March 2027. The chartered vessels, the first being the *Geo Coral*, are contracted on the basis of a one-year, renewable, bareboat agreement. The *Geo Coral* charter will be automatically extended by one year on April 1, 2018 and the *Geo Caribbean* will be chartered for one year on the same date.

As of December 31, 2017, the following vessels were either fully owned or hired under bareboat charter:

The *Oceanic Sirius*, the *Oceanic Vega* and the *Geo Coral* were chartered bareboat by GSS or one of its subsidiaries;

The *Oceanic Champion* was chartered bareboat from Oceanic Champion AS;

The *Oceanic Endeavour* was chartered bareboat from Volstad Maritime DIS II AS;

The *Viking Vanquish* was chartered bareboat from Eidesvik MPSV AS;

The *Oceanic Phoenix* was chartered bareboat from Master and Commander AS; and

The *Geowave Voyager* was owned by Exploration Vessel Resources II AS.

Competition and market

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Five companies (CGG, PGS, WesternGeco, Polarcus & Shearwater) comprised around 70% of the 3D marine market at the end of 2017. During early 2018, Schlumberger (WesternGeco) announced that it would be exiting the seismic vessel market and was evaluating options for divesting its acquisition business within an undetermined time frame. With still roughly 10 good cold stacked vessels which can quickly return to service, vessel supply is expected to remain elastic, which should limit a price rebound.

The contraction in demand in the marine seismic acquisition market observed since 2014 continued in 2017 as a result of persisting low oil prices and the budget constraints of oil and gas companies. The imbalance

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between supply and demand continued in 2017, despite the continued process of stacking, temporarily or permanently, and derigging of seismic vessels by most of the players. The low price levels observed in 2015 and 2016 were sustained throughout 2017. The low fleet activity rates similarly continued in 2017, particularly in the fourth quarter where competitor utilization dipped below 50% in some cases. We were able to outperform this trend with an industry leading 93% utilization rate for the full year 2017 for our 3D fleet.

Total revenues of the Marine Contractual Data Acquisition business line amounted to US\$186 million in 2017, representing 65% of the total production of the Contractual Data Acquisition segment.

52% of our 3D fleet's utilization was dedicated to exclusive marine acquisition contracts and 48% was dedicated to acquiring multi-client surveys.

2018 outlook

The Industrial Transformation Plan was completed in 2017 with the Marine business line reorganized and size-adjusted for the current market environment.

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

Land Data Acquisition and Multi-Physics Business Lines

Overview

Land Data Acquisition is principally focused on the acquisition and onsite processing of seismic data acquired on land areas. We are one of the main land seismic acquisition contractors operating worldwide, especially in desert areas, and particularly in areas requiring specific technologies, Health, Safety and Environment (HSE) excellence, highly qualified personnel and operational expertise. Our operations in high-resolution crews market in North Africa and the Middle East are good examples of our positioning. We now intend to reinforce on technological differentiation.

Multi-Physics acquisition operates globally and is principally focused on the acquisition, processing and interpretation of airborne geophysical data on land or offshore, and on providing marine gravity and magnetic acquisition services onboard seismic vessels or independently, as well as the processing of such data. Multi-Physics also provides advanced modeling, interpretation and commercial software services for potential fields and electromagnetics geophysical data and licenses data from a gravity and magnetics multi-client data library. We are one of the largest airborne acquisition contractors, operating worldwide and offering a diverse portfolio of airborne geophysical technologies, with particular emphasis and expertise in electromagnetics and gravity. In 2017, our activities were conducted out of operational centers located in Canada, the United States, Brazil, Italy and Australia, and are based on a foundation of HSE excellence.

In 2017, apart from operations in partnership, we operated on average two to three active land crews performing 3D and 2D seismic surveys (on exclusive contract surveys). Our Multi-Physics business line fleet was gradually reduced from 16 to 10 airplanes over the course of the year as we continued to sell some non-core aircraft.

Activity description

Land Data Acquisition

Land operations employ both surveying and recording crews. Surveying crews lay out the lines to be recorded and mark the sites for shot-hole placement or recording equipment location (except for stakeless

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operations where the source locations are indicated through integrated GPS capabilities rather than on location by field personnel). Recording crews produce acoustic impulses and record the seismic signals via geophones or hydrophones. The acoustic sources used are mainly vibrators onshore, and explosives and air guns in transition areas. On a land survey where explosives are used as the acoustic source, the recording crew is supported by several drill crews. Drill crews operate ahead of the recording crew and bore shallow holes for explosive charges which, when detonated by the recording crew, produce the necessary acoustic impulse.

Land seismic crews are equipped with advanced equipment and software used for each step of the acquisition process. Also, patented high-end vibroseis technologies seek to increase significantly the productivity of a crew. EmphaSeis and CleanSweep seek to enhance the resolution of the data through broadening and cleaning the frequency content of the signal emitted.

By combining specific acquisition geometries and processing technologies as well as on-site processing software for acquired data, we have a unique capability to offer fully integrated solutions, improving both data quality and turn-around time, thus accelerating the exploration cycle.

Operations in the Middle East are conducted in partnership with the Saudi company TAQA through the Argas joint venture.

Seabed acquisitions are operated through Seabed JV which is owned 60% by Fugro and 40% by us.

Multi-Physics

Multi-Physics encompasses four segments of activity and provides services worldwide:

Airborne activity encompasses the collection, processing and interpretation of data related to the earth's surface and the soils and rocks beneath, and provides advice based on the results to clients in the mineral, oil and gas, geothermal, governmental, engineering and environmental management sectors. We acquire electromagnetic, magnetic, radiometric and gravity data using fixed-wing airplanes and helicopter platforms. The airplanes we operate have been modified with integrated geophysical measurement systems incorporating elements of internal design and manufacture. Helicopter projects are supported using subcontracted or chartered helicopters, as the geophysical instrument systems designed for use on helicopters can be installed without significant modifications to the aircraft.

Marine activity encompasses the acquisition and data processing of marine gravity and magnetic data in conjunction with seismic surveys or on a stand-alone basis.

Imaging activity involves the development and licensing of leading commercial software packages for potential fields and electromagnetic modelling and inversion, as well as interpretation services provided on data collected directly by Multi-Physics or from other sources.

Multi-client activity involves the licensing of data from an owned library of gravity and magnetics data covering many areas of interest for oil & gas and minerals exploration.

These services are offered on a global basis. Efficient global deployment of our aviation resources is facilitated by operational units and aviation management facilities in both Canada and Australia, with the management responsibility and the majority of operational resources located in the two main logistics hubs in Toronto and Perth.

In Multi-Physics, we operate under two business models:

The first business model consists of working on an exclusive contractual basis with the client. The contract usually stipulates that we will receive a fixed remuneration per acquired linear kilometer, on client specifications. The client owns the acquired data and pays us on the agreed basis. Our operating income is the difference between the cost to us and the final price of the survey.

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The second business model consists of operating under a multi-client model, with multiple clients prefunding the acquisition. In this case, the surveying and recording activities are performed by the Acquisition business line as an internal service for the MCNV business line, which among other things develops and sells a library of geophysical surveys. We remain the owner of the data thus acquired.

Competition and market

The land acquisition market is fragmented and extremely competitive with the presence of both international and local players. In addition to CGG, the other significant service providers in the land seismic market worldwide are BGP, Sinopec, Geokinetics, WesternGeco, SAE and Argas (our joint venture with TAQA in the Middle East), and in the seabed acquisition market are Seabed Geosolutions BV, Fairfield and Magseis.

In this market, we believe that technology, quality of the crews, services provided and prices are the main differentiators, while the relationship with local suppliers and the expertise of personnel in complex areas are additional advantages. Our offerings are based on a technology and geographical focus with high-end activities often operated through local partnerships. We have developed a unique expertise in the Middle-Eastern and North African deserts. In a context of degraded oil prices, those regions still hold the best potential for growth, driven by the demand for high-end seismic and high-channel count crews. In 2017, we successfully developed a lighter product offering offer based on Sercel wireless technology particularly well suited for small 2D and 3D volumes in constrained environments, such as urban areas or areas otherwise difficult to access.

The airborne acquisition market is fragmented and extremely competitive with the presence of a handful of international players, as well as many smaller and regionally focused competitors. In general, primarily due to technical specialization, most competitors have their primary focus and activity in either the mining, oil and gas, or government sectors, but not in all.

We believe we are the only market player with a strong position in all major market sectors and geographic regions. The diversified market sector and geographic region presence lessens the impact of the historically significant fluctuations in airborne market activity by sector and region.

In the mining and oil and gas sectors, technology, service capability and prices are the main differentiators. For governmental sector work, price and capacity are the main differentiators on projects which are typically large in size and require commoditized technologies.

In 2017, land activities may be described by the following main elements:

In North Africa, the prudence of the operators in Tunisia, and program delays combined with fierce competition in Algeria did not allow us to reproduce the levels of activity in the region of the past years;

In the Middle East, certain national oil companies remained in waiting mode and continued their policy of delaying high channel count crews, whereas Saudi Aramco maintained a strong level of activity in Saudi Arabia; a fair level of activity was nevertheless maintained in Egypt where we introduced the first high resolution crew using unconstrained blended acquisition;

In Europe, we launched our return through Italy followed by France with one light wireless crew; and

In South East Asia, activity in Papua New Guinea started again with a high added value crew throughout the year. Otherwise, we successfully completed a 2D acquisition contract in Vietnam, with our local partner.

Activities for Multi-Physics in the mining sector remained at low levels for most of 2017, due to low levels of overall expenditure on exploration by both junior and major mining companies. However, increases in exploration budgets by major mining companies led to an increase in airborne activity towards the latter part of

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2017, a trend which is expected to continue into 2018. The oil and gas sector provided a weak level of airborne activity in direct relation with reduced exploration caused by continued low oil prices and uncertainty in the market. Governmental sector activities for airborne provided only minor contributions in 2017.

The field of acquisition and data processing of marine gravity and magnetics continued to be affected by the overall reduction of the worldwide fleet of seismic vessels and remained at low levels of activity.

Total Land Data Acquisition and Multi-Physics production (both contract and multi-client surveys) accounted for US\$102 million in 2017, representing 35% of Contractual Data Acquisition operating revenues.

2018 outlook

Our land acquisition services still occupy a good position geographically (North and sub-Saharan Africa and niche markets in Southeast 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, while also continuing our diversification outside of the oil & gas segment in a market which will nevertheless remain very competitive.

In multi-physics, we remain geographically and technologically well placed, and should benefit from our 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.

Geology, Geophysics & Reservoir (GGR)

Overview

With its worldwide footprint, our GGR segment engages in many activities assisting our clients in identifying their exploration targets and characterizing their reservoirs. Among these are: developing and licensing multi-client seismic surveys; processing seismic data; selling seismic data processing and reservoir characterization software (primarily under the *geovation*, Hampson-Russell and Jason brands); providing geoscience and petroleum engineering consulting services; collecting, developing and licensing geological data (under the Robertson brand) and providing data management services and software to our clients.

With its extensive scope of competencies, our GGR segment is the cornerstone of the integrated geoscience services that we offer to our clients.

General description of activities

Multi-Client and New Ventures (MCNV)

The MCNV business line utilizes the resources of our other business lines as well as those of sub-contractors to acquire and process seismic data for itself and license that data to our clients. Additionally MCNV may contribute or otherwise use its multi-client data in certain ventures with third parties (the *new ventures* in the business line name) in order to achieve enhanced returns. Such new ventures may take different forms, provided that they will not expose us to any drilling or other typical oilfield operation risk.

The multi-client licenses are for lengthy terms, the maximum allowable under local law, typically ranging from 5 to 25 years. The licenses are non-transferable, and the data may not be shared with partners who do not

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own a license. Oil company partnerships of various forms are a common arrangement, especially in difficult and expensive exploration plays. The business model works well in venues where there is one or more of the following: significant levels of competition between oil companies exploring for assets; frequent lease turnover due to government lease rounds or lease trading activity between oil companies; frequent partnering between oil companies; and relatively high costs for seismic data.

The costs of the multi-client surveys are capitalized on MCNV's balance sheet and then amortized. Until the end of 2015, amortization was, generally, at a rate of 80% of revenue, subject to a maximum five or seven year straight-line depreciation. The depreciation method was adjusted in 2016 due to the requirements of the amendment of IAS 38, but the essential process was unchanged. Details of our multi-client accounting methods are fully described in note 1 to our consolidated financial statements included in this report. In 2017, MCNV capitalized US\$281 million of total costs, of which US\$251 million represented cash expenditures, and amortized US\$298 million to cost of sales, including US\$23 million of impairment charges.

MCNV operates in marine environments on a worldwide basis and on land in the United States. It has significant investments in the Gulf of Mexico, offshore Brazil, the North Sea and onshore United States. Maps and details of all surveys in our data library are available on our website. At the end of 2017, the library of 3D seismic surveys consisted of approximately 978,000 square kilometers of marine surveys across numerous basins and 76,000 square kilometers of land data, mostly in the United States. During the fourth quarter of 2015, MCNV sold its Canadian land data and exited that market.

Subsurface Imaging and Reservoir (SIR)

Through its SIR activity, CGG transforms marine and land seismic data acquired in the field into high quality images of the subsurface that can then be used by our clients in their efforts to find and produce oil and gas. These images provide a means to understand the structure of the subsurface as well as deduce various qualities of the rocks and fluids in those structures. We process seismic data acquired by our land and marine seismic acquisition crews as well as seismic data acquired by non-affiliated third parties. In addition, we reprocess the previously processed data using new techniques to improve the quality of seismic images.

We conduct our seismic imaging operations out of 4 large international centers located in Houston (USA), Crawley (England), Massy (France) and Singapore, and 15 regional centers spread around the world. In addition to this network of open centers, serving all clients, we operate 9 centers each dedicated to serving a single specific client. This geographic spread of centers allows for a great amount of collaboration with our clients as we jointly seek to produce the best subsurface images.

In addition to subsurface imaging, we offer geophysical consulting services. Using seismic data in conjunction with other information such as well logs, we are able to determine various rock and fluid properties and thereby assist our clients in characterizing their oil and gas reservoirs.

In addition to geophysical data, the Group, under the Robertson brand, develops and maintains large libraries of various types of geological data covering most geographic areas of interest to petroleum and mining companies. We license this data to clients, who generally use it in the early stages of their exploration efforts, often as a precursor to seismic exploration. Our geologists and other geo-professionals also engage in many types of proprietary studies for clients.

CGG also sells seismic data processing software, under the *geovation* brand and sells software for reservoir characterization, interpretation, and modeling under the Hampson-Russell, Jason, Insight Earth and Velpro brands, allowing clients to produce reservoir studies.

Finally, CGG is engaged in the business of providing data storage & retrieval solutions, and data transformation services to oil companies and oil oriented government agencies under the Smart Data Solutions brand. The explosion in volume of data of all types and the need to re-format large volumes of old data for use in current applications make this activity an interesting area for future growth.

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CGG operates in those geographic and technical areas where its specific offerings can deliver significant value to customers. Based on customer feedback and industry surveys, we believe that our SIR activity is regarded as the technical leader in markets where it participates.

Competition and market

MCNV's main competition comes from Schlumberger (WesternGeco), PGS and TGS. Competition in the multi-client business is focused on location and availability of surveys, technology used in acquisition and processing, and price. The four main companies generally compete in all areas of the world where the multi-client business model is practical.

The SIR sector is led by CGG and WesternGeco. Competition in the high end of seismic imaging, where SIR focuses its business, tends to be based on technology and service level, areas where we have an outstanding reputation.

Processing capacity has multiplied in recent years as a result of improvements in computing technology. This increase in computing power has allowed improved processing quality through the use of more complex and accurate algorithms. We believe SIR is the market leader in application of the most advanced processing techniques.

SIR occupies a strong position in the relatively narrow market of seismic reservoir characterization software (Hampson-Russell, Jason and Insight Earth). The overall seismic and geological interpretation software market is dominated by Schlumberger and Halliburton, with numerous small players competing with niche applications. Many of these, including SIR's, are designed to be compatible with the Schlumberger and Halliburton systems.

GGR revenues in 2017 amounted to US\$820 million, an increase of 5% compared to 2016. GGR revenues represented 62% of the consolidated revenues in 2017. MCNV generated US\$469 million of this revenue (a 22% increase compared to 2016) and SIR generated US\$351 million (a 13% decrease compared to 2016).

MCNV invested US\$251 million in seismic data libraries in 2017, with a cash prefunding rate of 107%. After sales revenue, revenue from completed surveys, was US\$200 million in 2017. The net book value of the seismic multi-client library was US\$831 million at the end of the year.

2018 outlook

Increasing oil and gas prices have significantly improved the profitability and cash flow within GGR's customer base, which should lead to an improved market for GGR. However, most large clients are publicly stating that they will maintain tight spending discipline and will structure their companies to prosper at commodity prices lower than today's prices. Nonetheless, GGR's major customers are actively engaged in exploration in basins where they can access large reservoirs under reasonable commercial terms, a trend which we believe will continue. Particular areas meeting these criteria are the deepwater areas of Mexico and the pre-salt areas offshore Brazil, where GGR is particularly well positioned with advanced multi-client data sets. We believe GGR will also continue to see high demand for our products and services in Norway and we will see a resurgence of demand in the UK sector of the North Sea.

Many customers are focusing their exploration and production budgets on increasing production from current installations, and GGR benefits from services and imaging projects, given our leading ocean bottom nodes processing capability, as well as large multi-client projects over mature areas. Our clients also invest heavily in their land operations in the United States where our contributions are more modest, but GGR has established, and is continuing to invest in, a significant data library position in the popular onshore unconventional plays in the United States.

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Our top line strategy for the GGR activities in 2018 continues to be:

Maintain our investment in new MCNV surveys, at an acceptable level of pre-funding;

Continue to invest in research and development and people to maintain our lead in high end imaging and advance our software offering;

Expand our reservoir and geological operations through increased multi-client / subscription product investment and the geographic expansion of certain technologies; and

Gain more value from integrated offerings.

Equipment Business Line

Overview

We conduct our equipment development and production operations through Sercel and its subsidiaries. We believe Sercel is the market leader in the development and production of seismic equipment in the land and marine seismic markets. Sercel makes most of its sales to purchasers other than CGG. As of December 31, 2017, Sercel operated six seismic equipment manufacturing facilities, located in Nantes and Saint Gaudens in France, Houston and Tulsa in the US, Krimpen aan de Lek in The Netherlands and Singapore. In China, Sercel operates through Hebei Sercel-JunFeng Geophysical Prospecting Equipment Co. Ltd. (Sercel-JunFeng), based in Hebei, in which Sercel has a 51% equity stake. In addition, two sites in Toulouse and Brest (France) are dedicated to borehole gauges and submarine acoustic instrumentation, respectively.

General description of activities

Sercel sells its equipment and offers customer support services including training on a worldwide basis. Sercel offers a complete range of geophysical equipment for land or marine seismic data acquisition, including seismic recording equipment, software and seismic sources either for land (vibrators) or marine (air guns). Sercel also supplies its clients with integrated solutions.

With respect to land acquisition equipment, Sercel launched, in the fall of 2013, the latest generation of its recording system, the 508^{XT} system, which introduces a new paradigm in land seismic acquisition by offering high count channels crews the ability to record up to one million channels in real time, resulting in a new level of image resolution. First deliveries for this new system occurred during 2014 and in January 2016 the system achieved the one million VPs (Vibrated Points) on a high density survey with a high channel count. The 508^{XT} is the first member of Sercel's new generation of state-of-the-art land seismic acquisition systems designed to drive crew productivity, operating flexibility and data quality to a new level.

The 508^{XT} has an adaptive architecture and the option of mixing different communication media (cable, radio, and fiber-optic) to form a true network allowing the user to define data routing and hence avoid obstacles in the field.

Sercel also introduced, along with its new acquisition system, QuietSeis, a new, high-performance digital sensor based on next-generation MicroElectroMechanicalSystems (MEMS), allowing seismic signals to be recorded with three times less instrument noise than before.

The 508^{XT} architecture combines the best of both cabled and wireless technologies. In June 2017, Sercel announced the launch of a new node, the WTU-508, which is fully integrated into the existing 508^{XT} platform. This new product offers even greater flexibility for all types of survey operations, such as complex small-scale urban surveys or high-productivity mega-crews. The WTU-508 also features Sercel's new XT-Pathfinder transmission management technology, which provides quality control information to the land seismic recorder wirelessly and without the need for any additional infrastructure.

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Sercel is also a market leader for vibroseismic vehicles used as seismic source in land and for vibrator electronic systems VE 464. Sercel's latest vibrator family, called Nomad, offers high reliability and unique ergonomic features. Nomad is available with either normal tires or a tracked drive system. The track drive system allows Nomad vibrators to operate in terrain not accessible to vehicles with tires. In sand dunes or arctic conditions, this can improve crew productivity. The Nomad was designed to optimize reliability and maintenance in order to allow an intensive use on the field. As of December 31, 2017, more than 1,160 Nomad 65 were delivered since its market introduction. Sercel also offers the Nomad 90 which is capable of exerting a peak force of 90,000 pounds and is believed to represent the heaviest vibrator on the market. The Neo version of the Nomad 65 and 90 allows the generation of a wider range of seismic wave frequencies and is therefore a facilitator for broadband seismic land surveys and adds new functionalities that improve productivity and reliability. In June 2014, Sercel also launched the Nomad 15, a small and highly maneuverable version of a vibrator.

In addition to recording systems and vibrators, Sercel develops and produces a complete range of geophysical equipment for seismic data acquisition and other ancillary geophysical products such as geophones, cables and connectors. The acquisition of a 51% stake in Sercel-JunFeng, based in China, in 2004, reinforced our manufacturing capabilities for geophone, cables and connectors, as well as our presence on the Chinese seismic market. Sercel also offers the SG5 geophone featuring a low natural frequency.

In the down-hole domain, Sercel offers its latest generation VSP tool, MaxiWave, which has received positive reviews from clients. The Geowave II, launched in 2015, is the first digital multilevel borehole tool specifically designed for high temperature, high pressure wells. Sercel built on its diversification into the well environment and more specifically the artificial lift in acquiring Geophysical Research Corporation in January 2012.

With respect to marine equipment, the Seal system is currently the sole system with integrated electronics. In 2005, Sercel launched the Sentinel solid streamer that is the outcome of the technological synergies realized in acquisitions performed in recent years. The Sentinel cables have become a standard in the accessible market. The Sentinel RD is another generation of the Sentinel solid streamer which offers a reduced diameter and lower weight.

In June 2013, Sercel introduced the Sentinel MS, a Sentinel with multi-sensors together with two additional acceleration components, providing directive measurement for both cross line and vertical wave front. This streamer technology delivers multi-sensors data sets for enhanced broadband imaging.

On April 4, 2017, Sercel has further enhanced its cables offer with the Sentinel HR, the new high-resolution solid streamer designed to meet the specific imaging needs of shallow-target applications, such as oceanology, civil engineering and reservoir characterization, as well as high-resolution 3D (HR3D) seismic surveys for detailed mapping of geological features. The latest member of the Sentinel streamer family has been developed with a close channel separation of 3.125 meter to achieve reliable and cost-effective high-resolution surveys.

The marine range of products has been further improved with the SeaProNav, a navigation software allowing the real-time positioning of streamers, the Nautilus, a totally integrated system for positioning seismic streamers and QuietSea, a passive acoustic monitoring system for detecting the presence of marine mammals during marine seismic surveys.

The SeaRay is an ocean bottom cable offered under several configurations for depth of 100 to 500 meters. This cable is based on the 428 family acquisition systems technology and allows multi-components recording owing to its DSU 3 components. In October 2015, Sercel launched the GeoTag product, an acoustic solution for seabed seismic acquisition up to 500 meters depth.

As a result of many acquisitions since 2000, Sercel is a market leader in the development and production of both marine and land geophysical equipment. It is a global provider for the seismic acquisition industry with a

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balanced industrial position in terms of both product range and geographical presence on the shores of the Atlantic and in Asia Pacific. Sercel also relies on strategic partnerships to move beyond the oil exploration markets. To that end, an alliance was formed at the end of June 2017 with EFI Automotive, a French company that has created Axandus (a startup accelerator), in order to setup a similar entity within Sercel's premises in the western part of France. Its aim is to assist startups in their industrialization process in the fields of mechatronics and connected devices. Axandus' clients benefit from access to the panel of skills and resources of Sercel in business development, design, prototyping, design to cost, industrialization, manufacturing and international supply chain.

Sercel has also, on November 2017, entered into a partnership with UK-headquartered Fotech Solutions to jointly develop a future borehole seismic solution combining electronics and distributed acoustic sensing (DAS) technology. Within the partnership, Fotech Solutions will contribute DAS measurement solutions and Sercel will contribute downhole seismic tools & software for subsurface seismic operations. This combination of expertise will lead to revolutionary new technology developments for both the borehole seismic exploration and microseismic monitoring markets.

Competition and market

We estimate that the worldwide demand for geophysical equipment has stabilized in 2017 after a decrease of 41% in 2016. This low level of activity is due to a weakness of demand for land seismic equipment with the absence of new high-channel count megacrews operating in the Middle East and to the collapse of the marine demand due to the reduction of the global seismic fleet. We estimate that Sercel's market share remains above 50%.

Our main competitors for the manufacture of marine seismic equipment are Ion Geophysical Inc., Teledyne and WesternGeco, which now offers its streamers for sale to third parties. For land products, the main competitors are Inova (a joint venture between BGP and Ion Geophysical Inc.), Geospace Technologies Corporation, Wireless Seismic and WesternGeco. The market for seismic survey equipment is highly competitive and is characterized by continual and rapid technological change. We believe that technology is the principal basis for competition in this market, as oil and gas companies have increasingly demanded new equipment for activities such as reservoir management and data acquisition in difficult terrain. Oil and gas companies have also become more demanding with regard to the quality of data acquired. Other competitive factors include price and customers' support services.

The total production of the Equipment business line (Sercel), including internal and external revenues, amounted to US\$241 million, a 5% decrease compared to 2016.

Sercel external revenue amounted to US\$215 million, an increase of 20% compared to 2016, and representing 16% of our consolidated revenue in 2017.

2018 outlook

In 2018, we expect that 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 for new equipment after years of under investment. Sercel should also benefit from the sales of 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 moderately decrease as no major order will be coming from CGG and Sercel's clients are facing financing difficulties. 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.

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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.

Seasonality

We have historically experienced higher levels of activity in our equipment manufacturing operations in the fourth quarter as our clients seek to fully deploy annual budgeted capital. The same happens in our multi-client activity with oil and gas companies that seek to fully deploy their exploration budget in the last quarter of the year.

Intellectual property

We continually seek the most effective and appropriate protection for our products, processes and software and, as a general rule, will file for patent, copyright or other statutory protection whenever possible. Our patents, trademarks, service marks, copyrights, licenses and technical information collectively represent a material asset to our business. However, no single patent, trademark, copyright, license or piece of technical information is of material importance to our business when taken as a whole. These patents last up to 20 years, depending upon the date filed and the duration of protection granted by each country.

Competition

Most contracts are obtained through a competitive bidding process, which is standard for the industry in which we operate. Important factors in awarding contracts include service quality, technological capacity, performance, reputation, experience of personnel, customer relations and long-standing relationships, as well as price. While no single company competes with us in all of our segments, we are subject to intense competition with respect to each of our segments. We compete with large, international companies as well as smaller, local companies. In addition, we compete with major service providers and government-sponsored enterprises and affiliates. See [Business Overview](#) for a discussion of the competitive factors in each of our business segments.

Organizational structure

CGG S.A. is the parent company of the Group. Its principal subsidiaries are as follows:

Subsidiary	Jurisdiction of		% of interest
	Organization	Head office	
Sercel SAS	France	Carquefou, France	100.0
CGG Services SAS	France	Massy, France	100.0
CGG Holding B.V.	Netherlands	The Hague, the Netherlands	100.0
Exploration Investment Resources II	Norway	Oslo, Norway	100.0
CGG Services (Norway) AS	Norway	Oslo, Norway	100.0
Sercel Inc.	United States	Oklahoma, USA	100.0
CGG Holding (U.S.) Inc.	United States	Delaware, USA	100.0
CGG Services (U.S.) Inc.	United States	Delaware, USA	100.0
CGG Mexico, SA de CV	Mexico	Mexico City, Mexico	100.0
CGG do Brasil Participações Ltda.	Brazil	Rio de Janeiro, Brazil	100.0
CGG Services (UK) Ltd	UK	Crawley, UK	100.0

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The following table sets forth certain information relating to the principal properties of the Group as of December 31, 2017:

Location	Type of facilities	Size (sq.m.)	Owned/ Leased	Lease expiration date
France, Paris	Headquarters of CGG S.A.	1,655	Leased	2021
Geophysical Services (Contractual Data Acquisition and GGR Segments)				
Australia, Perth	Registered office of CGG Services (Australia) Pty Ltd and Data processing center	2,200	Leased	2024
Australia, Jandokot Airport, Perth	Warehouse	6,276	Leased	2019
Brazil, Rio de Janeiro	Registered office of CGG do Brazil Participações LTDA and Data processing center	1,522	Leased	2021
Canada, Calgary	Registered office of Hampson Russell Ltd Partnership and Data processing center	8,701	Leased	2018
China, Beijing	Registered office of CGG Services Technology (Beijing) Co, Ltd and Research and development center	1,470	Leased	2020
England, Redhill	Administrative offices and Operations computer hub	1,884	Leased	2029
England, Crawley	Registered office (Crompton Way) of CGG Services (UK) Ltd. and Data processing center	7,432	Leased	2028
France, Massy	Registered office of CGG Services SAS and Data processing center	17,850	Leased	2020
India, Mumbai	Registered office of CGG Services India			
	Pvt Ltd and Data processing center	1,675	Leased	2018
Indonesia, Jakarta	Registered office of PT Veritas Mega Pratama and Data processing center	678	Leased	2020
Malaysia, Kuala Lumpur,				
Kuching	Registered office of CGG Services (Malaysia) Sdn Bhd and Data processing center	1,755	Leased	2020
Mexico, Villahermosa	Data processing center and offices	1,788	Leased	2018
Mexico, Mexico City	Registered office of CGG de Mexico SA de CV	142	Leased	2018
Netherlands, La Hague	Offices	1,580	Leased	2019
North Wales, Anglesey	Data management Solutions	4,362	Owned	N/A
North Wales, Llanrhos	Offices and laboratories	2,800	Leased	2030
North Wales, Conwy	Offices/storage facility	2,829	Owned	N/A
Norway, Oslo	Registered office of CGG Services (Norway) AS, Wavefield Inseis AS, CGG Marine Resources Norge AS, Exploration Vessel Resources II AS, Exploration Investment Resources II AS	5,200	Leased	2024

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Location	Type of facilities	Size (sq.m.)	Owned/ Leased	Lease expiration date
Russia, Moscow	Registered office of CGG Vostok and			
	Data processing center	1,600	Leased	2018
Scotland, Aberdeenshire	Birchmoss offices	3,065	Leased	2018
Singapore	Registered office of CGG Services (Singapore) Pte.			
	Ltd. and Data Processing Center	9,782	Leased	2019
Singapore	Logistic Marine Warehouse	2,605	Leased	2018
Switzerland, Geneva	Registered office of CGG International	606	Leased	2022
Thailand, Bangkok,	Offices of CGG Services SAS (branch)	82	Leased	2019
USA, Houston, Texas	Principal executive offices of CGG Services (U.S.) Inc.			
	and data processing center	39,569	Leased	2024
USA, Schulenburg	Warehouse	28,230	Owned	N/A
Equipment Segment				
China, Xu Shui	Manufacturing and research and development facilities	59,247	Owned	N/A
France, Carquefou	Sercel manufacturing and research and development facilities recording equipment (land and marine)	25,005	Owned	N/A
France, Saint-Gaudens	Sercel manufacturing and research and development facilities	23,051	Owned	N/A
USA, Houston, Texas,				
(ParkRow)	Offices and manufacturing premises of Sercel	39,344	Owned	N/A

We also lease other offices worldwide to support our operations. We believe that our existing facilities are adequate to meet our current requirements.

Information concerning our seismic vessels is set out under [Business Overview](#) [Contractual Data Acquisition](#) [Marine Data Acquisition](#) [Business Line](#) above.

Environmental matters and safety

CGG has a structured approach to HSE, built on our HSE Operating Management System (HSE-OMS). The HSE-OMS is consistent with the International Oil & Gas Producers (IOGP) guidelines for the Development and Application of Health, Safety and Environment management systems which has become a de facto industry standard. The HSE-OMS is implemented across our activities; it has a wide scope including the health, safety and security of our permanent employees, our seasonal employees and sub-contractors working on our projects, as well as the environmental impact of all of our projects and facilities.

A dedicated HSE organization supports the operating divisions in all aspects of the management system, from risk identification and control through training and communication to emergency response in the event of an incident. This professional staff, which is widely distributed across our business, monitors the local regulatory environment in HSE and assists our line management in developing and implementing measures to ensure regulatory compliance.

Legal proceedings

From time to time we are involved in legal proceedings arising in the normal course of our business. We do not expect that any of these proceedings, either individually or in the aggregate, will result in a material adverse effect on our consolidated financial condition or results of operations.

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Request for information from the Bureau of Industry and Security (BIS) of the United States Department of Commerce

Following an investigation by the BIS regarding some shipments to our vessels operating in or near Cuba that may not have complied fully with our internal policies and possibly violated applicable export controls and sanctions laws, a warning letter without any financial penalty was issued on September 10, 2015. On July 29, 2015, the U.S. Office of Foreign Assets Control (OFAC) issued a pre-penalty notice. On December 15, 2015, a settlement agreement was signed pursuant to which we paid a fine of US\$614,250.

ONGC arbitration

On March 18, 2013, CGG Services SAS, a fully owned subsidiary of CGG S.A., initiated arbitration proceedings against ONGC, an Indian company, to recover certain unpaid amounts under three commercial contracts entered into by the two entities between 2008 and 2010. The Arbitration Tribunal issued an award in favor of CGG on July 26, 2017. ONGC appealed this decision on October 27, 2017. We believe that the on-going procedure will allow us to recover at a minimum the amount of the receivables that are recorded on our balance sheet as unpaid receivables as of December 31, 2017.

Challenge of the draft Safeguard Plan by certain holders of convertible bonds and by the representative of the holders of convertible bonds

On August 4, 2017, certain holders of convertible bonds (Keren Finance, Delta Alternative Management, Schelcher Prince Gestion, La Financière de l'Europe, Ellipsis Asset Management and HMG Finance) filed a claim against the Safeguard Plan approved by the committee of banks and assimilated creditors, and the bondholders' general meeting on July 28, 2017.

Without disputing the results of the general meeting of bondholders' vote, these holders of convertible bonds challenged the treatment of their claims under the Safeguard Plan, arguing that the differences in treatment between the holders of convertible bonds and the holders of Senior Notes were not justified by the differences in their situations and would be, in any event, disproportionate.

On December 1, 2017, the Commercial Court of Paris declared that the claims filed by the holders of convertible bonds were inadmissible and approved the Safeguard Plan.

Four of these holders of convertible bonds (the companies Delta Alternative Management, Schelcher Prince Gestion, La Financière de l'Europe and HMG Finance) have appealed against the judgment that rejected the admissibility of their claims, which appeal shall be examined by the Court of Appeal of Paris during the hearing of pleadings on March 29, 2018.

As this appeal does not stay implementation, the restructuring transactions provided for under the Safeguard Plan have been implemented on February 21, 2018.

If the Court of Appeal were to approve the appellants' requests and reverse the judgment approving the Safeguard Plan, this decision could theoretically lead to the cancellation of the implementation of the Safeguard Plan with retroactive effect. However, such a cancellation may be impossible to implement in the context of a transaction which has involved a public offering.

As of the date of this annual report, no assurance can be given concerning the decision of the Court of Appeal regarding the aforementioned appeal.

In addition, on December 29, 2017, (i) Mr. Jean Gatty, acting in his capacity as representative of the holders of Convertible Bonds, as well as (ii) JG Capital Management, acting as management company of the JG Partners

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fund, holder of Convertible Bonds, filed a third-party opposition against the judgment approving the Safeguard Plan rendered by the Commercial Court of Paris on December 1, 2017. This action, which did not stay implementation as of right, was expected to be examined by the Commercial Court of Paris at a hearing planned on February 12, 2018. However, JG Capital Management and Mr. Jean Gatty withdrew from this third-party opposition.

Claim for the cancellation of the extraordinary general meeting held on November 13, 2017

On December 7, 2017, a minority shareholder of the Company filed a claim in summary proceedings (*procédure de référé*) against the Company for the cancellation of the extraordinary general meeting held on November 13, 2017 that approved the resolutions necessary for the implementation of the Safeguard Plan. By a court order rendered on January 4, 2018, the President of the Commercial Court of Paris rejected the admissibility of the claim filed by this minority shareholder.

Item 4A: UNRESOLVED STAFF COMMENTS

None.

Item 5: OPERATING AND FINANCIAL REVIEW AND PROSPECTS

Group organization

Since September 30, 2015, we have organized our activities in four segments for financial reporting: (i) Contractual Data Acquisition, (ii) Geology, Geophysics & Reservoir (GGR), (iii) Equipment and (iv) Non-Operated Resources. Financial information by segment is reported in accordance with our internal reporting system and provides internal segment information that is used by the chief operating decision maker to manage and measure performance.

As discussed further below under the heading Factors affecting our results of operations Fixed costs, Transformation Plan and fleet reduction , we started implementing our Transformation Plan in the first quarter of 2014 to address the cyclical trough in the seismic market. In February 2015, when market conditions deteriorated further as a consequence of a renewed bearish outlook on the price of oil, we decided to implement new measures throughout the Group as part of our Transformation Plan, ultimately reducing our marine fleet to five vessels mainly dedicated to multi-client surveys. Going forward, the downsized CGG fleet will be dedicated on average two-thirds to multi-client surveys and only one-third to exclusive surveys. As a result of the reduction of the fleet, part of our owned vessels will not be operated for a certain period of time. The costs of these non-operated resources, as well as the costs of the Transformation Plan, are reported in the Non-Operated Resources segment. Since April 2017, and the implementation of the new ownership set up of our fleet, the non-operated vessels and their related costs (cold-stacking costs notably) have been transferred to Global Seismic Shipping AS (GSS). *For more information, see note 2 of our consolidated financial statements.*

A summary of our four segments is set out below:

Contractual Data Acquisition. This operating segment comprises the following business lines:

Marine: offshore seismic data acquisition undertaken by us on behalf of a specific client;

Land and Multi-Physics: other seismic data acquisition undertaken by us on behalf of a specific client.

GGR. This operating segment comprises the Multi-client business line (development and management of seismic surveys that we undertake and license to a number of clients on a non-exclusive basis) and the Subsurface Imaging and Reservoir business lines (processing and imaging of geophysical data, reservoir characterization, geophysical consulting and software services, geological

data library and

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data management solutions). Both business lines regularly combine their offerings, generating overall synergies between their respective activities. The GGR segment includes the costs, industrial capital expenditures and capital employed related to the vessels dedicated to multi-client surveys.

Equipment. This operating segment comprises our manufacturing and sales activities for seismic equipment used for data acquisition, both on land and marine. The Equipment segment carries out its activities through our subsidiary Sercel.

Non-Operated Resources. This segment mainly comprises the costs of the non-operated marine resources as well as all of the costs of our Transformation Plan (mainly restructuring provisions and provisions for onerous contracts). The capital employed includes the non-operated marine assets and the provisions related to the Transformation Plan. In this segment, the recoverable value retained is the fair value less costs of disposal.

Financial restructuring process

On February 21, 2018, the Group finalized the implementation of its Financial Restructuring Plan, which meets the Company's objectives of strengthening its balance sheet and providing financial flexibility to continue investing in the future. This plan comprises (i) the equitization of all of the unsecured senior debt, (ii) the extension of the maturities of the secured senior debt and (iii) the provision of additional liquidity to meet various business scenarios.

Following the implementation of the Financial Restructuring Plan, the Board of Directors considers that (i) the Group no longer faces material uncertainties that may cast doubt upon its ability to continue as a going concern and that (ii) the Group's liquidity and cash flow are sufficient to meet our expected cash requirements until at least December 31, 2018. Having considered the above, the Board of Directors concluded that preparing the December 31, 2017 consolidated financial statements on a going concern basis is an appropriate assumption.

The consolidated financial statements as of December 31, 2017 were approved by the Board of Directors on March 8, 2018 on a going concern basis.

For more detailed information, please refer to Item 4: Information on the Company History and development of the Company Financial restructuring process and note 2 to our consolidated financial statements.

Critical Accounting Policies and Estimates

The following operating and financial review and prospects should be read in conjunction with our consolidated annual financial statements and the notes thereto included in this annual report, which have been prepared in accordance with International Financial Reporting Standards (IFRS) and its interpretations as issued by the International Accounting Standards Board (IASB) and as adopted by the European Union at December 31, 2017.

Our significant accounting policies, which we have applied consistently, are fully described in note 1 to our consolidated financial statements, including a discussion of certain of our accounting policies that are particularly important to the portrayal of our financial position and results of operations, such as those relating to:

revenue recognition (including the application of IFRS 15 Revenue from Contracts with Customers);

multi-client surveys (and impairment, amortization and classification thereof);

capitalization of expenditures on our research activities; and

impairment losses (including impairment losses on goodwill).

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As stated in note 1 to our consolidated financial statements, the Group decided not to early adopt those Standards, Amendments and Interpretations which were adopted by the European Union but were not effective as of December 31, 2017, notably IFRS 15 Revenue from Contracts with Customers, IFRS 9 Financial Instruments and IFRS 16 Leases.

The preparation of consolidated financial statements in accordance with IFRS requires management to make estimates, assumptions and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ materially from those estimates due to the change in economic conditions, changes in laws and regulations, changes in strategy and the inherent imprecision associated with the use of estimates.

Our significant estimates relate mainly to the expected cash-flows used to measure the recoverability of certain intangible assets such as deferred tax assets, our multi-client data library and goodwill and to determine the amortization rate of our multi-client surveys. To calculate the recoverable amount of our goodwill, we use estimates that are based on our outlook for the seismic industry, as well as the expected cash flows in our three-year plan and what we consider to be normative cash flows for the years thereafter. *See note 11 to our consolidated financial statements for the key assumptions used in our determination of asset recoverability and the sensitivity in changes in assumptions.* Changed assumptions, in particular the discount rate and the normative cash flow, could significantly affect our impairment result.

Factors affecting our results of operations

Our operating results are generally affected by a variety of factors, including changes in exchange rates, particularly the value of the euro against the US dollar, and changes in market environment. See Foreign exchange fluctuations and Geophysical market environment herein.

Geophysical market environment

Overall demand for geophysical services and equipment is dependent on spending by oil and gas companies for exploration, development and production and field management activities. We believe the level of spending of such companies depends on their assessment of their ability to efficiently supply the oil and gas market in the future and the current balance of hydrocarbon supply and demand. The geophysical market has historically been extremely volatile.

We believe many factors contribute to the volatility of this market, such as the geopolitical uncertainties that can harm the confidence and visibility that are essential to our clients' long-term decision-making processes and the expected balance in the mid- to long-term between supply and demand for hydrocarbons. Lower or volatile hydrocarbon prices tend then to limit the demand for seismic services and products. Since 2015, oil and gas companies reduced their exploration and production spending due to falling oil prices, affecting demand for our products and services as reflected in our results.

The challenging market conditions that we experienced in 2016 remained similar in 2017, with clients remaining extremely cautious. After a decline in earnings over the last three years, we recorded a 10% increase in revenue (US\$1,320 million) and a 14% growth in EBITDAS (US\$372 million) for the full year 2017 compared to 2016. While the outlook still remains uncertain, we believe the market should stabilize in 2018 and progressively recover throughout 2019.

For more information about developments in the geophysical industry, please refer to Item 4: Information on the Company Industry conditions.

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Fixed costs, Transformation Plan and fleet reduction

The Group has high fixed costs and seismic data acquisition activities that require substantial capital expenditures and long-term contractual commitments. As a result, downtime or decreased productivity due to reduced demand, weather interruptions, equipment failures, permit delays or other circumstances that affect our ability to generate revenue could result in significant operating losses. In particular, we operate certain of our marine acquisition vessels under long-term bareboat charters, which generate significant fixed costs that cannot easily be reduced before the expiration of the charters.

In order to lower our high fixed cost base in light of the difficult market environment, the Group took drastic measures to reduce the operated seismic fleet, as part of the Transformation Plan, from 18 vessels in 2014 to an optimal size of five 3D high-end vessels by the end of 2016, with such remaining vessels mainly dedicated to multi-client programs. The main steps in the reduction of the fleet over the past three years are described below.

During the year 2015:

The *Symphony* and the *Princess* were sold;

The *Vantage*, the *Viking II* and the *Viking I* were returned to their owners;

The *Oceanic Phoenix* and the *Viking Vanquish* halted operations; and

The *Geowave Voyager* and the *Pacific Finder* were used as source vessels throughout the year.

During the year 2016:

The *CGG Alizé*, the *Geo Celtic* and the *Pacific Finder* halted operations;

The *Viking Vision* was returned to its owner; and

The *Geowave Voyager* was used as a source vessel and a crew boat throughout the year.

As of December 31, 2016, the operated seismic fleet was composed of five 3D high-end vessels, in accordance with our Transformation Plan.

Beginning of 2017, the Group implemented additional measures to further reduce its maritime exposure and improve the fleet's competitiveness.

In January 2017 and March 2017, we reduced the cash burden of various charter agreements, in respect of cold-stacked seismic vessels (the *Pacific Finder*, the *Oceanic Phoenix* and the *Viking Vanquish*) and an active seismic vessel (the *Oceanic Champion*) through payments settled on a non-cash basis. In April 2017, we implemented the new ownership set up for our seismic fleet, allowing the Group to access high-end capacity at fair market price while externalizing the cold-stacking costs.

During the year 2017:

The *Pacific Finder* was re-delivered to its owner;

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The *Geo Caspian* halted operations as a seismic vessel at the expiration of the charter agreement; and

The *Geo Coral* was re-introduced on April 1, 2017, in replacement of the *Geo Caspian*, as per the plan to keep the fleet at five seismic vessels.

In 2017, the Group operated five 3D high-end vessels for a total annual charter cost of US\$59 million compared to US\$77 million in 2016, mainly as a result of the improved contractual conditions described above.

For more information, please refer to Item 4: Information on the Company Contractual Data Acquisition Marine Data Acquisition Business Line Group's fleet of seismic vessels and note 2 to our consolidated financial statements.

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Write-downs & restructuring costs related to our Transformation Plan

We have had in the past and may have in the future impairment losses as events or changes in circumstances occur that reduce the fair value of an asset below its book value. We may also have write-offs and non-recurring charges or restructuring costs. For 2015, 2016 and 2017, such asset impairments, write-offs and restructuring costs net of gains on sales of assets related to our Transformation Plan totaled US\$1,218 million, US\$184 million and US\$186 million (not including the acceleration of historical issuing fees amortization for US\$23 million), respectively.

We have also been involved in a number of business combinations in the past, leading to the recognition of large amounts of goodwill on our balance sheet. Goodwill on our balance sheet totaled US\$1,234 million as of December 31, 2017 and US\$1,223 million as of December 31, 2016. Goodwill is allocated to CGUs as described in note 11 to our consolidated financial statements. At each balance sheet date, if we expect that a CGU's recoverable amount will fall below the amount of capital employed recorded on the balance sheet, we may write down some value on given assets and/or the goodwill in part or in whole.

As of December 31, 2015, in response to the continuing deterioration of market conditions and the drastic reduction of our fleet, we wrote down US\$365 million of goodwill in our marine acquisition activity and US\$439 million of goodwill in our GGR segment, for a total of US\$804 million for 2015.

In 2016 and 2017, we did not write down any goodwill.

For more information, please refer to notes 11 and 21 to our consolidated financial statements.

Acquisitions and divestitures

During the periods under review, the most significant change to our perimeter has been the new ownership set up of our marine fleet, as described above. *For more information regarding other acquisitions and divestitures, please refer to note 2 to our consolidated financial statements.*

Backlog

Backlog estimates are based on a number of assumptions and estimates, including assumptions as to exchange rates between the euro and the US dollar and estimates of the percentage of completion contracts. Contracts for services are occasionally modified by mutual consent and in certain instances are cancelable by the customer on short notice without penalty. The historical relationships we have with many of our clients (most of which are large, well established companies) tend to reduce our exposure to the risk of early termination. Nevertheless, backlog as of any particular date may not be indicative of actual operating results for any succeeding period.

Backlog for our Contractual Data Acquisition and GGR segments represents the revenues we expect to receive from commitments for contract services we have with our customers and, in connection with the acquisition of multi-client data, represents the amount of pre-commitments for such data. Backlog for our Equipment segment represents the total value of orders we have received but not yet fulfilled.

Our backlog for our Contractual Data Acquisition, GGR and Equipment segments was US\$500 million as of January 1, 2018 compared to US\$548 million as of January 1, 2017 and US\$719 million as of January 1, 2016.

Foreign exchange fluctuations

As a company that derives a substantial amount of its revenues from international sales, that are often denominated or linked to the US dollar but with costs that are to a certain extent denominated in euros, our results of operations are affected by fluctuations in currency exchange rates.

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Changes between the US dollar and euro or other currencies may adversely affect our business by negatively impacting our results of operations and earnings.

The exchange rates as of December 31, 2015, 2016 and 2017 were, US\$1.0887, US\$1.0541 and US\$1.1993 respectively, per euro, and the average exchange rates for the years 2015, 2016 and 2017 were, US\$1.1138, US\$1.1057 and US\$1.1227 respectively, per euro.

See Item 3 Key Information Risk Factors Market and Other Risks We are exposed to exchange rates fluctuations for more information on the impact of currency fluctuations on our results of operations during the periods under review.

Year ended December 31, 2017 compared to year ended December 31, 2016**Operating revenues**

The following table sets forth our operating revenues by business line and segment for each of the periods stated:

	Year ended December 31,	
	2017	2016
	In millions of US\$	
Marine Contractual Data Acquisition	186.4	133.1
Land and Multi-Physics Acquisition	102.3	104.9
Contractual Data Acquisition Revenues	288.7	238.0
Multi-client Data	469.0	383.3
Subsurface Imaging and Reservoir	350.6	400.7
GGR Revenues	819.6	784.0
Equipment Revenues	241.2	255.0
Eliminated revenues and others	(29.5)	(81.5)
Total operating revenues	1,320.0	1,195.5

Operating revenues

In a very challenging market environment, our consolidated operating revenues in 2017 increased 10% to US\$1,320 million from US\$1,196 million in 2016, due in particular to strong multi-client sales and the execution of two large exclusive contracts by our Marine Contractual Data Acquisition business line. The respective contributions from the Group's businesses in 2017 were 62% from GGR, 16% from Equipment and 22% from Contractual Data Acquisition.

Contractual Data Acquisition

Operating revenues for our Contractual Data Acquisition segment increased 21% to US\$289 million in 2017 from US\$238 million in 2016, mainly as a consequence of our Marine Contractual Data Acquisition business line, in a continuingly competitive market environment stabilized at a low level.

Marine Contractual Data Acquisition

Despite very weak pricing conditions, operating revenues of our Marine Contractual Data Acquisition business line increased 40% to US\$186 million in 2017 from US\$133 million in 2016, mainly due to the execution of two large contracts using high-end multi-source vessel set-up and the strong operational performance of the fleet, with a high production rate at 97% in 2017 compared to 94% in 2016.

The availability rate increased to 93% in 2017 from 92% in 2016. 48% of the fleet was dedicated to multi-client programs in 2017 compared to 49% in 2016.

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Land and Multi-Physics Acquisition

Operating revenues of our Land and Multi-Physics Acquisition business lines decreased 2% to US\$102 million in 2017 from US\$105 million in 2016, mainly as a consequence of the weak market, a delayed contract in Algeria and the early termination of a contract in Angola for our Land Acquisition business line.

GGR

Operating revenues from our GGR segment in 2017 increased 5% to US\$820 million from US\$784 million in 2016, mainly due to strong multi-client sales despite a soft market environment.

Multi-client Data

Multi-client revenues increased 22% to US\$469 million in 2017 from US\$383 million in 2016. Our sustained offshore multi-client sales were boosted by Brazilian licensing rounds, as well as sales in the North Sea and the Gulf of Mexico.

Prefunding revenues decreased 1% to US\$269 million in 2017 from US\$272 million in 2016, with cash prefunding rate at 107% in 2017 compared to 92% in 2016. After-sales increased 80% to US\$200 million in 2017 from US\$111 million in 2016 mainly as a result of demand for our well-positioned multi-client data libraries in the strategic basins.

Subsurface Imaging & Reservoir

Operating revenues from our Subsurface Imaging & Reservoir business lines decreased 13% to US\$351 million in 2017 from US\$401 million in 2016. Subsurface Imaging delivered a resilient performance and maintained its market share, while the Reservoir businesses were impacted by clients' spending cuts.

Equipment

Operating revenues from our Equipment segment, including internal and external sales, decreased 5% to US\$241 million in 2017 from US\$255 million in 2016, reflecting very low volumes driven by the weakness of the seismic acquisition market.

Internal sales represented 11% of the total revenues in 2017 compared to 30% in 2016. External revenues increased 20% to US\$215 million in 2017, from US\$179 million in 2016, mainly due to land equipment sales, driven notably by the 508^{XT} deliveries in the fourth quarter.

Land equipment sales represented 59% of the total revenues in 2017 compared to 56% in 2016.

In 2017, we generated US\$116 million in revenues in the fourth quarter, representing 48% of our total revenues of the year. This sharp increase can be explained by staggered deliveries from the third quarter to the fourth quarter and the usual seasonal pattern at year-end driving a strong activity pick-up in the fourth quarter.

Operating Expenses

Cost of operations, including depreciation and amortization, were stable in 2017 at US\$1,239 million compared to US\$1,250 million in 2016 despite increased activity, mainly due to the sharp reduction in our cost base as a consequence of the completion of our Transformation Plan. The multi-client amortization costs (including amortization linked to IAS 38 Amended, as the Group no longer applies straight-line scheme since 2016) corresponded to 63% of multi-client revenues in 2017 compared to 84% in 2016. As a percentage of operating revenues, cost of operations were 94% in 2017 compared to 105% in 2016. Gross profit increased to US\$81 million in 2017 from US\$(53) million in 2016, representing 6% of operating revenues in 2017 compared to (4)% in 2016.

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Research and development expenditures, net of government grants received, increased 112% to US\$29 million in 2017 from US\$14 million in 2016, principally as a result of a U.S. tax credit catch-up for research and development in the earlier period. Research and development expenditures represented respectively 2% and 1% of operating revenues for 2017 and 2016.

Marketing and selling expenses decreased 11% to US\$56 million in 2017 from US\$62 million in 2016 mainly due to the completion of our Transformation Plan.

General and administrative expenses decreased 3% to US\$82 million in 2017, from US\$84 million in 2016 as a consequence of the completion of the Transformation Plan. As a percentage of operating revenues, general and administrative expenses represented respectively 6% and 7% of operating revenues for 2017 and 2016.

Other expenses amounted to US\$179 million in 2017, including mainly US\$186 million of restructuring costs net of gain on sales of assets relating to our Transformation Plan (not including the acceleration of historical issuing fees amortization linked to our financial restructuring for US\$23 million) of which (i) US\$51 million loss relating to our new ownership set up for our seismic fleet (ii) US\$12 million relating to the renegotiation of a charter agreement, (iii) US\$102 million relating to financial restructuring fees and (iv) US\$21 million relating to other restructuring costs, being mainly redundancy and facilities exit costs net of reversal of provisions.

Other expenses amounted to US\$183 million in 2016, including mainly (i) US\$97 million impairment of multi-client surveys mainly related to our U.S. offshore library (ii) US\$31 million impairment of vessels related to our Transformation Plan and (iii) US\$54 million restructuring costs being mainly vessel chart costs and redundancies, net of reversal of provisions. Out of these other expenses, the portion directly related to our Transformation Plan and to impairment amounted to US\$184 million in 2016.

For more information about restructuring costs relating to the Transformation Plan, please refer to note 21 to our consolidated financial statements.

Operating income

Operating income amounted to US\$(263) million in 2017 (or US\$(77) million before restructuring costs net of gain on sale of assets relating to our Transformation Plan), compared to US\$(397) million in 2016 (or US\$(213) million before impairment of assets and restructuring costs related to our Transformation Plan).

Operating income from our Contractual Data Acquisition segment amounted to US\$(91) million in 2017, compared to US\$(99) million in 2016 (or US\$(98) million before impairment of assets), with the positive impact of the lower cost base of our Marine Contractual Data Acquisition business line being partially offset by a non-recurring research and development tax credit in 2016.

Operating income from our GGR segment amounted to US\$131 million in 2017, compared to US\$(16) million in 2016 (or US\$81 million before impairment of assets), demonstrating the overall resilience of the GGR segment, boosted by a favorable revenue mix in multi-client sales with an amortization rate corresponding to 63% of multi-client sales in 2017 compared to 84% in 2016.

Operating income from our Equipment segment increased to US\$(36) million in 2017 from US\$(42) million in 2016, hampered by very low volumes, despite very efficient cost management and manufacturing flexibility.

Operating income from our Non-Operated Resources segment amounted to US\$(220) million in 2017 (or US\$(34) million before restructuring costs net of gain on sale of assets relating to our Transformation Plan), compared to US\$(170) million in 2016 (or US\$(84) million before impairment of assets and restructuring costs related to our Transformation Plan).

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Equity in Income of Affiliates

Income from investments accounted for under the equity method amounted to US\$(20) million in 2017 compared to US\$(8) million in 2016, mainly due to the negative contribution from our joint ventures GSS and PTSC CGGV Geophysical Survey Limited (PTSC) in Vietnam, impacted by adverse market conditions in the marine acquisition market.

Earnings before interest and tax (EBIT)

EBIT, as disclosed in note 19 to our consolidated financial statements, amounted to US\$(284) million in 2017 (or US\$(97) million before restructuring costs net of gain on sale of assets relating to our Transformation Plan) compared to US\$(405) million in 2016 (or US\$(221) million before impairment of assets and restructuring costs related to our Transformation Plan).

EBIT from our Contractual Data Acquisition segment amounted to US\$(103) million in 2017, compared to US\$(105) million in 2016 (or US\$(104) million before impairment of assets). Our EBIT in 2017 included a US\$(11) million negative contribution from investments accounted for under the equity method, mainly PTSC and the Seabed JV, compared to a negative contribution of US\$(6) million for this line item in 2016 mainly attributed to the Seabed JV.

EBIT from our GGR segment amounted to US\$130 million in 2017 compared to US\$(18) million in 2016 (or US\$79 million before impairment of assets).

EBIT from our Equipment segment amounted to US\$(36) million in 2017 compared to US\$(42) million in 2016.

EBIT from our Non-Operated Resources segment amounted to US\$(229) million in 2017 (or US\$(43) million before restructuring costs net of gain on sale of assets relating to our Transformation Plan) compared to US\$(170) million in 2016 (or US\$(84) million before impairment of assets and restructuring costs related to our Transformation Plan). Our EBIT in 2017 included a US\$(8) million negative contribution from investments accounted for under the equity method, mainly reflecting the contribution from GSS.

See note 21 to our consolidated financial statements for further details on restructuring expenses related to our Transformation Plan.

Financial Income and Expenses

Cost of net financial debt increased 21% to US\$211 million in 2017 from US\$174 million in 2016. This increase was mainly due to the acceleration of historical issuing fees amortization for US\$23 million, as most of our debt was settled during February 2018 through conversion into equity or new debt instruments under our financial restructuring.

Other financial income amounted to US\$4 million in 2017 compared to an expense of US\$11 million in 2016. This increase was mainly due to foreign exchange gains. *See note 23 to our consolidated financial statements for more information.*

Income Taxes

Income taxes amounted to an expense of US\$24 million in 2017, including US\$12 million deemed taxation through withholding tax and US\$11 million in current income tax mainly in Canada and Brazil.

Income taxes amounted to an income of US\$14 million in 2016.

For more information about income taxes, please refer to note 24 to our consolidated financial statements.

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Net income amounted to US\$(514) million in 2017 compared to US\$(577) million in 2016 as a result of the factors discussed above. Earnings per share were US\$(11.18) in 2017 compared to US\$(13.26) in 2016.

Net income attributable to the shareholders of CGG S.A. was US\$(515) million (459) million) in 2017 compared to US\$(573) million (519) million) in 2016.

Unconsolidated financial statements of CGG S.A.

Operating revenues of CGG S.A. in 2017 were 26 million compared to 49 million in 2016.

Operating loss in 2017 amounted to 32 million compared to 43 million in 2016.

Financial loss in 2017 amounted to 969 million compared to 827 million in 2016. The decrease was mainly due to dividends received in 2017 of 142 million, compared to 421 million in 2016. In 2017, we accounted for a provision allowance for investments in affiliates for 1,104 million, compared to 1,197 million in 2016.

Extraordinary income and expense in 2017 amounted to (2) million, mainly as a result of extraordinary costs relating to the financial restructuring for (67) million and reversal of provisions for risks of affiliates for 67 million. Extraordinary income and expense amounted to 30 million in 2016 mainly due to a 25 million reversal of provisions for risks of affiliates.

Net income in 2017, after a tax income of 57 million due to the French tax group effect, was (945) million compared to a net income of (841) million in 2016, after a tax expense of 1 million. The 2017 tax income resulted from the reversal of the provision for the use of subsidiaries deficits, following the inclusion of the planned reduction of the corporate tax rate in France.

The shareholders' equity as of December 31, 2017 amounted to 0.3 billion compared to 1.2 billion as of December 31, 2016.

No dividends have been distributed in the last three fiscal years.

Year ended December 31, 2016 compared to year ended December 31, 2015**Operating revenues**

The following table sets forth our operating revenues by business line and segment for each of the periods stated:

	Year ended December 31,	
	2016	2015
	In millions of US\$	
Marine Contractual Data Acquisition	133.1	438.3
Land and Multi-Physics Acquisition	104.9	177.2
Contractual Data Acquisition Revenues	238.0	615.5
Multi-client Data	383.3	546.4
Subsurface Imaging and Reservoir	400.7	561.2
GGR Revenues	784.0	1,107.6
Equipment Revenues	255.0	437.3
Eliminated revenues and others	(81.5)	(59.5)
Total operating revenues	1,195.5	2,100.9

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Our consolidated operating revenues in 2016 decreased 43% to US\$1,196 million from US\$2,101 million in 2015 mainly due to weak volumes in difficult market conditions and the reduction of the marine seismic fleet. The respective contributions from the Group's businesses in 2016 were 66% from GGR, 15% from Equipment and 19% from Contractual Data Acquisition.

Contractual Data Acquisition

Operating revenues for our Contractual Data Acquisition segment decreased 61% to US\$238 million in 2016 from US\$616 million in 2015, mainly due to the downsizing of the fleet, weak volumes and low pricing conditions.

Marine Contractual Data Acquisition

Operating revenues of our Marine Contractual Data Acquisition business line decreased 70% to US\$133 million in 2016 from US\$439 million in 2015, mainly due to the reduction of the marine seismic fleet to five 3D high-end vessels and to weak pricing conditions, despite our fleet's good operational performance with a high production rate at 94% in 2016 compared to 92% in 2015.

The availability rate increased to 92% in 2016 from 83% in 2015. 49% of the fleet was dedicated to multi-client programs in 2016 compared to 34% in 2015.

Land and Multi-Physics Acquisition

Operating revenues of our Land and Multi-Physics Acquisition business lines decreased 41% to US\$105 million in 2016 from US\$177 million in 2015, as a consequence of low levels of activity and delays in clients' decision processes.

GGR

Operating revenues from our GGR segment in 2016 decreased 29% to US\$784 million from US\$1,108 million in 2015 as a result of the overall market conditions, characterized by slowdown and delays in exploration spending by oil and gas companies.

Multi-client Data

Multi-client revenues decreased 30% to US\$383 million in 2016 from US\$546 million in 2015 due to a very soft market environment. Our highest offshore multi-client sales were in Latin America and North Sea.

Prefunding revenues decreased at US\$272 million in 2016 from US\$290 million in 2015. Cash prefunding rate was of 92% in 2016 compared to 102% in 2015. After-sales decreased 56% to US\$111 million in 2016 from US\$256 million in 2015 due to lower overall exploration spending by our clients.

Subsurface Imaging & Reservoir

Operating revenues from our Subsurface Imaging & Reservoir business lines decreased 29% to US\$401 million in 2016 from US\$562 million in 2015 due to soft market conditions. However, we consider this to have been an overall resilient level of activity in the context of a significant decrease in data acquisition market volumes.

Equipment

Operating revenues from our Equipment segment, including internal and external sales, decreased 42% to US\$255 million in 2016 from US\$437 million in 2015 due to very low volumes driven by the weakness of the seismic acquisition market. Land equipment sales represented 56% of the total revenues.

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Internal sales represented 30% of the total revenues in 2016 compared to 9% in 2015.

External revenues for our Equipment segment decreased 55% to US\$179 million in 2016, from US\$400 million in 2015.

Operating Expenses

Cost of operations, including depreciation and amortization, decreased 31% to US\$1,250 million in 2016, from US\$1,817 million in 2015, mainly due to the downsizing of the fleet, the overall contraction of activity (with historically low volumes in our Equipment segment) and the cost base reduction as a consequence of the progress of our Transformation Plan (see paragraph Fixed costs, Transformation Plan and fleet reduction above for further details). The multi-client amortization expenses corresponded to 84% of multi-client revenues in 2016 before impairment of our multi-client data library compared to 60% (before impairment) in 2015. As a percentage of operating revenues, cost of operations were 105% in 2016 compared to 86% in 2015. Gross profit decreased 119% to US\$(53) million in 2016, from US\$285 million in 2015, representing (4)% of operating revenues in 2016 compared to 14% in 2015.

Research and development expenditures, net of government grants received, decreased 80% to US\$14 million in 2016 from US\$69 million in 2015 mainly due to a higher level of U.S. research and development tax credit. Research and development expenditures represented respectively 1% and 3% of operating revenues for 2016 and 2015.

Marketing and selling expenses decreased 29% to US\$62 million in 2016 from US\$87 million in 2015 mainly due to the progress of our Transformation Plan.

General and administrative expenses decreased 14% to US\$84 million in 2016 from US\$99 million in 2015 as a consequence of the progress of the Transformation Plan. As a percentage of operating revenues, general and administrative expenses represented respectively 7% and 5% of operating revenues for 2016 and 2015.

Other expenses amounted to US\$183 million in 2016, including mainly (i) US\$97 million impairment of multi-client surveys mainly related to our US offshore library (ii) US\$31 million impairment of vessels related to our Transformation Plan and (iii) US\$54 million restructuring costs being mainly vessel chart costs and redundancies, net of reversal of provisions. Out of these other expenses, the portion directly related to our Transformation Plan and to impairment amounted to US\$184 million in 2016.

Other expenses amounted to US\$1,188 million in 2015, including mainly (i) US\$804 million of impairment of goodwill in Marine Contractual Data Acquisition and GGR as a consequence of the reduction of the fleet and the revision of our financial forecasts (ii) US\$207 million of impairment of vessels and related equipment and other intangible assets (including US\$42 million of impairment of multi-client surveys); (iii) restructuring costs related to our Transformation Plan for US\$208 million mainly related to redundancies, facility exit costs and costs related to cold-stacked vessels, net of reversal of provisions and (iv) a US\$27 million net gain related to disposals of assets. Out of these other expenses, the portion directly related to our Transformation Plan and to impairment amounted to US\$1,219 million in 2015.

Operating income

Operating income amounted to US\$(397) million in 2016 (or US\$(213) million before impairment of assets and restructuring costs related to our Transformation Plan), compared to US\$(1,158) million in 2015 (or US\$61 million before impairment of assets and restructuring costs related to our Transformation Plan).

Operating income from our Contractual Data Acquisition segment amounted to US\$(99) million in 2016 (or US\$(98) million before impairment of assets), compared to US\$(675) million in 2015 (or US\$(156) million before impairment of assets).

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Operating income from our GGR segment amounted to US\$(16) million in 2016 (or US\$81 million before impairment of assets), compared to US\$(204) million in 2015 (or US\$288 million before impairment of assets).

Operating income from our Equipment segment decreased to US\$(42) million in 2016 from US\$26 million in 2015.

Operating income from our Non-Operated Resources segment amounted to US\$(170) million in 2016 (or US\$(84) million before impairment of assets and restructuring costs related to our Transformation Plan), compared to US\$(236) million in 2015 (or US\$(28) million before restructuring costs related to our Transformation Plan).

Equity in Income of Affiliates

Income from investments accounted for under the equity method amounted to US\$(8) million in 2016 compared to US\$21 million in 2015, mainly due to negative contribution from Seabed JV suffering from low volumes in a weak market.

Earnings before interest and tax (EBIT)

EBIT, as disclosed in note 19 to our consolidated financial statements, amounted to US\$(405) million in 2016 (or US\$(221) million before impairment of assets and restructuring costs related to our Transformation Plan) compared to US\$(1,136) million in 2015 (or US\$82 million before impairment of assets and restructuring costs related to our Transformation Plan).

EBIT from our Contractual Data Acquisition segment amounted to US\$(105) million in 2016 (or US\$(104) million before impairment of assets), compared to US\$(653) million in 2015 (or US\$(134) million before impairment of assets). Our EBIT in 2016 included a US\$(6) million negative contribution from investments accounted for under the equity method, mainly Seabed JV, compared to a positive contribution of US\$22 million for this line item in 2015.

EBIT from our GGR segment amounted to US\$(18) million in 2016 (or US\$79 million before impairment of assets) compared to US\$(204) million in 2015 (or US\$288 million before impairment of assets). Our EBIT in 2016 included a US\$(2) million negative contribution from investments accounted for under the equity method.

EBIT from our Equipment segment amounted to US\$(42) million in 2016 compared to US\$26 million in 2015.

EBIT from our Non-Operated Resources segment amounted to US\$(170) million in 2016 (or US\$(84) million before impairment of assets and restructuring costs related to our Transformation Plan) compared to US\$(236) million in 2015 (or US\$(28) million before restructuring costs related to our Transformation Plan).

Financial Income and Expenses

Cost of net financial debt decreased 2% to US\$174 million in 2016 from US\$179 million in 2015.

Other financial expense amounted to US\$11 million in 2016 compared to US\$55 million in 2015. This decrease was mainly due to the impairment of our shares in Geokinetics Inc. for US\$40 million in 2015.

Income Taxes

Income taxes amounted to an income of US\$14 million in 2016.

This compares to a US\$77 million expense in 2015.

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Net Income

Net income amounted to US\$(577) million in 2016 compared to US\$(1,446) million in 2015 as a result of the factors discussed above. Earnings per share were US\$(13.26) in 2016 compared to US\$(114.66) in 2015.

Net income attributable to the shareholders of CGG S.A. was US\$(573) million ((519) million) in 2016 compared to US\$(1,450) million ((1,302) million) in 2015.

Unconsolidated financial statements of CGG S.A.

Operating revenues of CGG S.A. in 2016 were 49 million compared to 74 million in 2015. The level of services provided by the Company to its subsidiaries in the Contractual Data Acquisition and GGR segments decreased in both 2015 and 2016.

Operating loss in 2016 amounted to 43 million compared to 48 million in 2015.

Financial income in 2016 was (827) million compared to 586 million in 2015. This decrease was mainly due to dividends of 2,007 million received in 2015 in connection with the reorganization of the subsidiaries within our Sercel Group compared to 421 million in 2016.

The rest of the financial income included mainly provision allowance on investments in affiliates for 1,197 million in 2016 compared to 1,280 million in 2015.

Extraordinary income and expense in 2016 amounted to 30 million mainly due to a 25 million reversal of provisions for risks of affiliates. Extraordinary income and expense in 2015 was (39) million mainly due to grants provided to affiliates totaling 56 million.

Net income in 2016, after a tax expense of 1 million, was (841) million compared to a net income of 606 million in 2015, after a tax income of 106 million due to the French tax group effect.

The shareholders' equity as of December 31, 2016 amounted to 1.2 billion compared to 1.7 billion as of December 31, 2015.

No dividends have been distributed in the last three fiscal years.

Liquidity and Capital Resources

Our principal financing needs are the funding of ongoing operations, capital expenditures, investments in our multi-client data library and our latest transformation steps, as well as debt service and refinancing. We intend to fund our capital requirements through cash generated by operations, liquidity on hand and, as necessary, capital markets or bank financings. In the past we have obtained financing through bank borrowings, capital increases and issuances of debt and equity-linked securities.

Our ability to make scheduled payments of principal, or to pay the interest or additional amounts, if any, or to refinance our indebtedness, or to fund planned capital expenditures will depend on our future performance, which, to a certain extent, is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control.

Financial restructuring process

Our balance sheet, and in particular our financial liabilities, were significantly affected by our financial restructuring, which was completed on February 21, 2018. As of February 21, 2018, our gross financial debt

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amounted to US\$1.2 billion. Based on the liquidity of US\$0.57 billion (our cash and cash equivalent as of December 31, 2017 increased by the net cash proceeds from the financial restructuring), the pro forma net debt was US\$0.63 billion as of December 31, 2017.

For information about the financial restructuring, please refer to Item 4: Information on the Company History and development of the Company Financial restructuring process and note 2 to our consolidated financial statements.

Cash Flows

Operating activities

Net cash provided by operating activities was US\$198 million in 2017 compared to US\$355 million for 2016 and US\$408 million for 2015. Before changes in working capital, net cash provided by operating activities in 2017 was US\$238 million compared to US\$157 million for 2016 and US\$453 million for 2015.

Changes in working capital had a negative impact on cash from operating activities of US\$40 million in 2017 compared to a positive impact of US\$198 million for 2016 and a negative impact of US\$45 million for 2015.

Investing activities

Net cash used in investing activities was US\$303 million in 2017 compared to US\$381 million in 2016 and US\$423 million in 2015.

In 2017, our industrial capital expenditures, inclusive of the Sercel lease pool, and net of asset suppliers variance, were significantly reduced to US\$47 million (US\$50 million excluding asset suppliers variance), mainly as a consequence of continued tight cash spending discipline in all segments. The capitalized development costs were US\$34 million.

In 2016, our industrial capital expenditures, inclusive of the Sercel lease pool, and net of asset suppliers variance, were significantly reduced to US\$71 million (US\$66 million excluding asset suppliers variance), mainly as a consequence of fleet reduction and tight cash spending discipline in all segments. The capitalized development costs were US\$34 million.

In 2015, our industrial capital expenditures, inclusive of the Sercel lease pool, and net of asset suppliers variance, were US\$104 million (US\$89 million excluding asset suppliers variance) mainly as a consequence of fleet reduction and tight cash spending discipline in all segments. The capitalized development costs were US\$42 million.

In 2017, we invested US\$251 million in multi-client data, primarily offshore in Brazil, Mozambique and in the North Sea.

In 2016, we invested US\$295 million in multi-client data, primarily offshore in Brazil, in Western Africa and in the Norwegian North Sea.

In 2015, we invested US\$285 million in multi-client data, primarily in Western Africa, in North Sea and Asia Pacific.

As of December 31, 2017, the net book value of our multi-client data library was US\$831 million compared to US\$848 million as of December 31, 2016 and US\$927 million as of December 31, 2015.

Financing activities

Our net cash used by financing activities in 2017 was US\$117 million compared to net cash provided of US\$176 million in 2016, and net cash provided of US\$63 million in 2015.

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In 2017, we repaid in full the US\$8 million outstanding principal amount of our 7.75% senior notes due 2017. We also repaid US\$8 million of the principal amount under our Nordic credit facility, leading to a total outstanding amount of US\$182.5 million under this facility before it was transferred to GSS in April 2017 as part of the of new ownership set up for our seismic fleet. *For more information, please refer to note 2 to our consolidated financial statements.*

In 2016, we repaid a net amount of US\$31 million from our French revolving facility, leading to an amount outstanding as of December 31, 2016 under this facility of US\$294 million. We also drew a net amount of US\$35 million from our US revolving facility, leading to an amount outstanding as of December 31, 2016 under this facility of US\$165 million.

As of December 31, 2016, the outstanding amount of our Nordic credit facility stood at US\$190 million compared to US\$220 million as of December 31, 2015 after repayment of US\$30 million in 2016.

On February 12, 2016, we fully repaid the outstanding US\$6.1 million of our US\$45 million Voyager AS (renamed Exploration Vessel Resources II AS) Secured Term Loan Facility.

In 2016, we also received net proceeds of 337 million from our capital increase.

In 2015, we drew a net amount of US\$167 million from our French revolving facility, leading to an amount outstanding as of December 31, 2015 under this credit facility of US\$325 million. We also drew a net amount of US\$55 million from our US revolving facility leading to an amount outstanding as of December 31, 2015 under this credit facility of US\$130 million.

Financing Arrangements

As of December 31, 2017, our material financing arrangements consisted of the following:

US\$162 million US revolving credit facility;

US\$309 million French revolving credit facility;

US\$338 million term loan B;

US\$675 million 6.50% senior notes due 2021;

400 million 5.875% senior notes due 2020;

US\$420 million 6.875% senior notes due 2022; and

360 million convertible bonds.

As of the completion date of our financial restructuring, our material financing arrangements were US\$664 million in principal amount of first lien senior secured notes due 2023 and US\$355 million and 80 million in principal amount of second lien senior secured notes due 2024, all issued on February 21, 2018.

For more information about the terms and conditions of our financing arrangements as of December 31, 2017, please refer to note 13 to our consolidated financial statements.

Financial Debt

Gross financial debt was US\$2,955 million as of December 31, 2017, US\$2,850 million as of December 31, 2016, and US\$2,885 million as of December 31, 2015. Net financial debt was US\$2,640 million as of December 31, 2017, US\$2,312 million as of December 31, 2016, US\$2,500 million as of December 31, 2015. The ratio of net debt to equity for the years ended December 31, 2017, 2016 and 2015 was 540%, 206%, and 191%, respectively.

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The amount of our financial debt was materially reduced by our financial restructuring, which was completed on February 21, 2018. Following the effectiveness of the restructuring, our gross financial debt totaled US\$1.2 billion. See *Item 4: Information on the Company History and development of the Company Financial restructuring process and note 2 to our consolidated financial statements.*

Gross financial debt is the amount of bank overdrafts, plus current portion of financial debt, plus financial debt, and net financial debt is gross financial debt less cash and cash equivalents. Net financial debt is presented as additional information because we understand that certain investors believe that netting cash against debt provides a clearer picture of our financial liability exposure. However, other companies may present net financial debt differently than we do. Net financial debt is not a measure of financial performance under IFRS and should not be considered as an alternative to any other measures of performance derived in accordance with IFRS.

The following table presents a reconciliation of net financial debt to financing items of the balance sheet at December 31, 2017, 2016 and 2015 (according to IFRS standards):

	Year ended December 31,		
	2017	2016	2015
	In millions of US\$		
Bank overdrafts	0.2	1.6	0.7
Current portion of financial debt	2,902.8	2,782.1	96.5
Financial debt	52.3	66.7	2,787.6
Gross financial debt	2,955.3	2,850.4	2,884.8
Less cash and cash equivalents	(315.4)	(538.8)	(385.3)
Net financial debt	2,639.9	2,311.6	2,499.5

EBIT and EBITDAS

EBIT is defined as operating income plus our share of income in companies accounted for under the equity method. As a complement to operating income, EBIT may be used by management as a performance indicator for segments because it captures the contribution to our results of the significant businesses that we manage through our joint ventures.

EBITDAS is defined as earnings before interest, tax, income from equity affiliates, depreciation, amortization net of amortization expense capitalized to multi-client, and share-based compensation cost. Share-based compensation includes both stock options and shares issued under our share allocation plans. EBITDAS is presented as additional information because we understand that it is one measure used by certain investors to determine our operating cash flow and historical ability to meet debt service and capital expenditure requirements.

However, other companies may present EBIT and EBITDAS differently than we do. EBIT and EBITDAS are not a measure of financial performance under IFRS and should not be considered as an alternative to cash flow from operating activities or as a measure of liquidity or an alternative to net income as indicators of our operating performance or any other measures of performance derived in accordance with IFRS.

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The following table presents a reconciliation of EBITDAS and EBIT to net income for the periods indicated:

	Year ended December 31,		
	2017	2016	2015
	in millions of US\$		
EBITDAS	186.1	273.6	452.8
Depreciation and amortization	(181.2)	(293.2)	(1,310.6)
Multi-client surveys depreciation and amortization	(297.7)	(417.2)	(369.5)
Depreciation and amortization capitalized to multi-client surveys	30.0	42.3	72.8
Stock based compensation expenses	(0.7)	(2.0)	(3.1)
Operating income	(263.5)	(396.5)	(1,157.6)
Share of (income) loss in companies accounted for under equity method	(20.1)	(8.2)	21.4
EBIT	(283.6)	(404.7)	(1,136.2)
Cost of financial debt, net	(211.0)	(174.2)	(178.5)
Other financial income (loss)	4.2	(11.4)	(54.5)
Total income taxes	(23.7)	13.7	(77.0)
Net income (loss)	(514.1)	(576.6)	(1,446.2)

For 2017, EBIT at the Group level was a loss of US\$284 million, corresponding to a loss of US\$97 million before restructuring costs net of gain on sale of assets relating to our Transformation Plan and a loss of US\$55 million excluding Non-Operated Resources.

For 2016, EBIT at the Group level was a loss of US\$405 million, corresponding to a loss of US\$221 million before impairment of assets and restructuring costs related to our Transformation Plan and a loss of US\$137 million excluding Non-Operated Resources.

For 2015, EBIT at the Group level was a loss of US\$1,136 million corresponding to an income of US\$82 million before impairment of assets and restructuring costs related to our Transformation Plan and an income of US\$110 million excluding Non-Operated Resources.

For 2017, Group EBITDAS was US\$186 million, representing 14% of operating revenues, US\$372 million before restructuring costs net of gain on sale of assets relating to our Transformation Plan, representing 28% of operating revenues and US\$387 million excluding Non-Operated Resources.

For 2016, Group EBITDAS was US\$274 million, representing 23% of operating revenues, US\$328 million before restructuring expenses relating to our Transformation Plan, representing 27% of operating revenues and US\$350 million excluding Non-Operated Resources.

For 2015, Group EBITDAS was US\$453 million, representing 22% of operating revenues, US\$661 million before restructuring expenses relating to our Transformation Plan, representing 31% of operating revenues and US\$661 million excluding Non-Operated Resources.

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The following table presents EBITDAS by segment:

	Year ended December 31,		
	2017	2016	2015
	(in millions of US\$)		
EBITDAS			
Contractual Data Acquisition	(47.3)	(35.9)	(23.8)
Non-Operated Resources	(200.6)	(76.5)	(207.2)
GGR	486.0	460.4	680.9
Equipment	(6.1)	(6.4)	67.9
Eliminations and other	(45.9)	(68.0)	(65.0)
Consolidated Total	186.1	273.6	452.8

For 2017, Non-Operated Resources EBITDAS included US\$(186) million of restructuring costs net of gain on sale of assets relating to our Transformation Plan.

For 2016, Non-Operated Resources EBITDAS included US\$(54) million of restructuring expenses relating to our Transformation Plan.

For 2015, Non-Operated Resources EBITDAS included US\$(207) million of restructuring expenses relating to our Transformation Plan.

The following table presents a reconciliation of EBITDAS to net cash provided by operating activities, according to our cash flow statement, for the periods indicated:

	Year ended December 31,		
	2017	2016	2015
	(in millions of US\$)		
EBITDAS	186.1	273.6	452.8
Other financial income (loss)	4.2	(11.4)	(54.5)
Variance on Provisions	(16.7)	(105.6)	98.5
Net gain on disposal of fixed assets	(30.4)	0.1	(27.2)
Dividends received from affiliates	2.0	13.0	5.1
Other non-cash items	49.2	0.3	(3.0)
Income taxes paid	43.5	(12.6)	(19.2)
Change in trade accounts receivables	(97.9)	320.2	76.8
Change in inventories and work-in-progress	54.5	60.2	53.2
Change in other current assets	(15.8)	(27.3)	25.7
Change in trade accounts payables	(0.4)	(98.2)	(144.1)
Change on other current liabilities	19.6	(58.2)	(33.5)
Impact of changes in exchange rate		1.0	(22.5)
Net cash provided by operating activities	197.9	355.1	408.1

Free cash flow

We define free cash flow as cash flow from operations including Proceeds from disposals of tangible and intangible assets minus (i) the net of Total net capital expenditures ; Investments in multi-client surveys set out in our consolidated statement of cash flows under Investing , and (ii) Financial expenses paid set out in our consolidated statement of cash flows under Financing .

Free cash flow amounted to outflows of US\$197 million in 2017 compared to outflows of US\$174 million in 2016 and outflows of US\$130 million in 2015. Before restructuring charges relating to the Transformation

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Plan, free cash flow amounted to outflows of US\$96 million in 2017, compared to outflows of US\$7 million in 2016 and outflows of US\$9 million in 2015.

Contractual obligations

The following table presents payments in future periods relating to contractual obligations as of December 31, 2017:

	Less than 1 year	Payments due by period			Total
		2-3 years	4-5 years	After 5 years	
(in millions of US\$)					
<i>Long-term debt obligations:</i>					
Repayments: fixed rates	2,134.9				2,134.9
Repayments: variables rates(a)	809.2				809.2
Bonds and facilities interests	9.0				9.0
Total Long-term debt obligations	2,953.1				2,953.1
<i>Finance leases:</i>					
Finance lease Obligations: fixed rates	8.2	15.6	11.8		35.6
Finance lease Obligations: variables rates(a)					
Total Finance lease obligations	8.2	15.6	11.8		35.6
Bareboat agreements	72.2	102.9	91.3	193.8	460.2
Other operating lease agreements	49.7	55.2	41.5	44.5	190.9
Total Contractual Obligations(b)	3,083.2	173.7	144.6	238.3	3,639.8

(a) Payments are based on the variable rates applicable as of December 31, 2017.

(b) Payments in foreign currencies are converted in US\$ at December 31, 2017 exchange rates.

The amount of our financial debt was materially reduced by our financial restructuring, which was completed on February 21, 2018.

See Item 4: Information on the Company History and development of the Company Financial restructuring process and note 2 to our consolidated financial statements.

Off-Balance Sheet Arrangements

We have not entered into any other off-balance sheet arrangements that have or are reasonably likely to have a current or future material effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that are material to investors.

Please refer to note 18 to our consolidated financial statements for further details on current off-balance sheet obligations.

Trend information**Currency Fluctuations**

We face foreign exchange risks because a large percentage of our revenues and cash receipts are denominated in US dollars, while a significant portion of our operating expenses and income taxes accrue in euro and other currencies. Movements between the US dollar and euro or other

currencies may adversely affect our operating results. Approximately 75% of our turnover was denominated in US dollars in 2017, 2016 and 2015.

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As of December 31, 2017, we estimate our annual recurring expenses in euros to be approximately 350 million and as a result, an unfavorable variation of US\$0.20 in the average yearly exchange rate between the US dollar and the euro would reduce our profit before tax and our shareholders' equity by approximately US\$70 million.

Please refer to Item 3 Key Information Risk Factors Market and Other Risks We are exposed to exchange rates fluctuations for further details on the effect of fluctuations in the exchange rate of US dollar against euro upon our results of operations.

Interest Rates

Following our financial restructuring effective February 21, 2018, the total amount of our first lien notes and second lien notes are subject to variable interest rates that are reset at each interest period (every three months). As a result, our interest expenses vary in line with movements in short term interest rates.

For more information about our variable interest rate exposure, please refer to Item 3 Key Information Risk Factors Risks Related to Our Indebtedness We are exposed to interest rate risk and note 14 to our consolidated financial statements.

Income Taxes

We conduct the majority of our activities outside of France and pay taxes on income earned or deemed profits in each foreign country pursuant to local tax rules and regulations.

We have significant tax losses carried forward that are available to offset future taxation on income earned in certain OECD countries. Deferred tax assets are recognized only when their recovery is considered as probable or when there are existing taxable temporary differences, of an appropriate type, that reverse in an appropriate period. When tax laws limit the extent to which unused tax losses can be recovered against future taxable profits in each year, the amount of deferred tax assets recognised from unused tax losses as a result of suitable existing taxable temporary differences is restricted as specified by the tax law. When financial forecast are revised downward, we consider the depreciation of our deferred tax assets recognized on prior period.

Seasonality

Our land and marine seismic data acquisition revenues, in particular in the marine market, are usually seasonal in nature. In the marine market notably, certain basins can be very active and absorb higher capacity during a limited period of the year (such as the North Sea between April and September), triggering significant volatility in demand and price in their geographical markets throughout the year. The marine data acquisition business is, by its nature, exposed to unproductive interim periods due to vessel maintenance and repairs or transit time from one operational zone to another during which revenue is not recognized. Other factors that cause variations from quarter to quarter include the effects of weather conditions in a given operating area, the internal budgeting process of some important clients for their exploration expenses, and the time needed to mobilize production means or obtain the administrative authorizations necessary to commence data acquisition contracts.

In particular, we have historically experienced higher levels of activity in the fourth quarter for our multi-client and equipment business lines as our clients seek to fully deploy annual budgeted capital.

Item 6: DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES **Directors and Senior Management**

Board of Directors

Under French law, the Board of Directors determines our business strategy and monitors its implementation. The Board of Directors deals with any issues relating to our affairs, pursuant to the powers granted to it by the

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Ordinary Shareholders Meeting. In particular, the Board of Directors prepares and presents our year-end accounts to our Ordinary Shareholders Meeting. Our Board of Directors consists of between six and fifteen members elected by our shareholders. Under French law, a Director may be an individual or a legal entity for which an individual is appointed as permanent representative.

Our *statuts* (memorandum and Articles of Association) provide that each Director is elected for a four-year term by the Ordinary Shareholders Meeting. There is no obligation for Directors to be French nationals. According to French corporate law, a physical person may simultaneously hold the office of Director in no more than five *sociétés anonymes* whose registered offices are located on French territory, subject to certain exceptions. The Board's internal regulations provide that each Director is required to own at least 156 of our shares.

Directors are required to comply with applicable law and our *statuts*. Under French law, Directors are responsible for actions taken by them that, *inter alia*, are contrary to the Company's interests. They may be held liable for such actions both individually and jointly with the other Directors.

The following table sets forth the names of our current Directors, their positions, the dates of their initial appointment as Directors and the respective expiry dates of their current term as of the date of this report:

Name	Independent ^(a)	Position	Age	Nationality	Initially appointed ^(b)	Term expires	Number of shares/ ADS held as of December 31, 2017	Number of shares/ ADS held as of March 15, 2018
Remi Dorval ⁽¹⁾	Yes	Chairman ^(c)	67	French	2005	2018	749 shares	3,180 shares
Helen Lee Bouygues ^(e)	Yes	Director	45	US	2018	2020	n.a	n.a
Michael Daly ⁽¹⁾⁽⁴⁾	Yes	Director	64	English	2015	2021	156 shares	663 shares
Patrice Guillaume	No	Director representing employees	59	French	2017 ^(d)	2021	28 shares	28 shares
Anne-France Laclide-Drouin ⁽²⁾	Yes	Director	50	French	2017	2021	0 share	0 share
Colette Lewiner	Yes	Director	72	French	2018	2019	n.a.	1,000
Gilberte Lombard ⁽²⁾⁽⁴⁾	Yes	Director	73	French	2011	2019	635 shares	3,202 shares
Heidi Petersen ^(f)	Yes	Director	60	Norwegian	2018	2020	n.a	n.a
Mario Ruscev	Yes	Director	61	French	2018	2019	n.a.	156 shares
Philippe Salle	Yes	Director	52	French	2018	2021	n.a.	25,950 shares
Robert Semmens ⁽¹⁾⁽³⁾	No	Director	60	US	1999	2019	156 shares	156 shares
Kathleen Sendall ⁽³⁾⁽⁴⁾	Yes	Director	65	Canadian	2010	2018	156 ADS	156 ADS

⁽¹⁾ Member of Technology/Strategy Committee.

⁽²⁾ Member of Audit Committee.

⁽³⁾ Member of Appointment-Remuneration Committee.

⁽⁴⁾ Member of HSE/Sustainable Development Committee.

^(a) Independent Director within the meaning of the Governance Code of the Association Française des Entreprises Privées – Mouvement des Entreprises de France. See Item 6: Directors, Senior Management and Employees – Board Practices.

^(b) All current Directors have been appointed pursuant to Article L.225-17 of the French Commercial Code.

^(c) Term of office was renewed on May 27, 2016 pursuant to Section 9 § 1 of the Articles of Association authorizing the Board to further extend the office of the Chairman, once or several times for a total period not exceeding three years.

^(d) Mr. Patrice Guillaume was appointed as Director by the Group Committee pursuant to Article 8 of the Company's articles of association.

^(e) Mrs. Bouygues was appointed by cooptation by the Board of Directors meeting held on March 23, 2018 in place of Bpifrance Participations. Ratification of this appointment will be submitted to the General Meeting to be held on April 26, 2018.

^(f) Mrs. Petersen was appointed by cooptation by the Board of Directors meeting held on March 23, 2018 in place of Mr. Houssin. Ratification of this appointment will be submitted to the General Meeting to be held on April 26, 2018.

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The Board indicated its intention to nominate Mr. Philippe Salle as Chairman of the Board of Directors to replace Remi Dorval whose term of office will expire at the end of the Annual General Meeting to be held on April 26, 2018. Such nomination shall take place at the Board meeting to be held at the end of such General Meeting subject to the ratification of Mr. Salle's cooptation by the said General Meeting.

The composition of the Board committees will be reviewed after the Annual General Meeting to be held on April 26, 2018.

Mr. Remi Dorval is a graduate of the *École Centrale de Paris*, the *Institut d'Études Politiques* and the *École Nationale d'Administration*. He has been Chairman of our Board of Directors since June 4, 2014. He served as a civil Board member of the *Direction des Hydrocarbures* of the Industry Ministry from 1979 to 1984 and a civil Board member of the *Direction du Trésor* of the Economy and Finance Ministry from 1984 to 1986. Between 1986 and 1990, he was successively, within the International Bank of Western Africa, General Manager of the US Branch in New York, then Managing Director of a subsidiary in Gabon and then Executive Vice President in charge of Treasury, Financial Markets Department and Asset Management. Until 2010, he was Chief Executive Officer and Director of Soletanche-Bachy Entreprise, Senior Executive Vice President of Soletanche Freyssinet, Director, Chairman and Chief Executive Officer of Soletanche Bachy France, Chairman of Forsol, Chairman of SB 2007, a Director of SHPIC, Bachy Soletanche Holdings, SBUSA, Soldata Iberia and Nicholson. He was also a member of the Supervisory Board of CGG Holding BV. He was Executive Vice President of Vinci, a Euronext Paris-listed company from 2010 to 2015. He also served as Chairman of *La Fabrique de la Cité* and is now a Member of the Advisory Board of the latter.

Mrs. Helen Lee Bouygues joined our Board of Directors on March 23, 2018. She received her Bachelor of Arts, magna cum laude, from Princeton University in Political Science and a Masters of Business Administration from Harvard Business School. Mrs. Helen Lee Bouygues started her career in 1995 at J.P. Morgan in the M&A group in New York and in Hong Kong. In 1997, she joined Pathnet Inc., a telecommunications provider based in Washington DC, as Director of Development and Finance. From 2000 until 2004, she worked at Cogent Communications Inc. as Chief Operating Officer, Chief Financial Officer and Treasurer. She thereafter became a Partner at Alvarez & Marsal Paris, where she left to launch her own consulting firm specialized in corporate turnaround and transformations in 2010. In 2014, she integrated her team at McKinsey & Company in Paris where she was Partner responsible for the division Recovery and Transformation Services. Since June 2017, she is President of HLB Partners, a consulting firm. She also serves as Director and member of the Audit Committee of Vivarte, Director and member of the Audit & Remuneration Committee of Burelle SA (a company listed on Euronext Paris) and Governor and member of Finance and Strategy Committees of the American Hospital of Paris (non-profit).

Mr. Michael Daly is a graduate of The University College of Wales, Leeds University (PhD) and Harvard Business School (PMD). Mr. Daly is a British geologist, oil and gas executive and academic. He joined the Geological Survey of Zambia in 1976, mapping the remote Muchinga Mountains of northeast Zambia. He began his business career with BP in 1986 as a research geologist. After a period of strategy work and exploration and production positions in Venezuela, the North Sea and London, he became President of BP's Middle East and S. Asia exploration and production business. In 2006, Mr. Daly became BP's Global Exploration Chief and a Group Vice President. He served on BP's Group Executive Team as Executive Vice President from 2010, and retired in 2014 after 28 years with the company. He currently serves as Senior Director at Macro Advisory Partners, Non-Executive Director with Tullow Oil, as Visiting Professor in Earth Sciences at The University of Oxford and Director of Daly Advisory and Research Ltd.

Mr. Patrice Guillaume graduated from the Ecole Centrale of Lyon (France). He began his professional activity in 1981 as a professor of electronics at the Polytechnic of Kano Nigeria as part of the volunteer service to the national service at the French Ministry of External Relations. After a three-year stint at Air Liquide's research center as a research engineer in combustion, he joined CGG in 1985 as deputy head of mission for land acquisitions in Italy. He then returned to a career in research in geophysics in the field of imaging to become an expert in tomography and managed the team specialized in tomography. He has been a member of the CGG Works Council for about 20 years and secretary of the Group Committee for about 10 years.

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Ms. Anne-France Laclide-Drouin joined our Board of Directors on October 31, 2017. She is a graduate from the *Institut Commercial* of Nancy (ICN) and Mannheim University. She also holds a *Diplôme d Etudes Supérieures Comptables et Financières*. Ms. Laclide-Drouin began her career at PricewaterhouseCoopers before occupying various positions in the financial division of international groups in different sectors, such as the distribution sector, where she acquired international experience. In 2001, she became Financial Director of Guilbert, then Staples, AS Watson and GrandVision. Mrs. Laclide-Drouin has been CFO of Oberthur Technologies, comprising the responsibility of the financial and legal functions of the group, from 2013 to 2017. She is now CFO of Consolis Holding SAS and she also serves as Director of Bonna Sabla SA (France), Consolis Oy AB (Finland), Parma Oy (Finland), Philbert Tunisie SA (Tunisia), Member of the Supervisory Board and Chairman of WPS Ujski (Poland), Member of the Supervisory Board of ASA Epitoipari Kft (Hungary) and General Manager of Compact (BC) SARL (Luxembourg).

Ms. Colette Lewiner joined our Board of Directors on March 8, 2018. Ms. Colette Lewiner has graduated from *Ecole Normale Supérieure* (a leading French higher education University) and has a PhD in physics. In November 1979, after around 10 years spent as a physics researcher, she joined Electricité de France (EDF), she headed the Fuel Procurement division (purchasing fuel oil, gas, coal and mainly nuclear fuel) and then she became in 1989 EDF's first woman Executive Vice President in charge of the Commercial division that she created. Ms. Lewiner was appointed Chairman of the Board, Chief Executive Officer, of SGN on March 1992. When she took SGN leadership, this engineering company revenue was only in the nuclear sector and at 90% for its main shareholder Cogema. She expanded this 9,000 people top class engineering and services company internationally and added a Chemical branch. In 1998, SGN revenues had grown (despite its decrease in France) and non-French clients (US, Japan, etc.) accounted for 30% of the revenues. In 1998, Ms. Lewiner joined Capgemini and created the Utilities Global Market Unit. In May 2000, following the merger of Cap Gemini and Ernst & Young, Ms. Lewiner was nominated Executive Vice President and Global Leader of the Energy, Utilities and Chemicals Sector. In 2011, with 1 billion euros revenue this global Unit represented 11% of Capgemini's revenue (compared to 4% in 1998) had more than 11,000 collaborators. After having lead during 14 years the Energy, Utilities and Chemicals sector, Ms. Lewiner became on July 1, 2012, Energy advisor to Capgemini Chairman. She has been Director and Member of the Audit Committee of TGS Nopec Geophysical Company (from 2006 to 2015), Non-Executive Chairman of TDF (from 2010 to 2012), Director and Member of the Strategy Committee of Lafarge Holcim (from 2011 to 2014) and Director and Chairwoman of the Nomination and Remuneration Committee of Cromton Greaves (from 2013 to 2016). Ms. Colette Lewiner currently serves as Director, Member of the Strategy & Sustainable Development Committee of Nexans (a company listed on Euronext Paris), Director, Chairwoman of the Selection and Compensation Committee of Bouygues (a company listed on Euronext Paris), Director, Member of the Accounts Committee, Member of the Ethics Committee and Chairwoman of the selection and Compensation Committee of Colas (a company listed on Euronext Paris and at 96.6% controlled by Bouygues), Director, Chairwoman of the Audit Committee, Member of the Governance Committee of Getlink (formerly Eurotunnel, a company listed on Euronext Paris), Director, Member of the Audit Committee, Chairwoman of the Ethic Committee, Member of the Nomination and Remuneration Committee of EDF (a company listed on Euronext Paris), Director, Member of the Strategy Committee, Member of the Audit Committee of Ingenico (a company listed on Euronext Paris - this term of office will expire at the end of the next annual general meeting of Ingenico).

Ms. Gilberte Lombard joined our Board of Directors on May 4, 2011. She held various financial positions within HSBC France (formerly Credit Commercial de France) from 1990 until her retirement in February 2011. She began her career as a financial analyst and then joined the M&A department of Credit Commercial de France. After Credit Commercial de France was privatized in 1987, she became the Investor Relations Officer in charge of relationships with financial analysts and institutional investors. She also coordinated the information policy for both major bank shareholders and individual bank shareholders from 1987 to 2000. In 2000, she was appointed as head of financial transactions in charge of structuring and implementing sales, acquisitions and mergers for HSBC France (which by now had taken over Credit Commercial de France) and managing its industrial and financial portfolio. She was appointed a member of the Board and the Audit Committee of several companies within the HSBC group in France. She was also appointed as Secretary of the Board of Directors in

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1990 and served as a member of the Supervisory Board, member of the Audit Committee and member of the Remuneration Committee of Zodiac Aerospace until February 12, 2018. She continues to serve as Director, Chairman of the Remuneration Committee and member of the Strategic Committee of Robertet SA, two Euronext Paris-listed companies. She is a Director of the *Vernet Retraite* association. Ms. Lombard holds a Masters degree in Economic Sciences and is a graduate of the INSEAD Advanced Management Program. She is *Chevalier de la Légion d'Honneur*.

Ms. Heidi Petersen joined our Board of Directors on March 23, 2018. Ms. Petersen holds a M.Sc. (cand. scient. degree) from the Norwegian University of Science and Technology in Trondheim, Department of Chemistry and Mathematics. She started her career as research assistant at the Norwegian University of Science and Technology in Trondheim in 1983. She was employed in Kvaerner Oil & Gas from 1988 where she worked as an engineer, project manager and departmental manager engaged in offshore and land-based industrial assignments. She served as maintenance supervisor of the Gullfaks C platform for two years from 1995 to 1997. She was appointed head of Kvaerner Oil & Gas AS in Sandefjord in 1997, where she served as Vice President until 2000. In 2000, she headed a management buy-out that led to the startup of Future Engineering AS and served as its Managing Director from 2000 to 2004. In 2004, she sold the company to Rambøll and served after that as Managing Director of Rambøll Oil & Gas from 2004 to 2007. Ms. Petersen is an independent businesswoman, with 30 years of experience in the oil and offshore industry. She has board experience in industrial, oil and gas-based operations, as well as energy supply and financial enterprises. Mrs. Petersen owns Future Technology AS, a leading consultancy and technology company located in Sandefjord and Oslo offering consultant services, engineering services and construction solutions, notably in the oil and gas market. She also serves as Chairman of Future Technology AS, Director of Arendal Fossekompagni ASA (a company listed on the Oslo Stock Exchange) and Director of HIP AS (Norway).

Mr. Mario Ruscev joined our Board of Directors on March 8, 2018. Dr. Ruscev is a Nuclear Physicist by training holding a PhD from Yale University. He spent 23 years with Schlumberger in various responsibilities in the R&D and operational areas. He was the head of the Seismic, Testing, Water & Gas services and Wireline Product Lines. He has since been CEO of FormFactor a provider of unique nanotech connectors for the semi-conductor industry, CEO of IGSS (GeoTech) the major Russian Seismic Company, CTO at Baker Hughes and EVP at Weatherford. During his career, Mr. Ruscev had the opportunity to evolve in many environments where Technology was a differentiator and his team's successfully introduced systems as diverse as: luggage scanners differentiating between organic and inorganic materials still in use after 30 years, the first Container Scanner based on unique gaseous sensors, many Wireline and Testing tools including the PlatForm Express Wireline combo still unequalled after 25 years, the first single sensor seismic systems called Q, the first ever Aquifer Storage and Recovery in Middle East, simulators allowing to understand the formation and propagations of fractures during Frac operations or analytics applications in the Oilfield Operations. His combined Technology and Operational experiences give him a unique perspective on the evolution of the Oilfield business.

Mr. Philippe Salle joined our Board of Directors on March 8, 2018. Mr. Philippe Salle is a graduate of the *École des Mines* and holds a MBA from the Kellogg Graduate School of Management, Northwestern University (Chicago, USA). Mr. Philippe Salle began his career with Total in Indonesia before joining Accenture in 1990. He then joined McKinsey in 1995 and became Senior Manager in 1998. In 1999, he joined the Vedior group (which later became Randstad, a company listed on Euronext Amsterdam). He became Chairman and CEO of Vedior France in 2002; In 2006, he became a member of the managing board of Vedior NV and was then appointed President for South Europe in 2006 (France, Spain, Italy and Switzerland). In 2007, he joined the Geoservices group, a technological company operating in the petroleum industry and listed on the New York Stock Exchange. He was first appointed Deputy CEO and then Chairman and CEO until March 2011. From 2011 to 2015, he was Chairman and CEO of the Altran group. He then became Chairman and CEO of Elior where he remained until October 2017. He is now CEO of Foncia. He has also been a Director of Gaztransport and Technigaz (a company listed on Euronext Paris), since 2014 and a Director of Banque Transatlantique since 2010.

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Mr. Robert Semmens is a private investor and adjunct professor of finance at the Leonard N. Stern School of Business (New York University). He holds a law degree from Northwestern University School of Law and an MBA in Finance and Accounting from the J.L. Kellogg Graduate School of Management at Northwestern University. He was Vice President of Goldman Sachs & Co. in Investment Banking, and at J. Aron and Principal Investing, all in energy related businesses. He was co-founder of The Beacon Group, where he raised and co-managed private equity funds in the energy business. Mr. Semmens joined the Board of CGG in connection with an investment made by the Beacon Group in CGG in 1999. At CGG, he has served on the Audit, Appointment-Remuneration and Strategic Committees of the Board and has been a Director of Sercel. He has served on more than 15 boards, all in the energy business. He currently serves as a Director of MicroPharma Ltd (Canada) and Bronco Holdings LLC (USA).

Ms. Kathleen Sendall joined our Board of Directors on May 5, 2010. She is a mechanical engineering graduate of Queen's University (Ontario), holds an Honorary Doctorate from the University of Calgary and is a graduate of the Western Executive Program. She began her career as a junior process engineer for Petro-Canada in 1978, and then was a project engineer for compressor station design and construction at Nova, an Alberta corporation for two years. Ms. Sendall held various positions within Petro-Canada between 1984 and 1996. From 1996 to 2000, she was Vice President Engineering & Technology, and was Vice President, Western Canada Development & Operations until 2002. Ms. Sendall was appointed Senior Vice President, North American Natural Gas of Petro-Canada from 2002 to 2009. She was also a Governor on the Board of Governors of the University of Calgary until 2010 and Governor and Chair of the Board of the Canadian Association of Petroleum Producers. Mrs. Sendall is a member of the Association of Professional Engineers and Geoscientists of Alberta (APEGA). She also serves as a Director of ENMAX, as trustee of the Ernest C. Manning Awards Foundation and as Chairman of the Board of Directors of Emission Reductions Alberta. Ms. Sendall was invested as a member of the Order of Canada in 2011 and was awarded the Queen's Jubilee Medal in 2012.

Executive Officers

Under French law and our current *statuts*, the Chief Executive Officer has full executive authority to manage our affairs and has full power to act on our behalf and to represent us in dealings with third parties, subject only to (i) the corporate purpose of the Company, (ii) those powers expressly reserved by law to the Board of Directors or our shareholders and (iii) limitations that the Board of Directors may resolve, such limitations not being binding on third parties. The Chief Executive Officer determines and is responsible for the implementation of the goals, strategies and budgets for our different businesses, which are reviewed and monitored by the Board of Directors. The Board of Directors has the power to appoint and remove the Chief Executive Officer at any time. In accordance with French corporate law, our current *statuts* provide that the Board of Directors may either elect one person to assume both the position of Chairman and the position of Chief Executive Officer or it may elect two different people to fill the positions. The Board of Directors decided to separate the roles of Chairman and Chief Executive Officer. Since June 4, 2014, Mr. Dorval has held the position of Chairman, and since June 30, 2010, Mr. Malcor has held the position of Chief Executive Officer. Our current *statuts* also allow that the Board of Directors to appoint up to five Corporate Officers (*Directeurs Généraux Délégués* or Corporate Officers) upon proposal of the Chief Executive Officer, whether or not this person is also the Chairman of the Board. Stéphane-Paul Frydman, Pascal Rouiller and Sophie Zurquiyah were each appointed as Corporate Officers by our Board of Directors. Their role as Corporate Officer was terminated on January 4, 2017 upon decision of the Board of Directors.

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The following table sets forth the names of members of our Corporate Committee and their current positions with us.

Name	Current position
Jean-Georges Malcor	Chief Executive Officer
Stéphane-Paul Frydman	Group Chief Financial Officer
Pascal Rouiller	Chief Operating Officer
Sophie Zurquiyah	Chief Operating Officer

Mr. Jean-Georges Malcor, 61, is a graduate of the *École Centrale de Paris*, holds a Doctorate from the *École supérieure des Mines de Paris* and a Master in Science from Stanford University. He has been Chief Executive Officer of CGG S.A. since June 30, 2010 and a Director of CGG S.A. since May 4, 2011. From January 1, 2010 to June 30, 2010, he served as President of CGG. Mr. Malcor began his career at the Thales group as an acoustic engineer (1983-1987) in the Underwater Activities division, where he was in charge of hydrophone and geophone design and towed streamer programs. He then moved to Sydney-based Thomson Sintra Pacific Australia, becoming Managing Director of the company in 1990. Mr. Malcor became Director of Marketing & Communications (1991), then Director, Foreign Operations, of Thomson Sintra Activités Sous-Marines (1993). In 1996, he was appointed Managing Director of Thomson Marconi Sonar Australia which was, in addition to its military activities, the lead developing company for the solid geophysical streamer. In 1999, he became the first Managing Director of the newly formed joint venture Australian Defense Industry. During this time, he operated the Sydney based Woolloomooloo Shipyard (the largest dry dock in the southern hemisphere). In 2002, he became Senior Vice President, International Operations, at Thales International. From 2004 to 2009, he was Senior Vice President in charge of the Naval Division, supervising all naval activities in Thales, including ship design, building and maintenance. In January 2009, he became Senior Vice President in charge of the Aerospace Division. In June 2009, he moved to the position of Senior Vice President, Continental Europe, Turkey, Russia, Asia, Africa, Middle East, and Latin America. He also serves as a member of the Board of Directors of the Arabian Geophysical and Surveying Company (ARGAS), a company 49% held by the Group. He is also a member of the Audit Committee and member of the Supervisory Board of STMicroelectronics (a company listed on Euronext Paris, the New York Stock Exchange and Borsa Italiana), a member of the Supervisory Board of Fives SA, General Manager of SCI 1 Australe, Chairman of the Board of Directors of *Universcience Partenaires*, Director of *Oceanides* association and of the *École Centrale Supélec*, and an active member of *EVOLLEN* and of *Cluster Maritime Français*.

Mr. Stéphane-Paul Frydman, 54, is a graduate of the *École Polytechnique* of Paris and the *École des Mines* of Paris. He has been Group Chief Financial Officer since January 2007 and served as Corporate Officer from February 29, 2012 to January 4, 2017. He is also in charge of the General Secretary Function, as well as the Strategy and Investors relations departments. Before that time, he had been Group Controller, Treasurer and Deputy Chief Financial Officer since September 2005, Deputy Chief Financial Officer of the Group since January 2004 and Vice President in charge of corporate financial affairs reporting to the Chief Financial Officer since December 2002. Prior to joining CGG, Mr. Frydman was, from April 2000 to November 2002, an Investor Officer of Butler Capital Partners, a private equity firm and from June 1997 to March 2000, Industrial Advisor to the French Minister of the Economy and Finances. Mr. Frydman is currently a Director of CGG Holding (U.S.) Inc. and Chairman of the Board of Directors of CGG International SA.

Mr. Pascal Rouiller, 64, is a graduate of the *École Centrale de Paris*. He is Chief Operating Officer in charge of the Acquisition and Equipment business lines and of Risk Management/HSE/Sustainable Development for the Group. He served as Corporate Officer from February 29, 2012 to January 4, 2017. Before that time, Mr. Rouiller served as Vice President for the Asia-Pacific region from May 1992 to September 1995, then as Vice President of our Product segment from October 1995 to December 1999. In 1999, he was appointed Chief Operating Officer of the Sercel Group and has acted as Chairman and Chief Executive Officer of Sercel SAS since September 2005. Mr. Rouiller is now Chief Executive Officer of Sercel SAS, Sercel Holding SAS and Chairman of CGG Services SAS, Chairman of the Board of Directors of Sercel (Beijing) Technological Services

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Co. Ltd. and of Sercel Australia Pty. Ltd., Chairman of the Board of Sercel Canada Ltd., Chairman of the Board of Directors of Hebei Sercel Junfeng Geophysical Prospecting Equipment Co. Ltd., Director of Sercel Singapore Private Ltd., Director and Chief Executive Officer of Sercel Inc., and Director of Seabed Geosolutions B.V. (a Dutch company 40% held by the Group).

Ms. Sophie Zurquiyah, 51, is a graduate from *École Centrale de Paris*, holds a master in Numerical analysis from the University of Paris VI (UPMC) and a master's degree in aerospace engineering from the University of Colorado. As of the date of this report, she is Chief Operating Officer (COO) and Senior Executive Vice President in charge of the GGR segment, Technology and Global Operational Excellence. She joined CGG in 2013 after 22 years in the oilfield services industry, working for Schlumberger in global executive positions ranging from business, operations, functional to technology, based in France, the United States and Brazil. Ms. Zurquiyah also serves as Senior Executive Vice President of CGG Services (U.S.) Inc. and Director of Petroleum Edge Ltd. She has been a Director of Safran (a company listed on Euronext Paris) since June 2017.

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

Following the approval by the extraordinary general meeting of the resolutions necessary to implement the Safeguard Plan, and with the confirmation judgment of the Chapter 11 Plan in the United States and the judgment approving the Safeguard Plan rendered by the Commercial Court of Paris on December 1, 2017, Mr. Jean-Georges Malcor decided, in agreement with the Board of Directors, not to pursue his mandate of Chief Executive Officer once the restructuring process is completed.

The Board of Directors of the Company, at its meeting held on December 1, 2017, determined the terms and conditions of the termination of Mr. Jean-Georges Malcor's office as Chief Executive Officer. This decision followed the Board of Directors' approval of the early termination of his office as Chief Executive Officer by October 1, 2018 at the latest or any earlier date on which a new Chief Executive Officer is appointed and takes up his duties. The compensation arrangements resulting from this decision are described in section Compensation below relating to the Chief Executive Officer's compensation.

The meeting of the Board of Directors held on March 23, 2018 approved the appointment of Ms. Sophie Zurquiyah as Chief Executive Officer until the annual general meeting to be convened to approve the 2021 financial statements. This appointment will be effective at the end of the annual general meeting to be held on April 26, 2018.

Compensation

Annual fixed and variable compensation of the Chairman of the Board of Directors and the Chief Executive Officer for 2016 and 2017 fiscal years

Compensation of Mr. Remi Dorval, Chairman of the Board of Directors

The gross fixed compensation earned by and paid by the Company and its subsidiaries to Mr. Remi Dorval, Chairman of the Board of Directors, for fiscal years 2016 and 2017, is set forth in the table below.

For fiscal year 2016, the Board of Directors resolved that Mr. Dorval would benefit, as Chairman of the Board of Directors, from a fixed amount of Directors' fees, set at 57,200 per year, and from a fixed remuneration set at 109,750 per year. In addition, he benefited from a benefit in kind (company car), corresponding to 3,360 per year, in addition to his fixed compensation.

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For fiscal year 2017, the Board of Directors resolved that Mr. Dorval would benefit, as Chairman of the Board of Directors, from a fixed amount of Directors' fees, set at 57,200 per year, and from a fixed remuneration set at 115,000 per year, to which the actual amount borne by the Company with respect to his company car will be deducted. This benefit in kind (company car) amounts to 3,360.

Remi Dorval	2016		2017	
	Amounts earned	Amounts paid	Amounts earned	Amounts paid
Chairman of the Board of Directors				
Fixed compensation	109,750.00	109,750.00	109,750.00	109,750.00
Annual variable compensation	N/A	N/A	N/A	N/A
Multi-annual variable compensation	N/A	N/A	N/A	N/A
Exceptional compensation	N/A	N/A	N/A	N/A
Retirement Indemnity	N/A	N/A	N/A	N/A
Director's fees	57,700.00 ⁽⁴⁾	65,000.00 ⁽¹⁾	57,200.00 ⁽²⁾	57,700.00 ⁽⁴⁾
Benefits in kind	3,360.00	3,360.00	3,360.00	3,360.00
Total	170,810.00	178,110.00	170,310.00	170,810.00

⁽¹⁾ Paid in February 2017 for fiscal year 2016.

⁽²⁾ Paid in January 2016 for fiscal year 2015.

⁽³⁾ Paid in March 2018 for fiscal year 2017.

⁽⁴⁾ Includes an amount of 500 as travel indemnity according to the Directors' compensation principles described below.

Compensation of Mr. Jean-Georges Malcor, Chief Executive Officer

The variable part of the Chief Executive Officer's compensation is based on qualitative criteria (individual objectives), accounting for a third of the variable compensation, and quantitative criteria (financial objectives), accounting for two-thirds of the variable compensation. His target amount was set at 100% of his fixed compensation. Lastly, in case of overachievement, the allocation of short term variable incentive compensation 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 fiscal year 2016, during a meeting held on March 24, 2016, the Board of Directors resolved that the variable compensation of Mr. Malcor would be composed as follows:

Quantitative criteria based on the achievement of budget objectives: 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);

Qualitative criteria based on the achievement of individual objectives, related to the implementation of the Group transformation plan, the relations with our major customers, the relations with the Board of Directors, the shareholders and the financial community, strategy and development of the Group in the industry and outside the oil and gas industry, human resources and the improvement of the Group HSE performance.

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

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In 2016, Mr. Jean-Georges Malcor's objectives were achieved at 61% of the target amount of his variable compensation and of his fixed compensation.

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For fiscal year 2017, during a meeting held on April 6, 2017, the Board of Directors resolved that the variable compensation of Mr. Malcor would be composed as follows:

Quantitative criteria based on the achievement of budget objectives: 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);

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 on 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).

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

In 2017, Mr. Jean-Georges Malcor's objectives were achieved at 145% of the target amount of his variable compensation and of his fixed compensation.

The gross fixed and variable compensations paid by the Company and its subsidiaries to Mr. Jean-Georges Malcor in fiscal years 2016 and 2017 are set forth below:

Jean-Georges Malcor	2016		2017	
	Amounts earned	Amounts paid	Amounts earned	Amounts paid
Chief Executive Officer				
Fixed compensation	630,000.00	630,000.00	630,000.00	630,000.00
Annual variable compensation	384,216.00	480,087.00 ⁽¹⁾	914,885.00 ⁽²⁾	384,216.00 ⁽³⁾
Multi-annual variable compensation ⁽⁴⁾	N/A	N/A	N/A	N/A
Exceptional compensation	N/A	N/A	N/A	N/A
Director's fees	N/A	N/A	N/A	N/A
Benefits in kind	11,880.00	11,880.00	11,880.00	11,880.00
Total	1,026,096.00	1,121,967.00	1,556,765.00	1,026,096.00

⁽¹⁾ Paid in March 2016 for fiscal year 2015.

⁽²⁾ The variable compensation due for the 2017 fiscal year in respect of the term of office of Mr. Jean-Georges Malcor as Chief Executive Officer will be paid in 2018, after approval of the financial statements by the Annual General Meeting convened on April 26, 2018. This payment will be subject to approval of such variable compensation by the same General Meeting in accordance with the conditions provided by article L. 225-100 of the French Commercial Code.

⁽³⁾ Paid in March 2017 for fiscal year 2016.

⁽⁴⁾ Additional details on the multi-annual variable compensation implemented on June 23, 2016 are provided below. No compensation was earned or paid pursuant to this mechanism in 2016 and 2017.

Conditions of compensation and benefits granted to the Chief Executive Officer following the Board of Directors' meeting held on December 1, 2017

The Board of Directors of the Company, at its meeting held on December 1, 2017, approved the conditions relating to the departure of Mr. Jean-Georges Malcor as Chief Executive Officer (see also paragraph Contractual

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indemnity in case of termination (below) 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:

- i a fixed compensation of 52,500 gross monthly, unchanged from his 2017 fixed compensation;
- i no annual variable compensation subject to the achievement of qualitative objectives and quantifiable objectives will be attributed to him;
- i 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
- i 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).

Multi-annual bonus plan in the form of performance units

On June 23, 2016, the Board of Directors of the Company, upon the Appointment-Remuneration Committee's proposal, implemented a multi-annual bonus system in the form of performance units, replacing the performance shares plans with a twofold objective:

Implementation of a globally harmonized remuneration mechanism consistent with the growing internalization of our Group, and

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Establishment of a closer link between the remuneration of the main senior executives and the share price and overall economic performance of the Group taken as a whole on a mid-term basis (three years).

The Corporate Committee members (including the Chief Executive Officer) along with the senior executives of the Group and certain additional employees that contributed to the Group performance or that have strong evolution potential within the Group are eligible for the plan.

The performance units vest upon the expiry of a three-year period from the allocation date subject to a presence condition in the Group at the time of vesting and achievement of certain performance conditions. These performance conditions are based on precise and predetermined qualitative criteria, which are not described in this report for confidentiality concerns. These performance conditions, each conditioning the vesting of 50% of the allocation, are based on the achievement of Group objectives related to the return on capital employed and balance sheet structure along with achievement of business segments' financial objectives aligned with the Group strategic orientations over a three-year period.

The number of vested performance units under these two plans is based on achievement of the Group objectives up to 60% of the global allocation. The balance is allocated based on the achievement of the segments' objectives.

The valuation of each vested performance unit under these two plans shall be equal to the average closing price of CGG shares on Euronext over the five trading days prior to the vesting date. The vested performance units will be paid half in cash and half in existing CGG shares.

The performance units allocated to the Chief Executive Officer by the Board of Directors on June 23, 2016 are set forth below:

Name of the Executive Officer	Date of Board meeting	Maximum number of Performance Units	Valuation of performance units pursuant to the method used for consolidated financial statements (€)	Acquisition date
Jean-Georges MALCOR	06.23.2016	108,960	32,943	06.23.2019
<i>Chief Executive Officer</i>				
<i>Corporate Committee</i>				

As of December 31, 2017, the compensation of the members of Corporate Committee consists of a fixed element and a bonus.

The variable part of this compensation is based on the achievement of Group's financial objectives such as the operating income, free cash flow and external revenues of the Group, as well as on the achievement of commercial and financial objectives within each segment of the Group and their respective heads. This variable part is also based on the achievement of qualitative individual objectives.

Considering the importance of this variable part, the amount of the Corporate Committee members' compensation may significantly vary from one year to another. The variable part is set and paid the following year, in March.

The aggregate compensation of our Corporate Committee, including the Chief Executive Officer, paid in fiscal year 2017 was 3,226,438 including the benefits in kind but excluding Directors' fees, if any.

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Contractual indemnity in case of termination

Chief Executive Officer

Agreement in force until January 4, 2017

On June 4, 2014, the Board of Directors renewed the term of office of Mr. Jean-Georges Malcor for a three-year period, and also renewed, for the duration of his term in office, the terms and conditions of the advantages granted to Mr. Jean-Georges Malcor in case of termination of his term of office, which were previously approved by the Board of Directors on May 10, 2012 and ratified at the General Meeting of May 3, 2013. The renewal of the advantages was ratified at the General Meeting held on May 29, 2015.

These advantages are the following:

Mr. Jean-Georges Malcor does not benefit from any contractual termination indemnity, except in case of a forced departure relating to a change of control or a change of strategy. In such case, his indemnity shall be equal to the difference between:

- (i) a gross amount of 200% of the gross fixed compensation paid by the Company to Mr. Jean-Georges Malcor during the 12-month period preceding his departure date, to which is added the annual average of the variable compensation paid by the Company to Mr. Jean-Georges Malcor over the 36-month period preceding his departure date, (hereinafter the Reference Annual Compensation), and
- (ii) any sum to which Mr. Jean-Georges Malcor may be entitled as a result of his departure from the Group, including any sums to be paid pursuant to his non-competition agreement.

The indemnity global amount shall not exceed 200% of the Reference Annual Compensation.

Pursuant to Article L.225-42-1 of the Commercial Code, the payment of the special termination indemnity referred to hereinabove shall remain subject to the achievement of the following performance conditions, related to the Company's performance:

The average, calculated over the 60 trading days preceding the departure date, of the ratio of the CGG ADS price over the PHLX Oil Service SectorSM (OSXSM) index shall equal at least two-thirds of the same average ratio over the same 60-day period four years before the date on which Mr. Malcor leaves the Group;

The average, calculated over the 60 trading days preceding the departure date, of the ratio of the CGG share price over the SBF 120 index shall equal at least two-thirds of the same average ratio over the same 60-day period four years before the date on which Mr. Malcor leaves the Group;

The average margin rate of the Group EBITDAS over the four years preceding the date on which Mr. Malcor leaves the Group shall be at least 25%.

Payment of the full amount of the special termination indemnity is subject to the fulfillment of two out of three aforementioned conditions. If only one condition is fulfilled, then Mr. Jean-Georges Malcor will be entitled to receive only 50% of the special termination indemnity.

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

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Amended agreement dated January 4, 2017:

On January 4, 2017, the Board of Directors amended the triggering events and the performance conditions of the advantages granted to Mr. Jean-Georges Malcor in case of termination of his term of office. They are now as follows:

Mr. Jean-Georges Malcor is entitled to receive the special termination indemnity in case of dismissal, non-renewal of his term of office or in any other event of a forced departure linked to a change of control resulting in a substantial change in situation or a change of strategy.

The payment of the special termination indemnity will depend on the level of the average rate of achievement of the objectives relating to Mr. Jean-Georges Malcor's variable compensation calculated over the three financial years preceding his departure date as follows:

If such average rate is below 40%, no special termination indemnity will be paid;

If such average rate is higher than 40%, the special termination indemnity will be equal to 100% of the Reference Annual Compensation.

The other provisions of the agreement remain unchanged.

On June 1, 2017, the Board of Directors decided to renew the term of office of Mr. Jean-Georges Malcor until June 1, 2020 as Chief Executive Officer, and also renewed the advantages granted to Mr. Jean-Georges Malcor in case of termination of his term of office with the same terms and conditions as those existing since January 4, 2017.

Pursuant to article L. 225-42-1 of the French Commercial Code, the modification and the renewal of these advantages were submitted for ratification to the Annual General Meeting held on October 31, 2017 under the 9th and 10th resolutions. The General Meeting did not approve these resolutions.

The Board of Directors held on December 1, 2017, which among other things, determined the terms and conditions of the termination of Mr. Jean-Georges Malcor's office as Chief Executive Officer, decided that no severance pay will be paid to Mr. Jean-Georges Malcor upon termination of his office as Chief Executive Officer or thereafter.

Non-compete agreement

Chief Executive Officer

On June 30, 2010, the Board of Directors approved, 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 between the Company and Mr. Jean-Georges Malcor. This agreement was ratified by the General Meeting held on May 4, 2011.

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. Jean-Georges 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 for this undertaking, Mr. Jean-Georges Malcor will be entitled to receive compensation corresponding to 100% of his Reference Annual Compensation as defined in the protection letters related to payment of the contractual indemnity in case of termination of his office.

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General benefits plan

Chairman of the Board of Directors

On March 26, 2015, the Board of Directors approved, 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 extension of the Group's general benefits plan (applicable to all employees) to Mr. Remi Dorval. This agreement was ratified during General Meeting held on May 29, 2015.

Chief Executive Officer

On June 30, 2010, the Board of Directors approved, 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 extension of the Group's general benefits plan (applicable to all employees) to Mr. Jean-Georges Malcor. This agreement was ratified by the General Meeting held on May 4, 2011.

Individual insurance covering loss of employment

Pursuant to the procedure applicable to related-party agreements set forth by Article 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. Jean-Georges Malcor. 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. This agreement was ratified during the General Meeting held on May 4, 2011.

Supplemental Retirement Plan

A 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) (whom we refer to here as the Beneficiaries) was implemented on December 8, 2004. This plan was closed to new comers on July 1, 2014.

The Chief Executive Officer benefits from this plan. 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 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.

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 cyclicality of the seismic market, which may result in strong volatility in the variable remuneration, the average remuneration used is composed of the three highest payments over the past seven years preceding the date of retirement.

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Further, to participate in the plan, the Beneficiaries must comply with the following main 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.

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.

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 L.225-42-1, paragraph 2 of the French Commercial 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 amended agreement has been 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.

Directors' compensation

Directors (excluding our Chief Executive Officer) as a group received aggregate compensation of 617,000 in March 2018 (compared to a 680,000 envelope authorized by the General Meeting held on October 31, 2017) for services provided in their capacity as Directors during fiscal year 2017. This amount is divided into a fixed and variable component on the basis of one-third of the basic amount for function and two-thirds for presence as described hereafter. No amounts were set aside or accrued by us or our subsidiaries to provide pension, retirement or similar benefits to Directors except for our Chief Executive Officer (Supplemental Retirement Plan).

Allocation of the basic amount:

The fixed component is calculated on the basis of one share for each Director and an additional share as a Committee member. The remuneration of any Director appointed in the course of the year is calculated on a pro-rata temporis basis.

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The variable component linked to the participation in committees and Board meetings is calculated on the basis of two shares for each meeting of the Board, one share for each committees or the Joint Committees, and 1.5 share for Board or Committee Chairs (this rule will apply as well to a Chairman attending a Joint Committee meeting of all committees). A Director who participates in a Board committee s meeting as a guest does not receive any fee.

Allocation of the lump sum:

Audit Committee

In addition to the basic amount, a lump sum is allocated as follows:

10,000 for the Chairman of the Audit Committee;

5,000 for each other Audit Committee member, i.e. a global amount of 20,000 for 4 members.

Travel indemnity

A travel indemnity is also applicable to each Director (whatever his/her nationality), including for the annual Board seminar

2,000 per intercontinental travel;

500 per travel in the same continent.

Chairman of the Board of Directors

The Chairman benefits from a fixed amount of Directors fees of 57,200. In addition, he receives a fixed compensation as Chairman amounting to 115,000 per year, to which the actual amount borne by the Company with respect to his company car is deducted. This benefit in kind (company car) amounts to 3,360.

Chief Executive Officer

The Chief Executive Officer, who is also a Director of the Company, does not receive Directors fees.

Stock options and performance shares

Pursuant to applicable law, Directors, except the Chief Executive Officer, are not entitled to be allocated stock options and/or performance shares of the Company.

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The following table sets forth the amounts CGG paid to its Directors, for the years ended December 31, 2016 and December 31, 2017:

Name	Amount paid to CGG's Directors for fiscal year 2017	Amount paid to CGG's Directors for fiscal year 2016
Bpifrance Participations ⁽¹⁾	58,356.81	30,174.04
Loren Carroll	59,627.09	54,837.40
Michael Daly	58,380.44	40,628.42
Anne Guérin ⁽²⁾	n.a.	23,983.35
Didier Houssin	55,519.92	52,349.44
Anne-France Laclide-Drouin ⁽³⁾	8,903.86	n.a.
Agnès Lemarchand ⁽⁴⁾	45,425.68	46,929.43
Gilberte Lombard	75,253.90	72,328.86
Hilde Myrberg	47,463.98	63,586.94
Robert F. Semmens	71,288.20	59,629.14
Kathleen Sendall	79,580.11	66,119.87
Daniel Valot ⁽⁵⁾	n.a.	16,013.11

⁽¹⁾ Bpifrance Participations was appointed by the General Meeting held on May 27, 2016.

⁽²⁾ Ms. Guérin was appointed by cooptation in place of Mr. Gilet, on April 22, 2015. This appointment was ratified by the General Meeting held on May 25, 2015. Her office as Director ended after the General Meeting on May 27, 2016. She then became permanent representative of Bpifrance Participations until December 7, 2017.

⁽³⁾ Ms. Laclide-Drouin was appointed director of the Company on October 31, 2017.

⁽⁴⁾ The term of office of Ms. Lemarchand ended at the end of the General Meeting held on October 31, 2017.

⁽⁵⁾ The office of Mr. Valot as Director ended after the General Meeting on May 27, 2016.

As of December 31, 2017, our Directors and Executive Officers held an aggregate of 15,317 shares and 467 ADS of the Company (including the number of shares held by Ms. Marie-Laetitia Vassort, who is herself permanent representative of Bpifrance Participations, the legal entity being Director of the Company as of this date; the number of shares directly held by Bpifrance Participations has not been taken into account for this calculation). As of December 31, 2017, none of our Directors and Executive Officers held, on an individual basis, shares and options representing 1% or more of our outstanding capital.

Board practices

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).

The Appointment-Remuneration Committee and the Board review the qualification of the Directors as independent on an annual basis before release of the annual reports.

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In accordance with Article 8.2 of the AFEP-MEDEF Code, the Board of Directors considers that a Director is independent when he or she has no relationship of any kind whatsoever with the company, its group or its management that may impair his or her freedom of judgment. The Appointment-Remuneration Committee and the Board of Directors rely on the criteria set out by the AFEP-MEDEF Code to assess the independence of each Director as follows:

<i>Name of the Director</i>	Criterion no. 1	Criterion no. 2	Criterion no. 3	Criterion no. 4	Criterion no. 5	Criterion no. 6	Criterion no. 7	Qualification of independence established by the Board of Directors
Remi DORVAL	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Helen LEE BOUYGUES	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Michael DALY	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Anne-France LACLIDE-DROUIN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Colette LEWINER	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Gilberte LOMBARD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Helen PETERSEN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mario RUSCEV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Philippe SALLE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robert SEMMENS	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Kathleen SENDALL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Yes = compliance with the AFEP-MEDEF Code in relation to independence criteria

No = non-compliance with the AFEP-MEDEF Code in relation to independence criteria

These criteria are the following:

Criterion no. 1: not to be:

- an employee or an Executive Officer of the corporation, or
- an employee or an Executive Officer or a Director:
 - i of a company consolidated by the corporation, or
 - i of the company's parent company, or
 - i of a company that the parent company consolidates

and not having been in such a position for the previous five years;

Criterion no. 2: not to be an Executive Officer of a company in which the corporation holds a directorship, directly or indirectly, or in which an employee appointed as such or an Executive Officer of the corporation (currently in office or having held such office during the last five years) is a Director;

Criterion no. 3: not to be a customer, supplier, investment banker or commercial banker:

- that is material for the corporation or its group;
- or for a significant part of whose business the corporation or its group accounts;

Criterion no. 4: not to be related by close family ties to an Executive Director;

Criterion no. 5: not to have been an auditor of the corporation within the past five years;

Criterion no. 6: not to have been a Director of the corporation for more than twelve years;

Criterion no. 7: not to represent a significant shareholder of the company holding more than 10% of the voting rights.

With regard to the criterion relating to the business relationship, there is no business relationship between, on the one hand, Directors and/or companies in which they hold an office and, on the other, the Company or its group. Therefore, in the absence of such a relationship, in 2016,

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the Board of Directors did not have to assess the significant nature of any business relationship with regard to criteria determined in relation with the characteristics of the company and the business relationship in question.

Finally, the Board of Directors considered that the fact Mr. Remi Dorval has been a Director of the Company for more than 12 years does not prevent him from remaining independent from the general

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management. The Board also indicated that as the term of office of Mr. Remi Dorval would expire at the end of the next general meeting and would not be renewed, Mr. Dorval would remain Chairman of the Board during this transition period to complete the board renewal process which was initiated in the second half of 2017.

In its meeting held on March 8, 2018, the Board therefore confirmed that 8 out of the 11 Directors who were sitting on the Board at that time qualified as independent (i.e. more than half of the Board members, which is compliant with the recommendation of the AFEP-MEDEF Code¹): Ms. Anne-France Laclide-Drouin, Ms. Colette Lewiner, Ms. Gilberte Lombard and Ms. Kathleen Sendall and Mr. Remi Dorval, Mr. Michael Daly, Mr. Mario Ruscev and Mr. Philippe Salle.

Mr. Patrice Guillaume, in his capacity of Director representing the employees, is not taken into account in the calculation of the independence rate of the Board.

The Board of Directors carries out any controls and checks it deems appropriate.

In 2017, the Board of Directors of the Company met twenty times. The average attendance rate of Directors at these meetings was 92%.

The table below summarizes the individual attendance rate of Directors in office at December 31, 2017 to the Board meetings.

Directors	Attendance rate to the Board meetings in 2017
Remi DORVAL	100%
Jean-Georges MALCOR	100%
Loren CARROLL	90%
Michael DALY	90%
Bpifrance Participations, represented by Anne GUERIN ⁽¹⁾	85%
Didier HOUSSIN	80%
Anne-France LACLIDE-DROUIN ⁽²⁾	100%
Gilberte LOMBARD	100%
Hilde MYRBERG	90%
Robert SEMMENS	100%
Kathleen SENDALL	100%

⁽¹⁾ From December 7, 2017, Mrs. Marie-Laetitia Vassort has replaced Mrs. Anne Guérin as permanent representative of Bpifrance Participations.

⁽²⁾ Director since October 31, 2017.

Statutory, consolidated and interim financial statements – General Meetings:

The Board approved the Company's annual financial statements and the 2016 consolidated annual financial statements and reviewed the interim quarterly and half-year results for fiscal year 2017 and the 2017 forecasts, the 2017-2019 outlook, and then the 2018-2020 outlook. The Board also convened the General Meeting of Shareholders held in October 2017 (the Annual Ordinary General Meeting to approve the 2016 financial statements having been postponed with the authorization from the President of the Commercial Court of Paris, in the context of the financial restructuring) and the Extraordinary General Meeting of Shareholders held on second notice on November 13, 2017 to approve the financial restructuring transactions planned in the Safeguard Plan. In this scope, the Board approved the various reports to be presented to the shareholders and the resolutions to be submitted for the shareholders' approval. The Board also prepared the answers to the written questions of the

¹ The AFEP-MEDEF Code recommends that independent Directors should account for half the members of the Board of Directors in widely-held corporations without controlling shareholders.

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shareholders prior to said general meetings. Finally, pursuant to the provisions of Article L.225-40-1 of the Commercial Code, the Board reviewed the related-party agreements authorized during previous fiscal years and which had remained in force in 2016.

Governance:

The Board decided to simplify the governance structure of the Group and put an end to the term of office of the three corporate officers on January 4, 2017. The Board also approved the renewal of the term of office of the Chief Executive Officer which was expiring in June 2017. The Board reviewed the qualification of Directors as independent and the method of allocation of Directors' fees and the composition of the Board committees.

Compensation:

The Board approved the compensation components for the Chairman of the Board and the Chief Executive Officer for fiscal year 2017. The Board also reviewed the method of allocation of Directors' fees for 2017 based on the envelop approved by the General meeting of October 31, 2017.

The Board also determined that the performance conditions set out (i) in the stock option plans dated June 24, 2013 (third batch), June 26, 2014 (second batch) and June 25, 2015 (first batch), and (ii) in the performance unit plan dated June 26, 2014, applicable to the Chief Executive Officer and the members of the Corporate Committee were not met.

The Board also amended the triggering events and the performance conditions of the advantages granted to the Chief Executive Officer in case of termination of his term of office. See *Contractual indemnity in case of termination*. Lastly, the Board approved the conditions relating to the termination of the term of office of Mr. Jean-Georges Malcor as Chief Executive Officer following the approval of the early termination of his term of office as Chief Executive Officer by October 1, 2018 at the latest, or any earlier date on which his successor would be appointed.

Financial and strategic transactions:

Throughout the fiscal year 2017, the work of the Board of Directors primarily focused on the financial restructuring of the Group. In this context, the Board of Directors authorized the Company to request from its lenders and senior bondholders the amendment of its credit agreements and bond agreements in order to allow the Company to request the appointment of an *ad hoc* representative, without such amendment any appointment of an *ad hoc* representative constituting an event of default under said agreements and bonds.

The Board subsequently approved the terms of the restructuring plan to be submitted to the creditors of the Group, and approved the final terms and conditions resulting from the negotiations with the creditors. The Board also authorized the Company to sign all documents formalizing the agreement of the Company and its creditors with respect to the restructuring plan (i.e. the term sheet, the lockup agreement, the private placement agreement and the restructuring plan support agreement). Lastly, the Board approved the financial characteristics of the first lien notes to be issued in order to refinance the existing secured debt and the second lien notes to issue new money.

The Board also authorized the Chief Executive Officer to request the opening of safeguard proceedings in respect of the Company and Chapter 11 proceedings in respect of the subsidiaries guaranteeing its debt. The Board also authorized the Chief Executive Officer to seek the recognition of the safeguard judgment in the United States through a Chapter 15 procedure. The Board was regularly kept informed of the progress of these proceedings.

Furthermore, the Board of Directors authorized the Company to issue 6.50% senior notes due 2021 to the owners of certain of the vessels operated by the Group in order to substantially reduce the amounts due under the

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charter agreements guaranteed by the Company. The Board also reviewed and approved the draft agreement with Eidesvik and the Nordic lenders of the Group in order to entirely deconsolidate the Nordic debt from the scope of the Group and to reduce the costs of chartering of the fleet operated by the Group.

Lastly, the Board approved the 2017-2019 business plan, the 2017 budget and the strategic directions of the Group for 2017.

Appointment-Remuneration Committee:

a) Responsibilities:

The responsibilities of this Committee in terms of propositions and/or recommendations to be made to the Board of Directors relate to:

1. the compensation to be paid to the Senior Executive Officers (*mandataires sociaux*) to be appointed from time to time, including the procedures for setting the variable part thereof and the grant of possible benefits in kind;
2. all provisions relative to the retirement of the Senior Executive Officers considered as *mandataires sociaux* ;
3. for the *mandataires sociaux* , the deferred elements of the compensation packages (pension, severance payment) to be submitted to the Shareholders Annual Meeting;
4. the evaluation of financial consequences on the Company s financial statements of all compensation elements for *mandataires sociaux* ;
5. the contracts between the Company and a *mandataire social* ;
6. the possible candidacies for filling Director s positions, positions as Senior Executive Officer considered as *mandataire social* or positions as a member of a Board Committee.
7. the periodical review of the independence of Board members;
8. the Directors fees level and their allocation rules;
9. the realization of capital increases reserved for the employees; and
10. the installation of cash and/or share compensation plans.

In addition to the responsibilities described above, this Committee is also in charge of:

1. examining compensation of the Corporate Committee (C-Com) members and its evolution;

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2. carrying out performance evaluation of the Board and its Committees;
 3. carrying out performance evaluation of the Chairman of the Board and the Chief Executive Officer;
 4. reviewing the succession planning process of C-Com members;
 5. ensuring compliance of compensation and benefits policies with all applicable regulations;
 6. reviewing the compensation data and other related information to be publicly disclosed by the Company in its annual reports and any other reports to be issued pursuant to applicable laws and regulations; and
 7. approving the policy and process of verifying and reimbursing expenses of the Directors and the Senior Executive Officers (*mandataires sociaux*).
- The Committee may also consider any question submitted to it by the Chairman in connection with one of the matters mentioned above.

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The work of the Committee is recorded in its minutes. The Committee reports to the Board on its proceedings after each meeting.

b) Composition:

As of December 31, 2017, the members of the Committee were as follows:

Kathleen Sendall (Chairman)^(*)

Didier Houssin

Robert Semmens

^(*) independent director

As of the date of this report, the composition of this Committee is not compliant with the provisions of the AFEP-MEDEF code, as it does not consist half of independent directors.

Further to the departure of Mrs. Agnès Lemarchand from 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.

The Chairman of the Board and the Chief Executive Officer are closely associated with the works of this Committee relating to the appointment of directors.

c) Activity:

In 2017, this Committee met eleven times. The average meeting attendance rate was 88%.

During these meetings, the Committee examined, *inter alia*, (i) the compensation of the Chairman of the Board, the compensation of the Chief Executive Officer and his 2017 objectives, (ii) the compensation of the other members of the C-Com, (iii) the amount of the Directors' fees, (iv) the report on the qualification of Directors as independent prior to its submission to the Board of Directors, (v) the paragraphs regarding the compensation of the *mandataires sociaux* to be included in the annual reports pursuant to Article L.225-37-2 of the Commercial Code (including the management report, *Document de Référence* and our annual report on Form 20-F), (vi) the 2017 bonus plans, (vii) the succession planning and (viii) the implementation of the evaluation process for the Board and the Chief Executive Officer.

In addition, in the context of the financial restructuring and the agreement entered into between the Group and its main creditors, approved by the creditors' committees on July 28, 2017 and by DNCA, it was agreed that, subject to the vote by the General meeting of shareholders of the Company, the structure and composition of the Board of Directors after the completion of the restructuring will be determined in consultation with DNCA and the members of the ad hoc senior noteholder committee who will have become and remain shareholders of the Company. As part of this renewal in the composition of the Board of Directors, the Appointment-Remuneration committee has been entrusted by the Board with the selection of candidates for the position of Directors in consultation with all stakeholders.

Lastly, the Committee also ruled on the conditions relating to the termination of the term of office of Mr. Jean-Georges Malcor as Chief Executive Officer following the approval of the early termination of his term of office as Chief Executive Officer by October 1, 2018 at the latest, or any earlier date on which his successor would be appointed. The Committee's proposal was definitively approved by the Board of Directors on December 1, 2017. See *Conditions of compensation and benefits granted to the Chief Executive Officer following the Board of Directors' meeting held on December 1, 2017*.

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Technology/Strategy Committee:

a) Responsibilities:

The Technology/Strategy Committee's assignments are to study:

The company's strategic options and orientations in relation to technology, markets and business;

The technologic development strategy in the various business of the Group,

The broad lines of the Group's budget;

The intellectual property protection policy;

The main R&D programs;

The strategic M&A transactions;

The company's organic development;

The projects related to financial transactions;

The major investment transactions or disposal of assets.

The Committee regularly invites other Directors who are interested in its work, to participate in its assignments. The Committee reports on its work to the Board of Directors.

b) Composition:

As of December 31, 2017, the members of the Committee were:

Remi Dorval^(*) (Chairman)

Michael Daly^(*)

Bpifrance Participations, represented by Marie-Laetitia Vassort

Didier Houssin

Robert Semmens

(*) independent director

c) Activity:

In 2017, the Committee met six times. The attendance rate of Committee members at these meetings was 89%. At these meetings, the Committee reviewed the restructuring plan to be submitted to the Group's creditors and received regular updates from the management as to the state of the discussions with each category of creditors. The Committee also reviewed the 2017-2019 business plan and the 2018-2020 outlook. Lastly, the committee also reviewed the draft agreement with Eidesvik and the Nordic lenders of the Group in order to entirely deconsolidate the Nordic debt from the scope of the Group and to reduce the costs of chartering of the fleet operated by the Group.

HSE/Sustainable Development Committee:

a) Responsibilities:

The Committee's assignments are the following:

Support General Management in developing a strategic approach to Health, Safety, Security and Environment (HSE) & Sustainable Development (SD). Determine the main axes for the improvement of HSE performance on an ongoing basis. Encourage, assist and counsel General Management in maintaining and improving HSE & SD performance;

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Monitor the performance of CGG's HSE & SD systems and programs, and at the Committee's discretion, recommend any changes to the Board;

Review CGG HSE & SD performance at each regularly scheduled meeting. Benchmark CGG performance against its peers in the industry;

Review the Group's high rated HSE & SD operational risks and the controls put in place to manage these risks. Review high impact incidents and near misses such as fatalities and HPIs;

Review the Group's SD programs (principally environmental, social and ethical matters) and provide support and direction concerning the mid-term and long-term direction of CGG efforts in this area;

Monitor the Group's compliance with applicable laws related to HSE & SD;

Review the Group's crisis management preparedness. Monitor any major crisis and support the Board and General Management team as necessary in the event of such a crisis;

Recommend to the Board and to General Management desirable policies and actions from its review and monitoring activity. The Committee reports to the Board on its proceedings after each meeting, on all matters within its duties and responsibilities.

b) **Composition:**

As of December 31, 2017, the members of the Committee were:

Michael Daly^(*) (Chairman)

Kathleen Sendall^(*)

Gilberte Lombard^(*)

Hilde Myrberg

^(*) independent director

c) **Activity:**

In 2017, the Committee met three times. The attendance rate of Committee members was 92%.

During these meetings, the Committee reviewed the following items: (i) the high potential incidents that occurred in the Land and Marine as well the Group HSE indicators, (ii) the review of specific risks (aviation risks, crisis management, environment/sustainable development), (iii) the HSE good practices implemented within the Group and the actions implemented in terms of sustainable development.

Audit Committee:

Pursuant to its charter, the Audit Committee is responsible for assisting the Board of Directors and, as such for preparing its assignments.

a) Responsibilities:

The Audit Committee shall report regularly on its duties and responsibilities to the Board of Directors. The Committee also reports on the audit process of the financial statements, on how such process contributed to the integrity of the financial statements and the role the Committee played in such process. The Committee is required to immediately inform the Board of any difficulty encountered in the process.

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In this scope, the Committee is specifically in charge of:

Assignments relating to accounts and financial information:

In accordance with the provisions of Article L.823-19 of the French Commercial Code, the Audit Committee is in charge of monitoring the financial reporting process and shall make any relevant recommendation in order to ensure its integrity, including:

Reviewing and discussing with General Management and the statutory auditors the following items:

the consistency and appropriateness of the accounting methods adopted for establishment of the corporate and consolidated financial statements;

the consolidation perimeter;

the draft annual and consolidated accounts, semi-annual and quarterly consolidated financial statements along with their notes, and especially off-balance sheet arrangements;

the quality, comprehensiveness, accuracy and sincerity of the financial statements of the Group.

Hearing the statutory auditors report on their review, including any comments and suggestions they may have made in the scope of their audit;

Examining the draft press releases related to the Group financial results and proposing any modifications deemed necessary;

Reviewing the *Document de Référence* and the annual report on Form 20-F;

Raising any financial and accounting question that appears important to it.

Assignments relating to risk management and internal control:

In accordance with the provisions of Article L.823-19 of the French Commercial Code, the Audit Committee shall monitor the effectiveness of the Company's internal control and risk management systems, and, if need be, of internal audit systems, in relation to the preparation and treatment of accounting and financial information, without prejudicing internal audit's independence. In connection therewith, the Committee's responsibilities include:

Reviewing with the General Management (i) the Company's policy on risk management, (ii) the analysis made by the Company of its major risks (risk mapping) and (iii) the programs put in place to monitor them;

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Reviewing with the General Management (i) the role and responsibilities with respect to internal control; (ii) the principles and rules of internal control defined by the Company on its general internal control environment (governance, ethics, delegation of authority, information systems...) and on the key processes (treasury, purchase, closing of the accounts, fixed assets...), (iii) the internal control quality as perceived by the Company and (iv) significant deficiencies, if any, identified by the Company or reported by the external auditors (Article L.823-16 of the French Commercial Code) as well as the corrective actions put into place;

Assignments relating to internal audit:

Reviewing with General Management and the EVP Global Operational Excellence, Internal Audit and Risk Management/HSE/SD:

the organization and operation of the internal audit;

the activities and in particular the missions proposed in the scope of the internal audit plan approved by management and presented to the Committee;

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results of internal audit reviews.

Assignments relating to external audit:

Reviewing with the statutory auditors their annual audit plan;

Hearing, if necessary, the statutory auditors without General Management being present;

Monitoring the procedure for selection of the auditors and issuing a recommendation to the Board of Directors on the statutory auditors whose appointment or renewal is to be submitted to the Shareholders Meeting. Such recommendation is to be prepared in accordance with Section 16 of Regulation (EU) n° 537/2014 (the Regulation); the Audit Committee is also responsible for issuing a recommendation when the renewal of the auditors is contemplated under the conditions set forth in Article L.823-3-1 of the French Commercial Code;

Monitoring the auditors compliance with the independence conditions defined in Article L.822-9 to L.822-16 of the French Commercial Code and take any measures necessary to the application of paragraph 3 of Section 4² of Regulation (EU) n°537/2014 and make sure that the conditions set forth in Section 6 of the Regulation are complied with;

Following the way the auditors fulfill their mission and take into account the statements and conclusions issued by the *Haut conseil du commissariat aux comptes* as a result of their review pursuant to Article L.821-9 et seq. of the French Commercial Code;

Approving the supply of non-audit services referred to in Article L.822-11-2 of the French Commercial Code, pursuant to the policy prepared by the Audit Committee and ratified by the Board of Directors;

Discussing, possibly individually the audit work with the statutory auditors and General Management and reviewing regularly with management the auditors fees. Within the framework of a procedure that it determines annually, the Committee has sole authority to authorize performance by the auditors and/or by the members of their network of services not directly relating to their auditing mission.

Other assignments:

Reviewing with management and, when appropriate, the external auditors the transactions binding directly or indirectly the Company and its Executive Officers;

Handling, anonymously, any feedback relating to possible internal control problem or any problems of an accounting or financial nature.

Finally, the General Management of the Company must report any suspected fraud of a significant amount to the Committee so that the Committee may proceed with any investigation that it deems appropriate.

The following persons attend the Committee meetings: the Chairman of the Board of Directors, the Chief Executive Officer, the Chief Financial Officer, the Chief Operating Officers, the relevant members of the E-Com, the Chief Executive Officer, the Senior Vice President Group Chief

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Accounting Officer, the auditors, the EVP Global Operational Excellence, Internal Audit and Risk Management/HSE/SD who presents an update on significant missions at least twice a year.

- ² *When the total fees received from a public-interest entity in each of the last three consecutive financial years are more than 15% of the total fees received by the statutory auditor or the audit firm or, where applicable, by the group auditor carrying out the statutory audit, in each of those financial years, such a statutory auditor or audit firm or, as the case may be, group auditor, shall disclose that fact to the audit committee and discuss with the audit committee the threats to their independence and the safeguards applied to mitigate those threats. The audit committee shall consider whether the audit engagement should be subject to an engagement quality control review by another statutory auditor or audit firm prior to the issuance of the audit report.*

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The Audit Committee usually meets before each session of the Board of Directors. For practical reasons that are linked to the presence of 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.

Minutes of each meeting are taken. Furthermore, the Chairman of the Committee reports on its work at every Board of Directors meeting. This report is recorded in the minutes of the Board of Directors meeting.

b) Composition:

As December 31, 2017, the members of the Committee are as follows:

Gilberte Lombard (Chairman)^(*)

Loren Carroll^(*)

Bpifrance Participations, represented by Marie-Laetitia Vassort

Anne France Laclide-Drouin^(*)

^(*) independent director

Ms. Gilberte Lombard was appointed as Financial Expert by the Board of Directors in 2013 pursuant to Section 407 of Sarbanes Oxley Act.

Both Ms. Gilberte Lombard and Mr. Loren Carroll qualify as independent members of the Committee with specific competences in financial and accounting matters pursuant to Article L.823-19 of the French Commercial Code.

Ms. Gilberte Lombard developed an extensive financial and accounting expertise through the various financial responsibilities she has held within the HSBC Group (previously *Crédit Commercial de France*), where she spent her career. After the privatization of *Credit Commercial de France* (1987), she was the Investor Relations Officer, in charge of the relation with financial analysts and institutional investors, and coordinated the information policy vis-a-vis the shareholders of the bank: major shareholders as well as individual shareholders. After *Credit Commercial de France* had been taken over by HSBC (2000), she was appointed as head of the financial transactions (*Directeur des Opérations Financières*) in charge of structuring and implementing sales, acquisitions, mergers for HSBC and managing HSBC industrial and financial portfolio. As part of her assignments, she was appointed as member of the Board and the Audit Committee of several companies of the HSBC group in France. In 1990, she was also appointed secretary of the Board and was in charge, in particular, of the relations with the main shareholders of the bank.

Mr. Loren Carroll, through the positions he held over 15 years within Arthur Andersen, developed an extensive accounting and auditing practice, and gained particular experience with public companies. He then became Chief Financial Officer of Smith International, a supplier of products and services to the oil and gas, petrochemical, and other industrial markets. Within Smith International, he was in charge of investor relations, supervision of financial activities of Public Corporation (NYSE) and merger, acquisitions and strategic development.

Both Ms. Gilberte Lombard and Mr. Loren Carroll are therefore very familiar with the financial and accounting specificities of our industrial sector and those linked to our international activities.

In compliance with the provisions of the AFEP-MEDEF Code, two thirds of the Committee is composed of independent Directors.

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c) Activity:

In 2017, the Committee met eight times with an average attendance rate of Committee members of 75%.

During these meetings, the Committee reviewed draft versions of the annual consolidated financial statements for 2016 (and in particular the impairment tests, the accounting classification of the financial debt of the Group as current liabilities and the memo relating to the going concern), the statutory financial statements for 2016 and the 2017 half-year statutory financial statements and the consolidated financial statements for the first quarter, the first semester and the third quarter of 2017. It also reviewed the 2017 forecasts. The Committee also provided to the Board its recommendations concerning these financial statements. The Committee reviewed the 2016 annual report on Form 20-F and the *Document de Référence*.

The Committee also met with the external auditors without General Management being present. During this meeting, the auditors and the Committee had an overview of the audit work performed for the closing of the 2016 financial statements. In addition, several discussions involving the external auditors, the Chairman of the Board and certain members of the Committee were held in the course of 2017 with respect to the going concern.

In addition, the Committee closely monitored the Group's situation with respect to cash and cash flow forecasts which was presented at each Committee's meeting. The Board was also regularly kept informed of the Group's situation with respect to debt, mid-term refinancing and Group's hedging policy. The Committee reviewed the multi-client activity.

Regarding the preparation of the Financial Restructuring Plan finally submitted to the approval of the creditors' committees, the French and United States Courts, and the general meeting of shareholders, the Audit committee was kept informed on a regular basis of the progress of the discussions with the various stakeholders and the options to be decided and the outcome of the various technical negotiations. In this context, special attention of the Audit committee was brought on the financial characteristics of the first lien notes to be issued in order to refinance the existing secured debt and the second lien notes to issue new money. In addition, the Audit committee was periodically kept informed on the financial costs related to the implementation of the financial restructuring to be borne by the Company.

The 2017/2016 risk mapping, before and after mitigation has been presented to the Audit Committee. In this scope, the Committee also approved and implemented the annual review plan of the main risks of the Group and of certain specific risks that it determined. In this scope, in particular, the Committee reviewed the risk related to cold stacked vessels, the contractual/third party liability risks, the insurance risk and the information security risk and monitored the Ethics Committee's actions. The Committee also follows the commercial consultants network of the Group on a regular basis.

The Committee also examined the work to be performed by the statutory auditors in the scope of their audit on the 2017 financial statements and approved their fee estimates for this work. The audit reviews are mostly focused on significant risks which may impact the financial statements. In compliance with the Committee's procedures for its prior approval of non-audit services provided by the members of our auditors' network, the Committee reviewed such services performed in 2017 and approved them as necessary.

The Committee reviewed the activities of the internal audit team, which acts according to a plan established by the E-Com and submitted to the Committee. This plan is established in light of perceived operational and financial risks with the goal of systematically reviewing the major entities of each business line on a five-year basis. It includes a review of the risks identified in the risk mapping presented to the Committee by the Enterprise risk management department.

The Committee was also kept regularly informed on the assessment of internal control procedures pursuant to Section 404 of the Sarbanes-Oxley Act and of the results thereof. The external auditors and the internal audit presented their respective conclusions.

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The Committee also follows the evolution of the Group's legal perimeter and, in particular the rationalization program for the Group's legal structures.

Employees

As of December 31, 2017, we had 5,266 permanent employees worldwide, of which 1,589 belong to the Equipment business line, 880 to the Acquisition business line, 2,232 to the Geology, Geophysics and Reservoir (GGR) business line and 565 to the Group functions, which includes shared services and corporate. 30 were employed by the holding company CGG S.A. We have never experienced a material work stoppage and consider our relations with our employees to be constructive. A significant part of our permanent employees are technicians and graduates holding engineering degrees; we have developed significant in-house training programs to sustain this high level of technical skills.

Our workforce of permanent employees decreased from 5,766 at December 31, 2016 to 5,266 at December 31, 2017. This decrease was a consequence of the overall downturn in the oil and gas business and the subsequent Group restructuring.

The 2016 turnover rate was 12.21% (total) or 6.52% (if only voluntary leavers are taken into account). The total turnover rate was 20.17% for 2016.

Our international activity allowed us to recruit 215 employees in 2017. We are looking for experienced technical profiles as well as young graduates, especially for the GGR area. The talents we integrate, coupled with the expertise of our teams, enable us to be at the forefront of innovation.

In the context of our continuous transformation, we are strengthening our focus on internal mobility with the support of our HR Country, Hub and business lines teams to enhance our employees' development.

In accordance with French labor laws, each of our French subsidiaries (representing a total of 1,306 employees) has an Employee Representation Committee (Work Council *Comité d'Entreprise*) consisting of representatives elected by our employees. The Work Council reports regularly to employees, represents employees in relations with management, is consulted on significant matters relating to working conditions and is regularly informed of economic developments. Elections held in November 2015 within the scope of the *Unité Économique et Sociale* CGG S.A. and CGG Services SAS have led to the composition of a new *Comité d'Entreprise* as of December 2015. Elections in the Sercel Group of Companies in France have been conducted in 2016 and all the Employee Representation Committees have been renewed.

Similarly elected employee representatives are in place for our field and expatriate staff employed by CGG International, set up under the specifications of the Swiss Code des Obligations. Marine Commission election took place in February 2017 and led to the formation of a new Commission in 2017 for a period of three years. The Land Commission will be renewed in March 2018.

In Singapore, 76 people were represented under the collective agreement as of December 31, 2017. These employees are represented by the Singapore Industrial and Services Employees Union (SISEU), an affiliated union of the National Trade Union Congress.

In Norway there is one collective bargaining agreement with a staff representative union. 34 employees are members of this union.

Share ownership

In accordance with French law, we are authorized annually by our shareholders at the Extraordinary General Meeting to issue ordinary shares for sale to our employees and employees of our affiliates who elect to

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participate in our Group Employee Savings Plan (*Plan d'Épargne Entreprise Groupe*) instituted in 1997 (the Group Plan). Our shareholders, at the Extraordinary General Meeting held on November 13, 2017, renewed our authorization to issue up to 11,580,000 ordinary shares of a nominal value of 0.01 in sales to employees and affiliates who participate in the Group Plan. We may offer ordinary shares pursuant to the Group Plan at a price not higher than the average market price for the 20 business days preceding the date on which the Board of Directors sets the commencement date for the offering, and not lower than 80% of such average market price. As of December 31, 2017, Group employees held 273 shares corresponding to 0.0012% of the share capital and 0.0024% of the voting rights. As of March 15, 2018, they still held 273 shares corresponding to 0.00005% of the share capital and 0.00009% of the voting rights.

Stock options

Pursuant to resolutions adopted by our Board of Directors on January 6, 2010, March 22, 2010, October 21, 2010, March 24, 2011, June 26, 2012, June 24, 2013, June 26, 2014, June 25, 2015, and June 23, 2016, our Board of Directors has granted options to certain of our employees and Executive Officers to subscribe for an aggregate of 15,850,633 ordinary shares not taking into account the various adjustments made to the number of stock options issued pursuant to French law. Options with respect to 424,383³ ordinary shares remained outstanding as of December 31, 2017, whereas options with respect to 931,142⁴ ordinary shares remained outstanding as of the date of this report.

The following table sets forth certain information relating to these stock options plans as of December 31, 2017:

Date of Board of Directors resolution	Options granted ⁽¹⁾	Number of beneficiaries	Options exercised (ordinary shares) at December 31, 2017	Options outstanding at December 31, 2017 ⁽²⁾⁽³⁾	Exercise price per ordinary share ⁽⁴⁾	Expiration date
January 6, 2010 ⁽⁶⁾⁽⁵⁾	220,000	1	0	8,668	373.44	January 6, 2018
March 22, 2010 ⁽⁷⁾⁽⁵⁾	1,548,150	339	38,382	51,394	493.44	March 22, 2018
October 21, 2010 ⁽⁸⁾⁽⁵⁾	120,000	3	0	1,564	428.80	October 21, 2018
March 24, 2011 ⁽⁹⁾⁽⁵⁾	1,164,363	366	0	38,345	646.72	March 24, 2019
June 26, 2012 ⁽¹⁰⁾⁽⁵⁾	1,410,625	413	0	19,720	476.48	June 26, 2020
June 24, 2013 ⁽¹¹⁾⁽⁵⁾	1,642,574	672	0	30,817	493.44	June 24, 2021
June 26, 2014 ⁽¹²⁾⁽⁵⁾	1,655,843	752	0	41,353	274.88	June 26, 2022
June 25, 2015 ⁽¹³⁾⁽⁵⁾	1,769,890	749	0	47,790	160.64	June 25, 2023
June 23, 2016 ⁽¹⁴⁾⁽⁵⁾	6,658,848	683	0	184,732	21.76	June 23, 2024
Total	15,850,633		38,382	424,383		

⁽¹⁾ Total number of shares initially allocated, not taking into account any adjustment.

⁽²⁾ Pursuant to French law and the terms of the stock option plans, the numbers of options initially granted has been adjusted following (i) our share capital increase in October 2012, (ii) our share capital increase in February 5, 2016 and (iii) our reverse stock split in July 2016. The figures shown are after adjustment. The figures do not take into account the share capital increase dated February 21, 2018.

⁽³⁾ The stock option plans provide for the cancellation of the non-vested options if the holder is no longer our employee, Director or Executive Officer.

⁽⁴⁾ The exercise price has been adjusted following (i) our share capital increase in October 2012, (ii) our share capital increase in February 5, 2016 and (iii) our reverse stock split in July 2016. The figures do not take into account the share capital increase dated February 21, 2018.

⁽⁵⁾ The stock option plans provide for the cancellation of the options whether vested or not if the holder is no longer our employee, Director or Executive Officer. reflect the number of options initially allocated, not taking into account any adjustment.

³ As adjusted further to the capital increase dated February 5, 2016 and the reverse stock split dated July 20, 2016. The figure does not take into account the share capital increase dated February 21, 2018.

⁴ As adjusted further to the share capital increase dated February 5, 2016, the reverse stock split dated July 20, 2016 and the share capital increase dated February 21, 2018.

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- (6) 110,000 options under this plan vest immediately, 55,000 vest on January 7, 2011 and 55,000 on January 7, 2012. However during the first four years, the resulting shares cannot be sold by French tax residents before January 7, 2013 for the first batch and, January 7, 2014 for the second and third batches.
- (7) Options under the March 2010 plans vest by one-third each year from March 2010 and can be exercised at any time. However the resulting shares cannot be sold by French tax residents before March 23, 2014. The March 2010 plans consist of a plan granting 200,000 options to the Chief Executive Officer (subject to certain performance conditions) and a plan granting 1,348,150 options to certain other officers and employees. These figures reflect the number of options initially allocated, not taking into account any adjustment.
- (8) Options under the October 2010 plan vest by one-third each year from October 2010 and can be exercised at any time. However the resulting shares cannot be sold by French tax residents before October 22, 2014. The October 2010 plan consists of a plan granting 120,000 options to three members of the Executive Committee. These figures reflect the number of options initially allocated, not taking into account any adjustment.
- (9) Options under the March 2011 plans vest by one-third each year from March 2011 and can be exercised at any time. However the resulting shares cannot be sold by French tax residents before March 25, 2015. The March 2011 plans consist of a plan granting 66,667 options to the Chairman and 133,333 options to the Chief Executive Officer (subject to certain performance conditions) and a plan granting 964,363 options to certain other officers and employees. These figures reflect the number of options initially allocated, not taking into account any adjustment.
- (10) Options under the June 2012 plans vest in three batches (50% in June 2014, 25% in June 2015 and 25% in June 2016) and can be exercised at any time. However the resulting shares cannot be sold by French tax residents before June 26, 2016. The June 2012 plans consist of a plan granting 200,000 options to the Chief Executive Officer, 100,000 options to each Corporate Officer (subject to certain performance conditions) and a plan granting 1,010,625 options to certain other officers and employees. These figures reflect the number of options initially allocated, not taking into account any adjustment.
- (11) Options under the June 2013 plans vest in three batches (50% in June 2015, 25% in June 2016 and 25% in June 2017) and can be exercised at any time. The June 2013 plans consist of a plan granting 200,000 options to the Chief Executive Officer, 100,000 options to each Corporate Officer (subject to certain performance conditions) and a plan granting 1,242,574 options to certain other officers and employees. These figures reflect the number of options initially allocated, not taking into account any adjustment.
- (12) Options under the June 2014 plans vest in three batches (50% in June 2016, 25% in June 2017 and 25% in June 2018) and can be exercised at any time. The June 2014 plans consist of a plan granting 200,000 options to the Chief Executive Officer, 100,000 options to each Corporate Officer (subject to certain performance conditions) and a plan granting 1,255,843 options to certain other officers and employees. These figures reflect the number of options initially allocated, not taking into account any adjustment.
- (13) Options under the June 2015 plans vest in three batches (50% in June 2017, 25% in June 2018 and 25% in June 2019) and can be exercised at any time. The June 2015 plans consist of a plan granting 220,600 options to the Chief Executive Officer, 111,000 options to each Corporate Officer (subject to certain performance conditions) and a plan granting 1,327,290 options to certain other officers and employees. These figures reflect the number of options initially allocated, not taking into account any adjustment.
- (14) Options under the June 2016 plans vest in three batches (50% in June 2018, 25% in June 2018 and 25% in June 2020) and can be exercised at any time. The June 2016 plans consist of a plan granting 882,400 options to the Chief Executive Officer, 444,000 options to each Corporate Officer (subject to certain performance conditions) and a plan granting 4,444,448 options to certain other officers and employees. These figures reflect the number of options initially allocated, not taking into account any adjustment.

The stock options allocated to Mr. Malcor, Chief Executive Officer, under the plans implemented by the Company over the last two years are set forth below:

Name of the	Date of the Plan	Nature of stock options	Valuation of options pursuant to the method used for consolidated financial statements ()	Maximum number of options allocated during fiscal year ⁽¹⁾⁽²⁾	Subscription price ⁽⁴⁾⁽⁵⁾	Exercise period
Executive Officer						
Jean-Georges Malcor	06.23.2016	Options to subscribe for shares	124,000	27,575	21.76	From 06.24.2018 to 06.23.2024 inclusive
Chief Executive Officer				0.12% ⁽³⁾		

(1) Subject to the performance conditions described below.

(2) Maximum number of shares as adjusted further to the reverse stock split dated July 20, 2016.

(3) Proportion of the share capital represented by the allocation as of the date of the allocation.

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

(5) Subscription price as adjusted further to the reverse stock split dated July 20, 2016.

Stock options are allocated without any possible discount.

The conditions of the plans applicable to the Executive Officers are those of the general plans, plus those described below.

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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.

Stock option plan dated June 23, 2016

Performance conditions:

The Board of Directors decided, in accordance with the provisions of the AFEP-MEDEF Code that the rights to the options would be acquired in three batches during the first four years of the plans (50% of the options are allocated after two years, 25% of the options are allocated after three years and 25% of the options allocated after four years) and that the acquisition of options would be subject to the following performance conditions:

1. The average, over the 60 trading days preceding the date of allocation, of the ratio of the CGG ADS price over the PHLX Oil Service SectorSM (OSXSM) index must equal at least two-thirds of the same average ratio over the same period of sixty trading days three years before the vesting date;
2. The average, over the 60 trading days preceding the date of allocation, of the ratio of the CGG share price over SBF 120 index must equal at least two-thirds of the same average ratio over the same period of sixty trading days three years before the vesting date;
3. Over the vesting period, the market price of the CGG share must have increased at least by 8% on an annual basis;
4. The Group results on average over a period of three years preceding the vesting date must reach at least 90% of the average EBITDAS annual targets as determined by the Board of Directors.

Obligation to keep stock options under the registered form:

Pursuant to the provisions of Article L.225-185 of the French Commercial Code, the Board of Directors decided that the number of shares resulting from the exercise of stock options that the Chief Executive Officer will have to keep under the registered form until the end of his term shall account for 20% of the amount of the gain on the purchase price realized when exercising the options granted by the Board of Directors on June 23, 2016.

Prohibition of the use of hedging instruments:

Upon the Committee's proposal and pursuant to the provisions of Code and the recommendations of the AMF, the Board of Directors reminded the Chief Executive Officer that he should not use hedging instruments both on options and on shares resulting from the exercise of options until the end of the retention period of the shares under registered form as set by the Board pursuant to the provisions of Article L.225-185 of the French Commercial Code.

Exercise period:

The Board noted that the exercise of stock options by the Chief Executive Officer is subject to compliance with the rules prohibiting trading over the shares of the Company set by the Group and which apply to all permanent insiders of the Group.

Table of Contents**Performance shares**a) Performance shares allocated to the Chief Executive Officer in 2016 and 2017

Neither the Company nor any of its subsidiaries has adopted a performance shares plan since 2012.

b) Performance shares that have become freely transferable upon expiry of the retention period, for the Chief Executive Officer during 2016 and 2017:

2016

Name of the	Date of the plan	Number of shares that have become freely transferable upon expiry of the retention period	Acquisition conditions
Executive Officer			
(<i>mandataire social</i>)			
Jean-Georges Malcor	06.26.2012	9,534	1 share to purchase for 20 allocated shares
<i>Chief Executive Officer</i>			

Table of Contents**Transactions in the Company's shares carried out by executives or their close relatives in 2017 and until the date of this report**

Pursuant to Article L.621-18-2 of the French *Code monétaire et financier* and Article 223-26 of the General Regulation of the French Market Authority, summary of the transactions carried out pursuant to the above mentioned Article L.621-18-2 are set out below.

Executive Officers, Directors and members of the corporate committees are forbidden from carrying out any transactions in the Company's shares, whatever the nature, including the exercise of stock options, (i) during the thirty calendar days preceding the publication of quarterly, semi-annual or annual results (transactions in the Company's shares can be carried out the day after the date of publication of such results), and (ii) if such Officers, Directors or Committee members hold any information which could have any influence on the share value in case of public disclosure.

Name	Type of transaction	Date	Number of shares/ADS	Unit price	Amount of the transaction
Jean-Georges MALCOR Chief Executive Officer Director until March 8, 2018	Purchase of shares associated with warrants	February 23, 2018	7,423	1.56	11,579.88
Bpifrance Participations Director until March 23, 2018	Purchase of preferential subscription rights	February 23, 2018	2	1.08	2.16
	Purchase of shares associated with warrants	January 30, 2018	17,316	1.56	27,012.96
	Purchase of preferential subscription rights	January 30, 2018	1	1.04	1.04
	Sale of shares	January 30, 2018	286,370	3.066	878,010.42
	Sale of shares	January 30, 2018	17,000	3.075	52,275
	Sale of preferential subscription rights	January 30, 2018	633,546	0.9754	617,960.77
	Sale of shares	January 31, 2018	398,261	2.90	1,154,956.9
	Sale of shares	January 31, 2018	23,924	2.89	69,140.36
	Sale of preferential subscription rights	January 31, 2018	799,312	0.7164	572,627.12
	Sale of shares	February 1, 2018	192,417	2.9532	568,245.88
	Sale of shares	February 2, 2018	615,402	2.6707	1,643,554.12
	Exercise of preferential subscription rights	February 2, 2018	471,808	0	0
	Purchase of shares associated with warrants	February 12, 2018	1,533,376	1.56	2,392,066.56
Philippe SALLE Director	Purchase of shares	February 28, 2018	18,500	1.442	26,677
	Purchase of shares	March 16, 2018	7,450	1.60	11,920

Note: Pursuant to Article 223-23 of the General Regulation of the French Market Authority, the transactions reflected in this table are those (i) carried out by the persons referred to in Article L.621-18-2 of the French code monétaire et financier, and (ii) if the total amount of such transactions exceeds 20,000 per calendar year.

Table of Contents**Item 7: PRINCIPAL SHAREHOLDERS****Major 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 March 15, 2018 and December 31, 2017, 2016 and 2015.

	March 15, 2018		2017		December 31, 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 Financière de l Echiquier ⁽ⁱ⁾					8.30	8.08	5.76	5.19
Autodétention	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.

Shares held by the Company are deprived of voting rights for all Shareholders Meetings.

Our *statuts* provide that each ordinary share that is fully paid and has been held in registered form by the same shareholder for a period of at least two consecutive years will entitle such shareholder to two votes at

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Shareholders' Meetings. Other than in this respect, our ordinary shares carry identical voting rights. Our *statuts* provide that fully paid ordinary shares may be held in either registered form or bearer form at the option of the shareholder.

On February 5, 2016, the Company completed 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.

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 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.

More recently, in the framework of our financial restructuring:

On January 15, 2018, we decreased our share capital by reducing the nominal value of the Company's shares from 0.80 to 0.01. As a consequence, on January 15, 2018, our share capital amounted to 221,331.49.

On February 21, 2018, we increased our share capital as described further in Item 4: Information on the Company History and development of the Company Financial restructuring process and summarized in the table below.
See Item 9: The offer and Listing Offer and Listing Details for information regarding holdings of our shares in the United States.

Table of Contents**Changes in share capital during 2017 and first quarter of 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 reduction dated January 15, 2018	0.01			- 17,485,187.17	221,331.49

Dilutive instruments**Stock options and bonds convertible into new or existing shares**

The number of actions which could derive from our dilutive instruments in circulation on December 31, 2017 and as of the date of this report, on the basis of their modalities in force as of these dates, as well as the corresponding percentage of dilution are presented in the table below.

	12/31/2017	Dilution%	03/29/2018	Dilution%
Convertible bonds due 2019	47,823 ^(a)	0.22%	n.a.	n.a.
Convertible bonds due 2020	1,112,541 ^(a)	5.03%	n.a.	n.a.
Stock options	424,383 ^(a)	1.92%	931,142 ^(b)	0.16%
Warrants #1	n.a.	n.a.	29,472,692	5.03%
Warrants #2	n.a.	n.a.	47,955,154	8.19%
Warrants #3	n.a.	n.a.	106,707,725	18.23%
Coordination Warrants	n.a.	n.a.	7,099,079	1.21%
Backstop Warrants	n.a.	n.a.	10,648,619	1.82%

(a) Adjusted pursuant to the share capital increase on February 5, 2016 and to the reverse stock split on July 20, 2016.

(b) Adjusted pursuant to the capital increase on February 21, 2018.

Since the Safeguard Plan was approved by the Commercial Court of Paris on December 1, 2017, the convertible bonds may now only give right to shares of the Company according to the terms of the Safeguard Plan and have therefore been fully converted into shares of the Company as a consequence of the implementation of the Safeguard Plan.

As of the date of this report, the subscription price of all stock option plans is above the stock market price.

Table of Contents**Warrants**

The following table sets out some of the key characteristics of the warrants issued in the framework of the implementation of our financial restructuring on February 21, 2018:

	Warrants #1	Warrants #2	Warrants #3	Coordination Warrants	Backstop Warrants
Number of warrants issued	22,133,149	71,932,731	113,585,276	7,099,079	10,648,619
Exercise ratio	3 Warrants #1 for 4 new shares	3 Warrants #2 for 2 new shares	1 Warrant #3 for 1 new share	1 Coordination Warrant for 1 new share	1 Backstop Warrant for 1 new share
Exercise price	3.12 euros per new share	4.02 euros per new share	0.01 euro per new share	0.01 euro per new share	0.01 euro per new share
Maximum number of shares to be issued upon exercise of the warrants (subject to adjustments)	29,477,536 ⁽¹⁾	47,955,154	113,585,276	7,099,079	10,648,619
Expiry date of the warrants	21 February 2022	21 February 2023	21 August 2018	21 August 2018	21 August 2018

(1) The 24,996 Warrants #1 allocated to the Company in connection with the treasury shares were cancelled.

(2) Subject to extension cases.

Warrants #1: warrants allocated to the shareholders of CGG;

Warrants #2: warrants associated to new shares (ABSA), all of which were subscribed by holders of preferential subscription rights;

Warrants #3: warrants in favor of the subscribers to the Second Lien Notes;

Coordination Warrants: allocated to the members of the ad hoc committee of holders of Senior Notes;

Backstop Warrants: warrants allocated to the members of the ad hoc committee of holders of Senior Notes.

Employees shareholding

Pursuant to Article L.225-102 of the French Commercial Code, we inform you that 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.

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Related party transactions