27, avenue Carnot
91300 Massy
France
(33) 1 64 47 45 00

CONDENSED INTERIM FINANCIAL REPORT

First half year 2020 Results

July 29, 2020

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FORWARD-LOOKING STATEMENTS

This document includes “forward-looking statements”. We have based these forward-looking statements on our current views and assumptions about future events.

These forward-looking statements involve certain risks and uncertainties. Factors that could cause actual results to differ materially from those contemplated by the forward-looking statements include, among others, the following risk factors:

Risks relating to our Business

- Customer satisfaction is important to our continued visibility
- Our proprietary technology could be rendered obsolete or be misappropriated by third parties
- We are subject to risks related to our information technology, including cyber security risks and risks of hardware and software failures
- We rely on third party supplies and are subject to disruptions outside our control
- We are subject to risks related to our international operations and geopolitical volatility
- We must sometimes provide performance bonds or guarantees to third parties
- Our reputation is important to our business
- Our backlog includes contracts that can be unilaterally delayed or terminated at the client’s option
- We are subject to risks related to our Marine acquisition exit

Risks relating to our Industry

- We are subject to economic uncertainty, volatility of oil and natural gas prices and conditions in financial markets
- The volume of our business depends on the level and location of capital expenditures by the oil and gas industry
- We need to attract and retain talented employees

Financial Risks

- We face risks (liquidity, asset valuation) related to the Covid-19 outbreak
- We are exposed to exchange rate fluctuations
- We must comply with the restrictions and covenants in our current and future debt agreements
- Our debt may adversely affect our financial health and pose risks to our liquidity
- We face the risk of payment, supplier and other types of fraud
- We are exposed to commercial, political and counterparty risk
- We invest significant amounts of money in our Multi-client library, which we may not recover
- We may need to impair goodwill on our balance sheet
- We are subject to inherent rate risk on our floating rate debt
- We are restricted in our ability to pay dividends

Legal and Regulatory Risks

- We remain subject to the terms of the Safeguard Plan
- Our business and that of our customers are subject to complex laws and governmental regulations, and we may be subject to legal proceedings
- We may not be successful in maintaining the necessary regulatory authorization or licenses needed to operate our business and such authorizations and licenses may be invalid or may be subject to termination, revocation or material alterations in the event of a breach

Environmental and Social Risks

- We may face risks of health and safety
- We are exposed to financial risks related to compliance with environmental laws

Certain of these risks are described in our Universal Registration Document for the year ended December 31, 2019; the French version of which we filed with the AMF on April 14, 2020. Our Universal Registration Document is available in French and English on our website at www.cgg.com or on the website maintained by the AMF (French only) at www.amf-france.org. You may request a copy of our Universal Registration Document, which includes our complete audited financial statements, at no charge, by calling our investor relations department at + 33 1 6447 3811, sending an electronic message to invrelparis@cgg.com or invrelhouston@cgg.com or writing to CGG – Investor Relations Department – 27, avenue Carnot – 91341Massy, France.

Unaudited Interim Consolidated statements of operations

		Six months ended June 30,	
(In millions of US$, except per share data)	Notes	2020	2019
Operating revenues	10	**491.2**	**606.7**
Other income from ordinary activities		0.5	0.4
Total income from ordinary activities		**491.7**	**607.1**
Cost of operations		(382.5)	(462.5)
Gross profit		**109.2**	**144.6**
Research and development expenses - net		(7.5)	(12.3)
Marketing and selling expenses		(17.2)	(21.7)
General and administrative expenses		(36.3)	(37.2)
Other revenues (expenses) - net	14	(120.3)	(2.2)
Operating income (loss)	**10**	**(72.1)**	**71.2**
Expenses related to financial debt		(67.2)	(67.4)
Income provided by cash and cash equivalents		1.5	1.6
Cost of financial debt, net		**(65.7)**	**(65.8)**
Other financial income (loss)	15	(30.0)	0.5
Income (loss) before incomes taxes		**(167.8)**	**5.9**
Income taxes	11	(37.6)	(5.6)
Net income (loss) from consolidated companies before share of income (loss) in companies accounted for under the equity method		**(205.4)**	**0.3**
Share of income (loss) in companies accounted for under the equity method	10	0.1	0.1
Net income (loss) from continuing operations		**(205.3)**	**0.4**
Net income (loss) from discontinued operations	3	(40.0)	(128.5)
Net income (loss)		**(245.3)**	**(128.1)**
Attributable to :			
Owners of CGG S.A		(246.6)	(134.6)
Non-controlling interests		1.3	6.5
Net income (loss) per share			
Basic		(0.35)	(0.19)
Diluted		(0.35)	(0.19)
Net income (loss) from continuing operations per share			
Basic		(0.29)	(0.00)
Diluted		(0.29)	(0.00)
Net income (loss) from discontinued operations per share			
Basic		(0.06)	(0.19)
Diluted		(0.06)	(0.19)

See the notes to the Unaudited Interim Consolidated Financial Statements

Unaudited Interim Consolidated statements of comprehensive income (loss)

(In millions of US$)	Six months ended June 30, 2020 (*)	2019 (*)
Net income (loss) from statements of operations	**(245.3)**	**(128.1)**
Net gain (loss) on cash flow hedges	(0.1)	0.6
Exchange differences on translation of foreign operations	(13.0)	(0.1)
Net other comprehensive income (loss) to be reclassified in profit (loss) in subsequent period (a)	**(13.1)**	**0.5**
Net gain (loss) on actuarial changes on pension plan	—	(2.1)
Net other comprehensive income (loss) not to be reclassified in profit (loss) in subsequent period (b)	**—**	**(2.1)**
Total other comprehensive income (loss) for the period, net of taxes (a) + (b)	**(13.1)**	**(1.6)**
Total comprehensive income (loss) for the period	**(258.4)**	**(129.7)**
Attributable to :		
Owners of CGG S.A.	*(259.0)*	*(136.2)*
Non-controlling interests	*0.6*	*6.5*

(*) Including other comprehensive income related to the discontinued operations, which is not material.

Unaudited Consolidated statements of financial position

(In millions of US$)	Notes	June 30, 2020	December 31, 2019
ASSETS			
Cash and cash equivalents		545.7	610.5
Trade accounts and notes receivable, net		250.9	436.0
Inventories and work-in-progress, net		212.3	200.1
Income tax assets	11	81.7	84.9
Other current assets, net		98.7	116.7
Assets held for sale, net	3	135.1	316.6
Total current assets		**1,324.4**	**1,764.8**
Deferred tax assets	11	12.2	19.7
Investments and other financial assets, net	4	40.5	27.4
Investments in companies under the equity method		3.7	3.0
Property, plant and equipment, net		276.8	300.0
Intangible assets, net	5	639.1	690.8
Goodwill, net	6	1,177.9	1,206.9
Total non-current assets		**2,150.2**	**2,247.8**
TOTAL ASSETS		**3,474.6**	**4,012.6**
LIABILITIES AND EQUITY			
Financial debt – current portion		55.8	59.4
Trade accounts and notes payables		97.1	117.4
Accrued payroll costs		125.1	156.6
Income taxes payable		75.9	59.3
Advance billings to customers		22.2	36.9
Provisions — current portion		29.8	50.0
Other current financial liabilities	7	33.6	—
Other current liabilities	8	237.0	327.3
Liabilities directly associated with the assets classified as held for sale	3	5.4	259.2
Total current liabilities		**681.9**	**1,066.1**
Deferred tax liabilities	11	17.1	10.4
Provisions — non-current portion		52.5	58.1
Financial debt – non-current portion		1,273.0	1,266.6
Other non-current financial liabilities	7	52.5	—
Other non-current liabilities	8	51.6	4.0
Total non-current liabilities		**1,446.7**	**1,339.1**
Common stock: 1,194,133,367 shares authorized and 711,323,839 shares with a €0.01 nominal value outstanding at June 30, 2020		8.7	8.7
Additional paid-in capital		1,687.1	3,184.7
Retained earnings		(279.6)	(1,531.1)
Other Reserves		(20.8)	(23.5)
Treasury shares		(20.1)	(20.1)
Cumulative income and expense recognized directly in equity		(0.8)	(0.7)
Cumulative translation adjustment		(67.6)	(56.3)
Equity attributable to owners of CGG S.A.		**1,306.9**	**1,561.7**
Non-controlling interests		39.1	45.7
Total equity		**1,346.0**	**1,607.4**
TOTAL LIABILITIES AND EQUITY		**3,474.6**	**4,012.6**

See the notes to the Unaudited Interim Consolidated Financial Statements

Unaudited Consolidated statements of cash flows

(In millions of US$)	Notes	Six months ended June 30, 2020	2019
OPERATING			
Net income (loss)	1	(245.3)	(128.1)
Less: Net income (loss) from discontinued operations	3	(40.0)	(128.5)
Net income (loss) from continuing operations		**(205.3)**	**0.4**
Depreciation, amortization and impairment		100.8	65.1
Multi-client surveys impairment and amortization	5	186.4	139.2
Depreciation and amortization capitalized in Multi-client surveys	5	(8.4)	(4.0)
Variance on provisions		1.2	(0.6)
Share-based compensation expenses		2.6	2.5
Net (gain) loss on disposal of fixed and financial assets		0.1	0.1
Equity (income) loss of investees		(0.1)	(0.1)
Dividends received from investments in companies under the equity method		—	—
Other non-cash items	15	30.0	0.8
Net cash-flow including net cost of financial debt and income tax		**107.3**	**203.4**
Less : net cost of financial debt		65.7	65.8
Less : income tax expense (gain)		37.6	5.6
Net cash-flow excluding net cost of financial debt and income tax		**210.6**	**274.8**
Income tax paid		(1.1)	(13.0)
Net cash-flow before changes in working capital		**209.5**	**261.8**
Change in working capital		16.7	66.5
- change in trade accounts and notes receivable		77.1	90.6
- change in inventories and work-in-progress		(18.5)	(4.4)
- change in other current assets		(1.5)	(23.2)
- change in trade accounts and notes payable		(2.4)	19.8
- change in other current liabilities		(38.0)	(16.3)
Net cash-flow provided by operating activities		**226.2**	**328.3**
INVESTING			
Total capital expenditures (including variation of fixed assets suppliers, excluding Multi-client surveys)	10	(36.6)	(36.4)
Investment in Multi-client surveys, net cash	5, 10	(139.9)	(95.8)
Proceeds from disposals of tangible and intangible assets		0.1	—
Total net proceeds from financial assets		0.2	—
Acquisition of investments, net of cash and cash equivalents acquired		(0.4)	—
Variation in loans granted		—	—
Variation in subsidies for capital expenditures		—	—
Variation in other non-current financial assets		9.7	(1.4)
Net cash-flow used in investing activities		**(166.9)**	**(133.6)**

(In millions of US$)	Notes	Six months ended June 30, 2020	2019
FINANCING			
Repayment of long-term debt		—	—
Total issuance of long-term debt		—	—
Lease repayments		(28.8)	(28.7)
Change in short-term loans		—	—
Financial expenses paid		(39.5)	(40.1)
Net proceeds from capital increase:			
— from shareholders		—	—
— from non-controlling interests of integrated companies		—	—
Dividends paid and share capital reimbursements:			
— to shareholders		—	—
— to non-controlling interests of integrated companies		(7.2)	(3.8)
Acquisition/disposal from treasury shares		—	—
Net cash-flow provided by (used in) financing activities		**(75.5)**	**(72.6)**
Effects of exchange rates on cash		(7.5)	(0.3)
Impact of changes in consolidation scope		—	—
Net cash flows incurred by discontinued operations	3	**(41.1)**	**(114.7)**
Net increase (decrease) in cash and cash equivalents		**(64.8)**	**7.1**
Cash and cash equivalents at beginning of year		610.5	434.1
Cash and cash equivalents at end of period		**545.7**	**441.2**

See the notes to the Unaudited Interim Consolidated Financial Statements

Unaudited Consolidated statements of changes in equity

Amounts in millions of US$, except share data	Number of Shares issued	Share capital	Additional paid-in capital	Retained earnings	Other reserves	Treasury shares	Income and expense recognized directly in equity	Cumulative translation adjustment	Equity attributable to owners of CGG S.A.	Non-controlling interests	Total equity
Balance at December 31, 2018	**709,944,816**	**8.7**	**3,184.6**	**(1,457.8)**	**(27.9)**	**(20.1)**	**(0.9)**	**(55.1)**	**1,631.5**	**42.6**	**1,674.1**
IFRS 16 First Time Application				8.4					8.4		**8.4**
Balance at January 1, 2019	**709,944,816**	**8.7**	**3,184.6**	**(1,449.4)**	**(27.9)**	**(20.1)**	**(0.9)**	**(55.1)**	**1,639.9**	**42.6**	**1,682.5**
Net gain (loss) on actuarial changes on pension plan (1)				(2.1)					(2.1)		**(2.1)**
Net gain (loss) on cash flow hedges (2)							0.6		0.6		**0.6**
Exchange differences on foreign currency translation (3)								(0.1)	(0.1)		**(0.1)**
Other comprehensive income (1)+(2)+(3)				**(2.1)**			**0.6**	**(0.1)**	**(1.6)**	**–**	**(1.6)**
Net income (4)				(134.6)					(134.6)	6.5	**(128.1)**
Comprehensive income (1)+(2)+(3)+(4)				**(136.7)**			**0.6**	**(0.1)**	**(136.2)**	**6.5**	**(129.7)**
Exercise of warrants	*5,096*								–		–
Dividends									–	(3.8)	**(3.8)**
Cost of share-based payment				2.4					2.4		**2.4**
Exchange differences on foreign currency translation generated by the parent company					2.0				2.0		**2.0**
Changes in consolidation scope and other				(1.4)					(1.4)		**(1.4)**
Balance at June 30, 2019	***709,949,912***	**8.7**	**3,184.6**	**(1,585.1)**	**(25.9)**	**(20.1)**	**(0.3)**	**(55.2)**	**1,506.7**	**45.3**	**1,552.0**

Amounts in millions of US$, except share data	Number of Shares issued	Share capital	Additional paid-in capital	Retained earnings	Other reserves	Treasury shares	Income and expense recognized directly in equity	Cumulative translation adjustment	Equity attributable to owners of CGG S.A.	Non-controlling interests	Total equity
Balance at December 31, 2019	**709,956,358**	**8.7**	**3,184.7**	**(1,531.1)**	**(23.5)**	**(20.1)**	**(0.7)**	**(56.3)**	**1,561.7**	**45.7**	**1,607.4**
Net gain (loss) on actuarial changes on pension plan (1)											
Net gain (loss) on cash flow hedges (2)							(0.1)		(0.1)		(0.1)
Exchange differences on foreign currency translation (3)								(12.3)	(12.3)	(0.7)	(13.0)
Other comprehensive income (1)+(2)+(3)							**(0.1)**	**(12.3)**	**(12.4)**	**(0.7)**	**(13.1)**
Net income (4)				(246.6)					(246.6)	1.3	(245.3)
Comprehensive income (1)+(2)+(3)+(4)				**(246.6)**			**(0.1)**	**(12.3)**	**(259.0)**	**0.6**	**(258.4)**
Exercise of warrants	9,860										
Dividends										(7.2)	(7.2)
Cost of share-based payment	1 357 341			2.3					2.3		2.3
Transfer to retained earnings of the parent company			(1,497.6)	1,497.6							
Exchange differences on foreign currency translation generated by the parent company					0.7				0.7		0.7
Changes in consolidation scope and other				(1.9)	1.9			1.1	1.1		1.1
Balance at June 30, 2020	**711,323,559**	**8.7**	**1,687.1**	**(279.6)**	**(20.8)**	**(20.1)**	**(0.8)**	**(67.6)**	**1,306.9**	**39.1**	**1,346.0**

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

CGG S.A. ("the Company"), along with its subsidiaries (together, the "Group") is a global geoscience technology leader providing a comprehensive range of data, products, services and equipment that support the discovery and responsible management of the Earth's natural resources.

Given that the Company is listed on a European Stock Exchange and pursuant to European regulation n°1606/2002 dated July 19, 2002, the accompanying interim condensed consolidated financial statements have been prepared in accordance with *International Financial Reporting Standards* ("IFRS") and its interpretations, as issued by the *International Accounting Standards Board* (IASB) and adopted by the European Union as at June 30, 2020.

The Board of Directors has authorized these interim condensed consolidated financial statements for issue on July 28, 2020.

The interim condensed consolidated financial statements are presented in U.S. dollars and have been prepared on a historical cost basis, except for certain financial assets and liabilities that have been measured at fair value.

1.1 - Critical accounting policies

The interim condensed consolidated financial statements do not include all the information and disclosures required in the annual financial statements, and should be read in conjunction with the Group's annual financial statements as of and for the year ended December 31, 2019 included in its Universal Registration Document for the year 2019 filed with the AMF on April 14, 2020 and approved by the General Meeting on June 16, 2020.

The accounting policies adopted in the preparation of the interim condensed consolidated financial statements are consistent with those followed in the preparation of the Group's annual financial statements for the year ended December 31, 2019, except for the adoption of the following new Standards, Amendments, and Interpretations:

- Amendments to IFRS 3 Business Combinations
- Amendments to IFRS 9, IAS 39 and IFRS 7 "Interest Rate Benchmark Reform"
- Amendments to the Conceptual Framework in IFRS Standards
- Amendments to IAS 1 and IAS 8: Definition of Material

The adoption of the new Standards, Amendments, and Interpretations had no impact on the Group's interim financial statements.

At the date of issuance of these interim condensed consolidated financial statements, the following Standards, Amendments, and Interpretations were issued but not yet adopted by the European Union and were thus not effective:

- IFRS 17 "Insurance Contracts"
- Amendments to IAS 1 : Classification of Liabilities as Current or Non-Current
- Amendments to IFRS 3 Business Combinations; IAS 16 Property, Plant and Equipment; IAS 37 Provisions, Contingent Liabilities and Contingent Assets as well as Annual Improvements 2018-2020
- Amendment to IFRS 16 Leases Covid 19-Related Rent Concessions

The Group don't expect any significant impact on our consolidated accounts for the following Standards, Amendments and Interpretations:

- IFRS 17 "Insurance Contracts"
- Amendments to IFRS 3 Business Combinations; as well as Annual Improvements 2018-2020
- Amendment to IFRS 16 Leases Covid 19-Related Rent Concessions

The review of IAS 1, IAS 16 Property, Plant and Equipment and IAS 37 Provisions is ongoing to assess the potential impacts on our consolidated accounts.

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1.2 - Use of judgment and estimates

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 changes in economic conditions, changes in laws and regulations, changes in strategy and the inherent imprecision associated with the use of estimates.

Key judgments and estimates used in the financial statements are summarized in the following table:

Note	Judgments and estimates	Key assumptions
Note 6	Recoverable value of goodwill and intangible assets	Expected geophysical market trends and timing of recovery
		Discount rate (WACC)
Notes 5 and 14	Amortization and impairment of Multi-client surveys	Expected sales for each survey
Note 3	Classification of disposal groups as held for sale	Likelihood of disposal within twelve months
	Valuation of disposal groups classified as held for sale	Assessment of disposal groups at fair value less cost to sell
Notes 4 and 15	Fair value of Shearwater Vendor Notes	Assessment of Shearwater (unlisted company) equity value
Notes 7 and 15	Fair value of Eidesvik put option	Assessment of Shearwater (unlisted company) equity value Volatility of Shearwater share price
Note 7	Idle Vessels Compensation (Capacity Agreement)	Shearwater fleet utilization assumptions over the five-year commitment period
Note 8	Off-Market component (Capacity Agreement)	Market rate over the five-year contractual term as estimated at Marine Closing Date
Note 10	Revenue recognition	Geoscience Contract completion rates
Note 11	Income tax liabilities – Uncertain tax positions	Assessment of most likely amount
	Deferred tax assets	Assumptions supporting the achievement of future taxable profits
	Provisions for restructuring	Assessment of future costs related to restructuring plans
	Discount rate IFRS 16	Assessment of incremental borrowing rate
	Recoverability of client receivables	Assessment of clients' credit default risk
Note 5	Depreciation and amortization of tangible and intangible assets	Assets useful lives
	Development costs	Assessment of future benefits of each project
Note 12	Stock options	Fair value of each plan
	Post-employment benefits	Discount rate
		Enrollment rate in post-employment benefit plans
		Inflation rate
	Provisions for risks, claims and litigations	Assessment of risks considering court rulings and attorney's positions

NOTE 2 SIGNIFICANT EVENTS

Exit from Marine Data Acquisition business

In the first quarter of 2020, we delivered a key milestone on our strategic roadmap to an asset-light business model with the closing of our strategic partnership with Shearwater GeoServices Holding AS ("Shearwater") in the Marine Data Acquisition business.

On January 8, 2020 (the "Marine Closing"), Shearwater acquired all of the shares in Global Seismic Shipping AS ("GSS") (the indirect owner of five high end vessels) and five sets of streamers, and the Capacity Agreement (described below) entered into force. The agreements for the Streamer NewCo Transaction remain under negotiation.

More precisely, the following transactions occurred on the Marine Closing:

- CGG acquired the 50% interest held by Eidesvik in GSS and indemnified Eidesvik for the end of the relationship with payment in Shearwater shares. CGG also granted Eidesvik an associated put option (the "Eidesvik Put Option");
- Shearwater acquired 100% of GSS and the streamers from CGG with payment in Shearwater Vendor Notes exchangeable into Shearwater shares (the "Shearwater Vendor Notes");
- The existing umbrella agreement and the existing bareboat charter agreements between CGG and GSS subsidiaries were terminated together with the guarantee granted by CGG;
- Shearwater CharterCo AS entered into five-year bareboat charter agreements with GSS subsidiaries, guaranteed by Shearwater, for the five high end vessels equipped with streamers (the "Shearwater Charter Agreements") and CGG Services SAS entered into the Capacity Agreement;
- Under payment instructions agreement (the "Payment Instructions Agreement"), Shearwater and Shearwater CharterCo AS direct CGG Services SAS to pay amounts due under the Capacity Agreement directly to GSS subsidiaries to cover Shearwater CharterCo's obligations under its bareboat charter agreements; and
- CGG also entered into step-in agreements with Shearwater and GSS (the "Step-In Agreements") which could come into force if certain conditions are met and would require CGG to substitute itself for Shearwater CharterCo AS as charterer of GSS subsidiaries' five high end seismic vessels (equipped with streamers).

As a result, CGG recognized the following items in these interim financial statements at the date of Marine Closing:

- US$52.9 million of Shearwater Vendor Notes;
- US$(148.0) million of liabilities related to the Capacity Agreement; and
- US$(4.6) million of liability related to fair value of the Eidesvik Put Option.

Shearwater Vendor Notes

Those notes are exchangeable into Shearwater shares. They can also be used to setoff payment obligations or buy assets, but only as agreed with Shearwater. Shearwater is in no case required to settle the notes with cash. If those notes are not settled by December 31, 2020, Shearwater may require CGG to use the notes as consideration in kind for the purchase of shares in Shearwater at a fixed price of US$25.2262 per share. *Please refer to note 4.*

Capacity Agreement

The main terms of the Capacity Agreement are that CGG will:

- work exclusively with Shearwater's global fleet of high-end 3D and source vessels for our Multi-client marine and nodes data acquisition projects up to 730 vessel days per year on average for the next five years;
- pay a pre-agreed day rate for the first 2.5 years and the higher of market rate or the pre-agreed day rate for the remaining 2.5 years;
- reimburse Shearwater for project-related operational costs and fuel ; and
- compensate Shearwater for days during which more than one of its high end seismic vessels are idle for a maximum of three vessels (the "Idle Vessels Compensation").

The pre-agreed day rate as negotiated in summer 2019 is higher than the estimated average market day rate at the Marine closing date. Thus, an off-market operational liability of US$(69.3) million was recognized at the Marine Closing date representing the net present value of the positive difference between the pre-agreed rate and the estimated market rate over the five-year contractual term. *Please refer to note 8.*

The Idle Vessels Compensation gave rise to a US$(78.7) million financial liability at the Marine Closing date representing the net present value of expected payments under this clause. The expected payments were estimated based on Shearwater fleet utilization assumptions over the five-year commitment period. *Please refer to note 7 and 9.*

Eidesvik Put Option

Eidesvik has the right to sell all its Shearwater shares to CGG at a strike price of US$30 million. The exercise period starts at the earlier of: i) the date of Shearwater IPO, and ii) 1 year after Marine Closing. It ends at the earlier of: i) 6 months after the date of Shearwater IPO, and ii) 3 years after Marine closing. The fair value of this put option has been assessed at US$(4.6) million as of the Marine Closing Date. *Please refer to note 7 and note 9.*

Step-In Agreements

As described above, following the Marine Closing, Shearwater CharterCo AS has entered into five-year bareboat charter agreements with the GSS subsidiaries, guaranteed by Shearwater, for the five high-end vessels equipped with streamers. CGG has agreed to substitute itself for Shearwater CharterCo AS as charterer of GSS subsidiaries' five high-end seismic vessels (equipped with streamers) in the event of a payment default under the charter party between GSS subsidiaries and Shearwater CharterCo AS. This payment default can only be triggered either by CGG non-payment under the Payment Instructions Agreement, or by Shearwater's insolvency.

Were the Step-in Agreements to be triggered:

- CGG would be entitled to terminate the Capacity Agreement;
- CGG would have the right to use the five high end seismic vessels equipped with streamers under bareboat charter agreements;
- CGG would be entitled, through pledge in its favor, to acquire all the share capital of GSS, knowing that GSS and subsidiaries' principal assets would be the vessels and streamers and its principal liabilities would be the external debt associated with the vessels.

The Step-In Agreements will not impact the statement of financial position unless a trigger, as described above, occurs. In such circumstances, the obligations under the Capacity Agreement should be terminated and replaced by the obligations under the Step-In Agreements, representing a lower amount of commitment compared to the Capacity Agreement.

For more information about the Exit from Marine Data Acquisition business and the strategic partnership with Shearwater, please refer to the notes 2 and 5 to our consolidated financial statements in the 2019 Universal Registration Document.

Covid-19 pandemic and drop in oil price

In the first half of 2020, the Covid-19 pandemic has had a dramatic impact on economic growth and led to an unprecedented decline in the demand for oil and gas. On top of that, the radical increase in supply by Saudi Arabia and Russia to gain market share from early March 2020 due to the inability of OPEC and oil producing countries to reach a consensus on supply cuts, further exacerbated the crisis. As a result, over the period, the Brent oil price plummeted drastically from trading in the high US$60's per barrel during late 2019 down to US$50 on March 5, 2020, the date of approval of the 2019 accounts by the CGG Board of Directors, and US$25 on March 31, 2020 before starting climbing up and reach US$41 on June 30, 2020.

Our clients reacted sharply and announced severe cuts in exploration and production spending (E&P), and deferrals of projects, by about 30% year-on-year. Although crude-oil prices improved from the lows of the period, clients did not revise their targets of reduction. This context opens a new period of high uncertainty for the whole oil and gas industry. It is currently difficult to predict how long the economic contraction and the imbalance between supply and demand in the oil market will persist, as well as the timing and breadth of the recovery of clients' activity. We believe though that, in line with the consensus, such an unbalanced situation is very likely to normalize with the projected recovery in the energy consumption with oil and gas continuing to play a primary role in the energy mix. Consequently, the oil price is expected to gradually recover over the coming years and estimated to reach price level close to 2019 one at 2022/2023 horizon.

For 2020, we expect very challenging market conditions to remain and our results of operations and cash flows to be materially adversely affected. With revenues dropping by 40% in the second quarter of 2020 compared to last year, the Group implemented actions and launched the "Covid-19 plan" to align its cost structure and to preserve cash.

The first adaptation measures relating to Covid-19 plan were implemented and US$10m of cash costs were incurred (mostly severance costs). In the context depicted above, the Group reviewed the carrying value of its assets and liabilities and recorded a non-cash charge during the first half of the year of approximately US$157 million, including (i) US$ 16 million of impairment loss related to fair value re-measurement of our GeoSoftware business available for sale (*See note 3*), (ii) US$ 26 million of impairment loss related to fair value re-measurement of the Shearwater Vendor Notes (*See note 4*), (iii) US$ 69 million of impairment loss on Multi-client library mainly in frontier exploration areas due to the current oil price environment (*See note 5*), (iv) US$ 24 million of impairment loss relating to goodwill affected to our Geoconsulting CGU (*See note 6*), (v) US$ 11 million of loss related to the fair value re-measurement of the Eidesvik Put Option (*See note 7*) and (vi) US$ 9 million of loss on deferred tax asset (*See note 11*).

In the period, the Group benefited from support measures in certain countries triggering a positive cash impact US$10m million, mainly attributable to government support including US$5 million of tax and social contribution deferrals and US$3 million of government grants and subsidies.

The Group will continue to monitor cautiously the outlook.

Divestment from Seabed Geosolutions BV

In line with our strategy to exit the Contractual Data Acquisition business, on December 30, 2019 CGG SA entered into in a Share Purchase and Exit Agreement ("Exit Agreement") to transfer on that date 15% (out of its total 40% stake) of its shares in the Seabed Geosolutions BV joint venture ("Seabed") to its partner Fugro NV ("Fugro"), with its remaining 25% shareholding to be transferred before April 1, 2020.

The full divestment from Seabed was effective on April 1, 2020 with the transfer of the remaining shares to Fugro.

Decision of the French Supreme Court

On July 17, 2018, certain holders of CGG's convertible bonds filed an appeal before the French Supreme Court (Cour de cassation) against the ruling rendered on May 17, 2018 by the Appeals Court of Paris rejecting a claim by a group of Convertible Bondholders against the ruling of the Commercial Court of Paris sanctioning the Safeguard Plan on December 1, 2017.

On February 26, 2020, the French Supreme Court (Cour de cassation) confirmed the ruling rendered by the Appeals Court of Paris and rejected the claim from a group of Convertible Bondholders, putting a definitive end to this litigation.

NOTE 3 NON-CURRENT ASSETS HELD FOR SALE AND DISCONTINUED OPERATIONS

The 2021 strategic roadmap includes a transition to an asset-light model by reducing CGG's exposure to the data acquisition business. As a result of these strategic announcements in November 2018 and actions undertaken subsequently, we presented our data acquisition operations and the costs of implementation of the related measures, referred to as the CGG 2021 Plan, in accordance with IFRS 5, as discontinued operations and assets held for sale.

The fair value measurement of assets held for sale is categorized within Level 3 of the fair value hierarchy.

In 2019 the related assets of our GeoSoftware business, part of our GGR segment, were reclassified to the line "assets held for sale" and liabilities to the line "liabilities directly associated with the asset classified as held for sale". The GeoSoftware activity does not meet the criteria of a major line of business under IFRS 5, therefore the GeoSoftware operations were not presented as discontinued operations in the consolidated statements of operations and in the consolidated statements of cash flows (hence triggering no retrospective presentation). Any sale of these related assets would be independent from the CGG 2021 Plan.

Disaggregation of assets

(In millions of US$)	June 30, 2020	December 31, 2019
Goodwill	6.9	23.0
Intangible assets, net	82.8	77.2
Property, plant and equipment, net	5.4	48.4
Right of use-assets	-	82.0
Investments in companies formerly under the equity method	35.0	72.0
Trade accounts and notes receivable, net	3.3	12.1
Other current assets, net	1.4	1.9
Other non-current assets, net	0.3	-
Assets held for sale, net [a]	**135.1**	**316.6**

(a) Decrease mainly related to Marine exit for US$(144.6) million, equity investment for US$(10.6) million and GeoSoftware for US$(16.1) million.

As of June 30, 2020, the assets held for sale amounted to US$135.1 million, which comprised US$93.2 million of GeoSoftware assets and US$41.9 million of other assets held for sale.

With the global economic crisis and the drop in oil price and E&P spending, the GeoSoftware business was remeasured triggering an impairment of US$16.1 million.

Disaggregation of liabilities

(In millions of US$)	June 30, 2020	December 31, 2019
Trade accounts and notes payable	3.0	2.6
Accrued payroll costs	0.4	3.2
Other current liabilities	1.7	0.0
Other non-current liabilities	0.3	1.7
Lease liability	-	190.7
Provisions for onerous contracts	-	61.0
Liabilities directly associated with the assets classified as held for sale [a]	**5.4**	**259.2**

(a) Decrease mainly related to Marine exit for US$(252.8) million.

As of June 30, 2020, the liabilities directly associated with the assets classified as held for sale amounted to US$(5.4) million, which comprised US$(2.0) million for GeoSoftware and US$(3.4) millions for Other Liabilities directly associated with the Other Asset classified as held for sale.

Net income (loss) from discontinued operations

(In millions of US$)	Six months ended June 30, 2020	2019
Operating revenues	19.2	134.7
Operating income (loss)	(41.5)	(123.4)
Net income (loss) from discontinued operations	**(40.0)**	**(128.5)**

For the period ended June 30, 2020, we recognized US$(37.3) million of restructuring costs as part of the CGG 2021 Plan including US$(24.1) million of impairment of assets, coming from the loss recognized on the re-measurement to fair value less cost to sell of our disposal groups.

Net cash flows incurred by discontinued operations are as follows

The following table presents the net cash flow from discontinued operations for each of the periods stated:

(In millions of US$)	Six months ended June 30, 2020	2019
Net cash-flow from discontinued operations	**(41.1)**	**(114.7)**

NOTE 4 INVESTMENTS AND OTHER FINANCIAL ASSETS

(In millions of US$)	June 30, 2020	December 31, 2019
Vendor Notes (Capacity Agreement)	23.5	-
Non-consolidated investments	0.9	1.1
Loans and advances [(a)]	1.6	7.3
Deposits and other [(b)]	14.5	19.0
TOTAL	**40.5**	**27.4**

(a) The variance of US$5.8 million corresponds to trust ("Fiducie") releasing of guarantees,

(b) As of June 30, 2020, the amount of pledged financial assets was US$13.9 million.

The Shearwater Vendor Notes was US$23.5 million as of June 30, 2020. The Vendor Notes amounted to US$52.9 million at the Marine Closing date. US$3.5 million were used to settle various operational costs. A fair value adjustment of US$25.9 million was booked in a context of depressed oil and gas market environment. *Please refer to note 15.*

The fair value measurement of the Vendor Notes is categorized within Level 3 of the fair value hierarchy and the valuation is based on Shearwater equity value estimate. External valuation firms have determined the Vendor Notes fair value at the Marine Closing date as well as its reassessment as of June 30, 2020.

A change of +/- 10% in the Shearwater equity value estimate, and all other assumptions being equal, would result in a respective +/- US$4.3 million fair value impact of the Vendor Notes.

NOTE 5 INTANGIBLE ASSETS

As of June 30, 2020, the net intangible assets amount to US$639.1 million compared to US$690.8 million as of December 31, 2019. The variance is mainly attributable to:

- The capitalization in Multi-client surveys for US$148.3 million, including a US$121.5 million increase in offshore surveys;
- The amortization on Multi-client surveys for US$186.4 million, including US$68.9 million of impairment loss triggered by the downward revision in sales forecasts mainly in frontier exploration areas (mostly Africa and Ireland) due to the drop of the oil price; and
- A negative impact from change in currency exchange rates of US$14.2 million mostly relating to the Brazilian library.

NOTE 6 GOODWILL

Variation of the period

(In millions of US$)	June 30, 2020	December 31, 2019
Balance at beginning of period	**1,206.9**	**1,229.0**
Increase	-	-
Impairment	(24.0)	-
Reclassification of intangible assets as “Assets held for sale” [(a)]	-	(23.0)
Change in exchange rates	(5.0)	0.9
Balance at end of period	**1,177.9**	**1,206.9**

(a) Goodwill associated to GeoSoftware activity was reclassified in asset held for sale

Impairment review

The Group management undertakes at least an annual impairment test covering goodwill, intangible assets and indefinite life assets allocated to the cash generating units (CGU) to consider whether impairment is required.

This review is conducted at year-end, unless there is an indication of potential loss of value. With the collapse in the oil price and the severe E&P spending cuts, we assessed our Goodwill for impairment in this interim period.

The recoverable amount retained by the Group corresponded to the value in use of the assets, cash generating units or group of cash generating units, defined as the discounted expected cash flows.

The following table provides the split of the total Group Goodwill per segment after current period impairment:

(In millions of US$)	June 30, 2020	December 31, 2019
Contractual Data Acquisition	**-**	**-**
CGU Multi-client	*284*	*284*
CGUs in Geoscience	*724*	*748*
GGR	**1,008**	**1,032**
Equipment	**170**	**175**
Total	**1,178**	**1,207**

Key assumptions used in the determination of recoverable amount

In determining the asset recoverable amount through value in use, management makes estimates, judgments and assumptions on uncertain matters. For each cash generating unit tested for goodwill impairment, the value in use is determined based on economic assumptions and forecasted operating conditions as follows:

- Expected cash flows estimated over explicit period 2020-2023 starting July 1,2020,
- Use of normative cash flows, the discounted normative cash flows weigh more than 90% of the total value in use,
- Long-term growth rate at 2.0% for all the CGUs,
- Discount rates which we considered reflect the respective sectors weighted average cost of capital (WACC):
  - 10.0% for the Equipment segment (compared to 9.75% in 2019) corresponding to a pre-tax rate of 12.3%;
  - 9.625% for the cash generating units within the GGR segment (compared to 9.0% in 2019) corresponding to a pre-tax rate of 11.8%

Our WACC is calculated using the standard Capital Asset Pricing Model (CAPM) methodology. We requested an external valuation firm to perform an independent assessment in 2020. The pre-tax WACC are computed by iteration: the discount rate leading to the same net present value is calculated with post-tax WACC with tax expenses and excluding tax impacts from cash flows projections.

The unprecedented crisis triggered by Covid-19 pandemic led to a large reduction in oil demand due to lockdown measures in the most of important economies worldwide. This resulted in the collapse of oil price and massive cuts in E&P spending by Oil & Gas companies.

This context opens a new period of high uncertainty for the whole oil and gas industry. We do not know how long this period of crisis will persist.. For 2020, we expect very challenging market conditions to remain. We believe though that such an unbalanced situation,between supply and demand in the oil market, should normalize in the future and in line with the consensus, and with our clients’ view forward, estimate that the oil price should progressively recover to 2019 levels, around US$60-65 for Brent, at 2022/2023 horizon and pull E&P spending in the coming years. The financial projections of our CGU are built on such recovery path.

GGR

The massive cut in E&P spending is expected to impact strongly our GGR segment activity. If the first half of 2020 was supported by pre-Covid-19 backlog, the slow sales should materialize in the second half. We are responding to the current environment by:

- Aligning our cost structure with the new baseline;

- Preserving our investment in new MC surveys at a balanced level, focusing on acceptable levels of prefunding and predicted returns;

However, we are also:

- Continuing to invest in research and development, people development, and computer equipment to maintain our leadership in high-end imaging and strengthen our reservoir characterization monitoring. We believe this positioning is critical during the downturn and beyond.

The capital employed of the Multi-client CGU amounted to US$591 million as of June 30, 2020, including US$284 million of goodwill.

While expectations for this CGU have been lowered, there is no goodwill impairment to be recorded based on our long-term projections.

Before any impairment, the capital employed of the Geoscience CGUs amounted to US$951 million as of June 30, 2020, including US$748 million of goodwill. In that space, our Geoconsulting CGU, involved in upstream consulting, has been particularly hard hit by the cuts in clients' spending. As we do not expect a rapid recovery in this business, weaccounted for the full impairment of the goodwill affected to Geoconsulting for an amount of US$24 million. The capital employed of the Geoscience CGUs was down to US$927 and its goodwill to US$724 million at June 30, 2020.

US$24 million impairment of goodwill recorded as of June, 30 2020.

Equipment

In the current context, we expect the revenues of our Equipment business to be significantly impacted as the crisis led Sercel's clients to defer their investments. Going forward, we expect solid rebound, in line with the trajectory mentioned above, fueled by Sercel's large installed base, its portfolio of new products and the diversification dynamics into non-oil sectors. In land acquisition equipment, we see some opportunities in India, Russia and North Africa, especially for the new generations of products, and in the Middle-East with some high-channel count crews ("mega crew"). While still very low currently, we also expect expansion of the marine equipment activity, supported by the obsolescence of streamers in operations and shrinking inventories from stacked vessels.

The capital employed of the Equipment CGU amounted to US$529 million as of June 30, 2020, including US$170 million of goodwill.

While the expectations have been lowered, there is no goodwill impairment to be recorded based on our long-term projections.

No impairment of goodwill recognized as of June 30, 2020.

Sensitivity to changes in assumptions

Changing the assumptions selected by Group management, in particular the discount rate and the normative cash flows could significantly affect the evaluation of the value in use of our cash generating units and, hence, the Group's impairment test result. The profile of the business cycle could affect, to a lesser extent compared to the two previous assumptions, the evaluation of the value in use of our cash generating units. The main assumptions of this impairment test as of June 30, 2020 is the recovery scenario at the 2022/2023 horizon. Cash flows generated in 2022 and 2023 as well as in the normative year may vary depending upon timing and breadth in recovery.

Changes to the assumptions used in the impairment test lead to the following:

(In millions of US$)	**Goodwill**	**Excess of the expected future Discounted cash flows over the carrying value of assets including goodwill**	**Sensitivity on 2022-2023 cash flows**		**Sensitivity on normative cash flows**		**Sensitivity on discount rate (after tax)**	
			Decrease by 10%	**Increase by 10%**	**Decrease by 10%**	**Increase by 10%**	**Decrease by 0.25bps**	**Increase by 0.25bps**
CGU Multi-client	284	123	(6)	6	(67)	67	29	(27)
CGUs Geoscience	724	95	(7)	7	(93)	93	40	(37)
CGU Equipment	170	273	(7)	7	(73)	73	30	(28)
Total	**1,178**							

NOTE 7 OTHER CURRENT AND NON-CURRENT FINANCIAL LIABILITIES

Idle Vessel Compensation

The Idle Vessels Compensation (Capacity Agreement) gave rise to a US$78.7 million financial liability at the Marine Closing date representing the net present value of expected payments under this clause of agreement. The expected payments are based on Shearwater fleet utilization assumptions over the five-year commitment period. The Idle Vessel Compensation is a debt at amortized costs. *Please refer to note 2.*

As of June 30, 2020, the outstanding Idle Vessels Compensation financial liability was US$70.5 million. The current portion of the Idle Vessels Compensation was US$18.0 million and the non-current portion was US$52.5 million.

Eidesvik Put Option

Eidesvik has the right to sell all its Shearwater shares to CGG at a strike price of US$30 million. *Please refer to note 2.*

The oil market is currently suffering from price swing. In light of this, the fair value of the Eidesvik Put Option have been re-measured leading to a US$ 11.0 million impact to reach US$15.6 million as of June 30, 2020.

The fair value measurement of the put option is categorized within Level 3 of the fair value hierarchy and the valuation is based on Shearwater equity value estimate. External valuation firms have determined the put option fair value at the Marine Closing date as well as its reassessment as of June 30, 2020. The full amount is presented in the line Other current financial liabilities.

A change of +/- 10% in the Shearwater equity value estimate, and all other assumptions being equal, would result in a respective +/- US$3.2 million fair value impact of the put option.

NOTE 8 OTHER CURRENT AND NON-CURRENT LIABILITIES

(In millions of US$)	June 30, 2020	December 31, 2019
Value added tax and other taxes payable	33.6	40.8
Deferred revenue	189.6	280.7
Fair value of financial instruments	-	0.1
Off Market Component [(a)]	12.6	-
Other liabilities	1.2	5.7
Total other current liabilities	**237.0**	**327.3**

(a) "Capacity Agreement", see note 2.

(In millions of US$)	June 30, 2020	December 31, 2019
Research and development subsidies	0.2	0.2
Profit sharing scheme	2.1	3.2
Off Market Component [(a)]	48.8	-
Other non-current liabilities	0.5	0.6
Total other non-current liabilities	**51.6**	**4.0**

(a) "Capacity Agreement", see note 2.

NOTE 9 CONTRACTUAL OBLIGATIONS, COMMITMENTS AND CONTINGENCIES

Contractual obligations

(In millions of US$)	June 30, 2020	December 31, 2019
Long-term debt obligations	1,629.0	1,688.9
Lease obligations – other than bareboat agreements	152.3	173.1
Lease obligations - bareboat agreements	-	326.3
Total obligations	**1,781.3**	**2,188.3**

The following table sets forth our future cash obligations (not discounted) on our contractual obligations and commitments as of June 30, 2020:

(In millions of US$)	Payments due by period				
	Less than 1 year	**2-3 years**	**4-5 years**	**After 5 years**	**Total**
Long-term debt obligations:					
Financial debt (including cumulated PIK) [(a)]	0.3	614.1	738.0	4.2	1,356.6
Other long-term obligations (cash interests)	79.3	166.4	26.7	-	272.4
Total Long-term debt obligations	**79.6**	**780.5**	**764.7**	**4.2**	**1,629.0**
Lease obligations	53.4	59.0	27.0	12.9	152.3
Total Contractual Cash Obligations [(b)]	**133.0**	**839.5**	**791.7**	**17.1**	**1,781.3**

(a) PIK : Payment In Kind interest

(b) Payments in other currencies are converted into U.S. dollar at June 30, 2020 exchange rates.

Capacity Agreement: Idle vessel compensation and Off-market component

As described above in Note 2, on January 8, 2020, CGG and Shearwater entered in a Capacity Agreement at the Marine Closing Date, for which the main terms of the agreement are as follows:

- Work exclusively with Shearwater's global fleet of high-end 3D and source vessels for our Multi-client marine and nodes data acquisition projects up to 730 vessel days per year on average for the next five years:
  - pay a pre-agreed day rate for the first 2.5 years and the higher of market rate or the pre-agreed day rate for the remaining 2.5 years;
  - reimburse Shearwater for project-related operational costs and fuel; and
- Compensate Shearwater for days during which more than one of its high-end seismic vessels are idle for a maximum of three vessels (the "Idle Vessels Compensation"). The maximum Idle Vessel Compensation for a full year represents US$(21.9) million. As of June 30, 2020 the Idle Vessels remaining maximum commitment until the end of the five-year commitment period was US$(99.2) million.

Contingencies

As described above in Note 2, CGG has agreed to substitute itself for Shearwater CharterCo AS as charterer of GSS subsidiaries' five high-end seismic vessels (equipped with streamers) in the event of a payment default under the charter party between the GSS subsidiaries and Shearwater CharterCo AS. This payment default can only be triggered either by CGG non-payment under the Payment Instructions Agreement, or by Shearwater's insolvency.

The Step-In Agreements will not impact the financial statement of position unless a trigger, as described above in Note 2, occurs. In such circumstances, the obligations under the Capacity Agreement should be terminated and replaced by the obligations under the Step-In Agreements, representing a lower amount of commitment compared to the Capacity Agreement.

Put Option

See note 7.

NOTE 10 ANALYSIS BY OPERATING SEGMENT

Group organization

Segment presentation and discontinued operations

The 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.

Until the last quarter of 2018, we 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. In November 2018, we announced the new strategy for our Group that included the transition to an asset-light model by reducing CGG's exposure to the Contractual Data Acquisition business. As a result of these strategic announcements and actions undertaken since then, our Contractual Data Acquisition segment and part of our Non-Operated Resources segment have been presented as discontinued operations in our income statement and as assets held for sale in our balance sheet in accordance with IFRS 5. The costs of implementation of our strategic plan described above, referred to as the "CGG 2021 Plan", are reported in discontinued operations in the related Contractual Data Acquisition business lines.

Our Geology, Geophysics & Reservoir ("GGR") and Equipment segments are reported in continuing operations.

Internal reporting and Segment presentation

Before the implementation of IFRS 15, the Group applied the percentage of completion method for recognizing Multi-client prefunding revenues. Following the implementation of IFRS 15, the Group recognizes Multi-client prefunding revenues only upon delivery of final processed data.

Although IFRS fairly presents the Group's statement of financial position, for internal reporting purposes CGG management continues to apply the pre-IFRS 15 revenue recognition principles, with Multi-client prefunding revenues recorded based on percentage of completion. CGG management believes this method aligns revenues closely with the activities and resources used to generate it and provides useful information as to the progress made on Multi-client surveys, while also allowing for useful comparison across time periods.

CGG therefore presents the Group's results of operations in two ways:

- the "Reported" or "IFRS" figures, prepared in accordance with IFRS, with Multi-client prefunding revenues recognized upon delivery of the final data; and
- the "Segment" figures, for purposes of internal management reporting, prepared in accordance with the Group's previous method for recognizing Multi-client prefunding revenues.

Other companies may present Segment and related measures differently than we do. Segment figures are not a measure of financial performance under IFRS and should not be considered as an alternative to operating revenues, operating income or any other measures of performance derived in accordance with IFRS as indicators of our operating performance.

Alternative Performance Measures

As a complement to Operating Income, EBIT may be used by management as a performance measure for segments because it captures the contribution to our results of the significant businesses that are managed through our joint ventures. We define EBIT as Operating Income plus our share of income in companies accounted for under the equity method.

We define EBITDAs 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 a measure used by certain investors to determine our operating cash flow and historical ability to meet debt service and capital expenditure requirements.

Inter-segment transactions are made at arm's length prices. They relate primarily to geophysical equipment sales made by the Equipment segment. These inter-segment revenues and the related earnings are eliminated in consolidation in the tables that follow under the column "Eliminations and other".

Operating Income and EBIT may include non-recurring or restructuring items, which are disclosed in the reportable segment if material. General corporate expenses, which include Group management, financing, and legal activities, have been included in the column "Eliminations and other" in the tables that follow. The Group does not disclose financial expenses or financial revenues by segment because they are managed at the Group level.

Identifiable assets are those used in the operations of each segment. Unallocated and corporate assets consist of "investments and other financial assets" and "cash and cash equivalents" of our consolidated statement of financial position. The group does not track its assets based on country of origin.

Capital employed is defined as "total assets" excluding "cash and cash equivalents" less (i) "current liabilities" excluding "bank overdrafts" and "current portion of financial debt" and (ii) "non-current liabilities" excluding "financial debt".

Analysis by segment (continuing operations)

Amounts in millions of US$, except for assets and capital employed in billions of US$	Six months ended June 30, 2020 GGR	Equipment	Eliminations	Segment figures	IFRS 15 adjustments	Consolidated Total / As reported
Revenues from unaffiliated customers	341.9	131.0	-	472.9	18.3	491.2
Inter-segment revenues (1)		1.8	(1.8)			
Operating revenues	**341.9**	**132.8**	**(1.8)**	**472.9**	**18.3**	**491.2**
Depreciation and amortization (excluding Multi-client surveys)	(85.0)	(14.9)	(0.9)	(100.8)	-	(100.8)
Depreciation and amortization of Multi-client surveys	(180.4)	-	-	(180.4)	(6.0)	(186.4)
Operating income (2)	**(61.3)**	**(7.2)**	**(15.9)**	**(84.4)**	**12.3**	**(72.1)**
EBITDAs	**197.1**	**8.1**	**(14.2)**	**191.0**	**18.3**	**209.3**
Share of income in companies accounted for under the equity method	0.1	-	-	0.1	-	0.1
Earnings Before Interest and Tax (2)	**(61.2)**	**(7.2)**	**(15.9)**	**(84.3)**	**12.3**	**(72.0)**
Capital expenditures (excluding Multi-client surveys) (3)	23.5	11.5	1.6	36.6	-	36.6
Investments in Multi-client surveys, net cash	139.9	-	-	139.9	-	139.9
Capital employed (4)	**1.7**	**0.5**	**(0.1)**	**2.1**	**-**	**2.1**
Total identifiable assets (4)	**2.3**	**0.6**	**-**	**2.9**	**-**	**2.9**

(1) *Sale of equipment to the Contractual Data Acquisition segment which is classified as discontinued operation.*
(2) *"Eliminations and other" corresponded to general corporate expenses.*
(3) *Capital expenditures included capitalized development costs of US$(24.1) million for the six months ended June 30, 2020. "Eliminations and other" corresponded to the variance of suppliers of assets for the six months ended June 30, 2020.*
(4) *Capital employed and identifiable assets related to non-current assets held for sale and discontinued operations are included under the column "Eliminations and other".*

Amounts in millions of US$, except for assets and capital employed in billions of US$	Six months ended June 30, 2019 GGR	Equipment	Eliminations	Segment figures	IFRS 15 adjustments	Consolidated Total / As reported
Revenues from unaffiliated customers	400.5	222.2	–	622.7	(16.0)	606.7
Inter-segment revenues (1)	–	6.0	(6.0)	–	–	–
Operating revenues	**400.5**	**228.2**	**(6.0)**	**622.7**	**(16.0)**	**606.7**
Depreciation and amortization (excluding Multi-client surveys)	(49.1)	(15.7)	(0.3)	(65.1)	–	(65.1)
Depreciation and amortization of Multi-client surveys	(162.6)	–	–	(162.6)	23.4	(139.2)
Operating income (2)	**44.9**	**34.7**	**(15.9)**	**63.7**	**7.5**	**71.2**
EBITDAs	**254.0**	**50.5**	**(14.6)**	**289.9**	**(15.9)**	**274.0**
Share of income in companies accounted for under the equity method	0.1	–	–	0.1	–	0.1
Earnings Before Interest and Tax (2)	**44.9**	**34.7**	**(15.8)**	**63.8**	**7.5**	**71.3**
Capital expenditures (excluding Multi-client surveys) (3)	26.2	9.3	0.9	36.4	–	36.4
Investments in Multi-client surveys, net cash	95.8	–	–	95.8	–	95.8
Capital employed (4)	**2.0**	**0.6**	**(0.2)**	**2.4**	**–**	**2.4**
Total identifiable assets (4)	**2.2**	**0.7**	**0.7**	**3.6**		**3.6**

(1) *Sale of equipment to the Contractual Data Acquisition segment which is classified as discontinued operation.*
(2) *"Eliminations and other" corresponded to general corporate expenses.*
(3) *Capital expenditures included capitalized development costs of US$(16.4) million for the six months ended June 30, 2019. "Eliminations and other" corresponded to the variance of suppliers of assets for the six months ended June 30, 2019.*
(4) *Capital employed and identifiable assets related to non-current assets held for sale and discontinued operations are included under the column "Eliminations and other".*

The following table disaggregates our operating revenues by major sources for the period ended June 30, 2020:

	Six months ended June 30, 2020		
(In millions of US$)	GGR	Equipment	Consolidated Total
Multi clients prefunding	121.6		121.6
Multi clients after sales	62.4		62.4
Total Multi clients	**184.0**		**184.0**
Geoscience	**176.2**		**176.2**
Equipment, Land equipment		97.8	97.8
Equipment, Marine equipment		22.6	22.6
Equipment, Downhole Gauges		9.5	9.5
Equipment, Non-Oilfield related		2.9	2.9
Total equipment		**132.8**	**132.8**
Internal revenues		**(1.8)**	**(1.8)**
Total Group operating revenues as reported	**360.2**	**131.0**	**491.2**

NOTE 11 INCOME TAXES

As of June 30, 2020, the net deferred tax position amounted to US$(4.9) million compared to US$9.3 million at the end of December 2019.

This is mainly due to the US$8.9 million impairment of deferred tax assets in the United Kingdom due to downward revision of the outlook following the share drop in the oil price and the massive reduction in E&P spending.

NOTE 12 LONG TERM INCENTIVE PLANS

New stock option plans and performance shares allocation plan

On June 25, 2020, the Board of Directors allocated:

- 360,000 options to the Chief Executive Officer. Their exercise price is €1.10. The options vest in one batch, in June 2023. Such vesting is subject to performance condition related to the CGG share price. The options have an eight-year duration.
- 940,000 options to the Executive Leadership members. Their exercise price is €1.10. The options vest in one batch, in June 2023. Such vesting is subject to performance condition related to the CGG share price. The options have an eight-year duration.
- 968,512 options to certain employees. Their exercise price is €1.10. The options vest in two batches, in June 2022 (for 50% of the options allocated) and June 2023 (for 50% of the options allocated). The options have an eight-year duration.
- 220,000 performance shares to the Chief Executive Officer. The performance shares vest in one batch in June 2023.The end of the acquisition period for the batch of these performance shares is set at the latest of the two following dates: June 25, 2023 or the date of the general meeting of shareholders convened to approve the 2022 financial statements provided that the Board of Directors decides that the performance conditions set forth in the plan regulation have been fulfilled.
- 530,000 performance shares to the Executive Leadership members and 1,203,148 performance shares to certain employees. The performance shares vest in two batches, in June 2022 (for 50% of the shares allocated) and June 2023 (for 50% of the shares allocated). The end of the acquisition period for the first batch of these performance shares is set at the latest of the two following dates: June 25, 2022 or the date of the general meeting of shareholders convened to approve the 2021 financial statements provided that the Board of Directors decides that the performance conditions set forth in the plan regulation have been fulfilled. The end of the acquisition period for the second batch of these performance shares is set at the latest of the two following dates: June 25, 2023 or the date of the general meeting of shareholders convened to approve the 2022 financial statements provided that the Board of Directors decides that the performance conditions set forth in the plan regulation have been fulfilled.

The main assumptions related to the June 25, 2020 stock option plan are as follows:

- CGG share price as of June 25, 2020 : €1.04
- Volatility over 2 years: 62.97%
- Volatility over 3 years: 66.52%
- Risk-free rate: -0.59% (over 2 years) and -0.58% (over 3 years).

NOTE 13 RELATED PARTY TRANSACTIONS

The main events at the close of the first half of 2020 are the “Marine Closing” on January 8, 2020 (*Please refer to note* 2) and the full divestment from Seabed Geosolutions BV effective on April 1, 2020 with the transfer of the remaining shares to Fugro.

The following tables present the transactions with our joint-ventures and associates.

(In millions of US$)	Six months ended June 30, 2020 Joint Ventures	Associates	Total
Sales of geophysical equipment	—	2.8	2.8
Equipment rentals and services rendered	—	0.7	0.7
Operating Revenue	**—**	**3.5**	**3.5**
Charter expenses	—	—	**—**
Ship management expenses	—	—	**—**
Costs of services rendered	(1.6)	(0.3)	(1.9)
Cost of operations	**(1.6)**	**3.2**	**1.6**
Other financial income (loss)	**—**	**—**	**—**

(In millions of US$)	Six months ended June 30, 2020			December 31, 2019		
	Joint Ventures	Associates	Total	Joint Ventures [a]	Associates [b]	Total
Trade accounts and notes payable, including agency arrangements	3.2	1.7	4.9	9.4	30.3	39.7
Right-of-use assets	—	—	—	156.2	—	156.2
Receivables and assets	**3.2**	**1.7**	**4.9**	**165.6**	**30.3**	**195.9**
Trade accounts and notes payable, including agency arrangements	—	—		4.6	2.4	7.0
Provisions for onerous contracts	—	—		61.0	—	61.0
Lease liabilities	—	—		190.7	—	190.7
Payables and liabilities	**—**	**—**		**256.3**	**2.4**	**258.7**
Contractual Obligations	**—**	**—**	**—**	**—**	**—**	**—**

(a) Mainly correspond to investments in companies accounted for using the equity method in our Marine disposals groups and presented as held for sale (see note 5);
(b) Mainly correspond to investments in companies accounted for using the equity method in our Land disposals groups and presented as held for sale (see note 5).

No credit facility or loan was granted to the Company by shareholders during the last three years.

NOTE 14 OTHER REVENUES AND EXPENSES

As of June 30, 2020, the other revenues and expenses amounted to US$(120.3) million compared to US$(2.2) million at the end of June 2019.

They comprised US$(68.9) million impairment on our Multi-client data library (see note 5), US$(24.0) million goodwill impairment (*see note 6*), US$(16.1) million of fair value adjustment of our GeoSoftware business available for sale (*see note 3*) and US$(9.6) million cash costs relating to the Covid-19 plan (mostly severance costs).

NOTE 15 OTHER FINANCIAL INCOME

As of June 30, 2020, the other financial income and expenses amounted to a loss of US$30.0 million, compared to an income of US$0.5 million as of June 30, 2019, including US$37.0 million re-measurements of fair value of other financial assets and liabilities and an exchange gain of US$4.9 million. These re-measurements of fair value concerned the Eidesvik Put Option for an amount of US$11.0 million and the Shearwater Vendor Notes for an amount of US$25.9 million. *Please refer to note 4 and 7.*

NOTE 16 SUBSEQUENT EVENTS

None.

Group organization

Segment presentation and discontinued operations

The 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.

Until the last quarter of 2018, we 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. In November 2018, we announced the new strategy for our Group that included the transition to an asset-light model by reducing CGG's exposure to the Contractual Data Acquisition business. As a result of these strategic announcements and actions undertaken since then, our Contractual Data Acquisition segment and part of our Non-Operated Resources segment have been presented as discontinued operations in our income statement and as assets held for sale in our balance sheet in accordance with IFRS 5. The costs of implementation of our strategic plan described above, referred to as the "CGG 2021 Plan", are reported in discontinued operations in the related Contractual Data Acquisition business lines.

Our Geology, Geophysics & Reservoir ("GGR") and Equipment segments are reported in continuing operations.

Internal reporting and Segment presentation

Before the implementation of IFRS 15, the Group applied the percentage of completion method for recognizing Multi-client prefunding revenues. Following the implementation of IFRS 15, the Group recognizes Multi-client prefunding revenues only upon delivery of final processed data.

Although IFRS fairly presents the Group's statement of financial position, for internal reporting purposes CGG management continues to apply the pre-IFRS 15 revenue recognition principles, with Multi-client prefunding revenues recorded based on percentage of completion. CGG management believes this method aligns revenues closely with the activities and resources used to generate it and provides useful information as to the progress made on Multi-client surveys, while also allowing for useful comparison across time periods.

CGG therefore presents the Group's results of operations in two ways:

- the "Reported" or "IFRS" figures, prepared in accordance with IFRS, with Multi-client prefunding revenues recognized upon delivery of the final data; and
- the "Segment" figures, for purposes of internal management reporting, prepared in accordance with the Group's previous method for recognizing Multi-client prefunding revenues.

Other companies may present Segment and related measures differently than we do. Segment figures are not a measure of financial performance under IFRS and should not be considered as an alternative to operating revenues, operating income or any other measures of performance derived in accordance with IFRS as indicators of our operating performance.

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. In recent years, oil and gas companies have reduced their exploration and production spending due to falling or volatile oil prices, affecting demand for our products and services as reflected in our results.

In the first half of 2020, the Covid-19 pandemic has had a dramatic impact on economic growth and led to an unprecedented decline in the demand for oil and gas. On top of that, the radical increase in supply by Saudi Arabia and Russia to gain market share from early March 2020 due to the inability of OPEC and oil producing countries to reach a consensus on supply cuts, further exacerbated the crisis. As a result, over the period, the Brent oil price plummeted drastically from trading in the high US$60's per barrel during late 2019 down to US$50 on March 5, 2020, the date of approval of the 2019 accounts by the CGG Board of Directors, and US$25 on March 31, 2020 before starting climbing up and reach US$41 on June 30, 2020.

Our clients reacted sharply and announced severe cuts in exploration and production spending (E&P), and deferrals of projects, by about 30% year-on-year. Although crude-oil prices improved from the lows of the period, clients did not revise their targets of reduction. This context opens a new period of high uncertainty for the whole oil and gas industry. It is currently difficult to predict how long the economic contraction and the imbalance between supply and demand in the oil market will persist, as well as the timing and breadth of the recovery of clients' activity. We believe though that, in line with the consensus, such an unbalanced situation is very likely to normalize with the projected recovery in the energy consumption with oil and gas continuing to play a primary role in the energy mix. Consequently, the oil price is expected to gradually recover over the coming years and estimated to reach price level close to 2019 one at 2022/2023 horizon.

For 2020, we expect very challenging market conditions to remain and our results of operations and cash flows to be materially adversely affected. With revenues dropping by 40% in the second quarter of 2020 compared to last year, the Group implemented actions to align its cost structure and to preserve cash. This plan designated as "Covid-19 plan" is set to reduce cash outflows by approximately US$135 million of annualized savings, including around US$90 million of fixed costs.

The Group will continue to monitor cautiously the outlook.

For more information on Geophysical Market, please refer to note 2 "Significant Events" in our interim consolidated financial statements

Impairment and non-recurring and restructuring costs

To adjust to the volatile market environment, the Group may have to incur non-recurring or restructuring costs. The Group had in the past and may have in the future impairment losses or write-offs as events or changes in circumstances occur that reduce the fair value of an asset below its book value.

In continuing operations, in the context of drop in oil price and E&P spending cuts, the Group recorded the following non-recurring charges in the first half of 2020:

- US$10 million of costs relating to the implementation of first measures as part of Covid-19 plan, corresponding mainly to severance costs;
- US$ 16 million of impairment loss related to fair value re-measurement of our GeoSoftware business available for sale (*See note 3*);
- US$ 26 million of impairment loss related to fair value re-measurement of the Shearwater Vendor Notes (*See note 4*);
- US$ 69 million of impairment loss on Multi-client library mainly in frontier exploration areas due to the current oil price environment (*See note 5*);
- US$ 24 million of impairment loss relating to goodwill affected to our Geoconsulting CGU (*See note 6*);
- US$ 11 million of loss related to the fair value re-measurement of the put option (*See note 7*); and
- US$ 9 million of loss on deferred tax asset (*See note 11*).

In discontinued operations, the Group recorded the following charges in relation to CGG 2021 Plan:

- US$2 million various final adjustments coming from Marine Acquisition exit Transaction;
- US$11 million of wind-down costs linked to the exit from Contractual Data Acquisition;
- US$24 million of loss on fair value remeasurement and impairment of our disposal groups.

Accounting policies

This operating and financial review and prospects should be read in conjunction with our consolidated interim financial statements and the notes thereto.

For more information on these items, please refer to note 1.

Significant events, Acquisitions and Divestures

During the period under review, the most significant external event was the unprecedented crisis triggered by Covid-19 pandemic, which led to a large reduction in oil demand after shutdown of world economies and resulted in the collapse of oil price and massive cuts in E&P spending by our clients. The most significant changes to our perimeter were the Closing of Marine strategic partnership with Shearwater on January 8, 2020 and the divestment of Seabed Geosolutions JV completed on April 1, 2020.

For more information on these items, please refer to note 2.

Six months ended June 30, 2020 compared to six months ended June 30, 2019

Unless otherwise specified, comparisons made in this section are between the six months ended June 30, 2020 and the six months ended June 30, 2019. References to 2020 correspond to the six months ended June 30, 2020 and references to 2019 correspond to the six months ended June 30, 2019.

Operating revenues

The following table sets forth our operating revenues by division for each of the periods stated:

	Six months ended June 30,						Increase/(Decrease)	
	2020			2019			2020 vs. 2019	
(In millions of US dollars)	Segment Figures	IFRS 15 adjustment	As reported	Segment Figures	IFRS 15 adjustment	As reported	Segment Figures	As reported
Geoscience	176.2		176.2	184.3		184.3	-4%	-4%
Multi-client data	165.7	18.3	184.0	216.2	(16.0)	200.2	-23%	-8%
GGR Revenues	**341.9**	**18.3**	**360.2**	**400.5**	**(16.0)**	**384.5**	**-15%**	**-6%**
Equipment Revenues	**132.8**		**132.8**	**228.2**		**228.2**	**-42%**	**-42%**
Eliminated revenues and others	(1.8)		(1.8)	(6.0)		(6.0)	-70%	-70%
Total operating revenues	**472.9**	**18.3**	**491.2**	**622.7**	**(16.0)**	**606.7**	**-24%**	**-19%**

Our consolidated operating revenues as reported, following the application of IFRS 15, decreased 19% to US$491 million in 2020 from US$607 million in 2019.

Before IFRS 15 adjustments, our consolidated operating revenues decreased 24% to US$473 million in 2020 from US$623 million in 2019. The respective contributions from the Group's businesses to our segment operating revenues were 72 % from GGR and 28 % from Equipment.

GGR

Operating revenues as reported from our GGR segment decreased 6 % to US$360 million compared to 2019. Before IFRS 15 adjustments, GGR segment revenues decreased 15 % to US$342 million from US$401 million in 2019, with clients reprioritizing portfolios to factor in reductions in spending.

GEOSCIENCE

Operating revenues from our Geoscience business lines slightly decreased 4 % to US$176 million in 2020 compared to US$184 million in 2019, showing resilience. Imaging business revenues remained overall stable in the first half of 2020 leveraging on its pre-crisis backlog. From March 2020, Geoscience has continued to deliver quality work, on time with the latest technology, despite the majority of its employees working from home and thanks to the excellent support of our IT organization.

MULTI-CLIENT DATA

Multi-client data revenues as reported decreased 8 % to US$184 million in 2020 compared to US$200 million in 2019. Before IFRS 15 adjustments, Multi-client data segment revenues decreased 23 % at US$166 million.

Prefunding revenues as reported strongly increased 61% to US$122 million in 2020 from US$75 million in 2019. Excluding IFRS 15 adjustment, prefunding revenue of our Multi-client projects reached US$103 million, up 13% from US$91 million in 2019, mainly due to higher Multi-client capex, up to US$140 million from US$96 million in 2019, while cash-prefunding rate was at 74% from 95% in 2019.

After-sales revenues strongly decreased 50 % to US$62 million in 2020 from US125$ million in 2019 as anticipated.

Equipment

Total revenues for our Equipment segment (including internal and external sales) decreased 42 % to US$133 million in 2020 from US$228 million in 2019 in a low equipment market with some delays in deliveries due to lockdown measures.

Internal sales represented 1% of total revenues in 2020 compared to 3% in 2019. External revenues for our Equipment segment decreased 41 % to US$131 million in 2020 from US$222 million in 2019.

- Land equipment sales represented 74 % of total revenues in 2020, compared to 76 % in 2019, with significant deliveries in the second quarter of 2020 mainly in North Africa and Middle East, in reduction though compared to last year. Additionally, the first WiNG system was delivered during the period.
- Marine equipment sales represented 17% of total revenues in 2020 compared to 14% in 2019 in a still depressed marine equipment market with mostly spares for Sentinel sections.
- Downhole equipment sales reported US$10 million in 2020 compared to US$14 million in 2019.
- Non-Oil & Gas sales decreased to US$3 million in 2020 compared to US$9 million in 2019.

Operating expenses

The following table sets forth our operating expenses for each of the periods stated:

	Six months ended June 30,				Increase/(Decrease)	
	2020		2019		2020 vs. 2019	
(In millions of US$)	Segment Figures	As reported	Segment Figures	As Reported	Segment Figures	As reported
Operating revenues	472.9	491.2	622.7	606.7	-24%	-19%
Costs of Operations	(376.5)	(382.5)	(485.9)	(462.5)	-23%	-17%
% of operating revenues	*-80%*	*-78%*	*-78%*	*-76%*		
Gross Margin	**96.9**	**109.2**	**137.2**	**144.6**	**-29%**	**-24%**
% of operating revenues	*20%*	*22%*	*22%*	*24%*		
Research and Development	(7.5)	(7.5)	(12.3)	(12.3)	-39%	-39%
% of operating revenues	*-2%*	*-2%*	*-2%*	*-2%*		
Marketing and Selling	(17.2)	(17.2)	(21.7)	(21.7)	-21%	-21%
% of operating revenues	*-4%*	*-4%*	*-4%*	*-4%*		
General and Administrative	(36.3)	(36.3)	(37.3)	(37.2)	-3%	-2%
% of operating revenues	*-8%*	*-7%*	*-6%*	*-6%*		
Other incomes (expenses)	(120.3)	(120.3)	(2.2)	(2.2)		
Operating Income	**(84.4)**	**(72.1)**	**63.7**	**71.2**		

The amortization cost of our Multi-client library as reported corresponded to 64% of the Multi-client data revenues as reported in 2020 compared to 70% in 2019. Excluding IFRS 15 adjustments, the segment amortization cost of our Multi-client library decreased to 67% of the Multi-client data segment revenues in 2020 (excluding impairment loss) compared to 75% in 2019, mainly due to the survey mix and impact of impairment losses recorded in previous periods.

As a percentage of operating revenues as reported, cost of operations as reported increased to 78% in 2020 from 76% in 2019. Excluding IFRS 15 adjustments, segment cost of operations, as a percentage of the segment operating revenues, increased to 80% in 2020 from 78% in 2019.

The decrease of US$ 5 million in 2020 compared to 2019 in research and development was mainly due to the increase in development costs capitalization in our Equipment segment.

Marketing and Selling expenses and General and Administrative expenses decreased by 21% and 3% respectively in 2020 compared to 2019, mainly due to the impact of support costs reduction measures as part of our CGG 2021 Plan and the favorable exchange rate environment. Average exchange rate was set as US$1.10 per euro for the first half 2020 compared to US$1.13 per euro in 2019.

Other expenses of US$120 million in 2020 included:

- US$10 million of costs relating to the implementation of first measures as part of Covid-19 plan, corresponding mainly to severance costs,
- US$69 million of Multi-client library impairment loss triggered by the downward revision in sales forecasts mainly in frontier exploration areas (mostly Africa and Ireland) in the current depressed oil and gas market environment,
- US$24 million of impairment loss relating to goodwill of our Geoconsulting cash generating unit, part of Geoscience,
- US$16 million of loss on fair value remeasurment of our GeoSoftware disposal group, part of Geoscience.

Operating income

Operating income as reported amounted to a loss of US$72 million in 2020 as a result of the factors described above, compared to a gain of US$71 million in 2019. Excluding IFRS 15 adjustments, segment operating income amounted to a loss of US$84 million in 2020 compared to a gain of US$64 million in 2019.

Segment operating income from our GGR segment was a loss of US$61 million in 2020 compared to a gain of US$45 million in 2019, strongly impacted by the costs recorded as a consequence of the depressed oil market pursuant Covid-19 pandemic.

Segment operating income from our Equipment segment recorded a loss of US$7 million in 2020 compared to a gain of US$35 million in 2019, mainly impacted by the reduced demand worldwide and lockdown measures.

Financial income and expenses

Net cost of financial debt in 2020 was US$66 million stable compared to 2019.

Other financial income and expenses amounted to a loss of US$30 million in 2020, compared to an income of US$1 million in 2019, including US$37 million of loss on fair value re-measurement relating to other financial assets and liabilities linked to Marine Acquisition exit transaction.

Income taxes

Income taxes as reported amounted to an expense of US$38 million in 2020 compared to a US$6 million expense in 2019, including US$9 million of impairment loss of deferred tax asset triggered by the downward revision of perspectives following the sharp drop of oil price.

Net Income from continuing operations

Net income from continuing operations as reported was a loss of US$205 million in 2020 compared to a net income at breakeven in 2019 as a result of the factors discussed above.

Net Income from discontinued operations

Operating revenues for Contractual Data Acquisition decreased 86% to US$19 million in 2020 from US$135 million in 2019.

Net loss from discontinued operations amounted to US$40 million in 2020 compared to a loss of US$128 million in 2019.

Net income

Net income as reported was a loss of US$245 million in 2020 compared to a loss of US$128 million in 2019 as a result of the factors discussed above.

Liquidity and capital resources

Our principal financing needs are the funding of ongoing operations and capital expenditures, investments in our Multi-client data library, the funding of the measures relating to the “Covid-19 plan” and to the tails of the “CGG 2021 Plan” and of our debt services obligations. We do not have any major debt repayment scheduled before 2023, the maturity date of our first lien senior secured notes. We intend to fund our capital requirements through cash generated by operations and liquidity on hand. 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.

Cash flows from continuing operations

Operating activities

The following table presents a summary of the net cash as reported related to operating activities for each of the periods stated:

	Six months ended June 30,	
(In millions of US dollars)	2020	2019
Net cash before changes in working capital	**209.5**	**261.8**
Change in working capital	16.7	66.5
Net cash provided by operating activities	**226.2**	**328.3**

Before changes in working capital, net cash as reported provided by operating activities in 2020 was US$210 million compared to US$262 million in 2019. Changes in working capital had a positive impact on cash from operating activities of US$17 million in 2020, mostly due to the reduction in our receivables as a consequence of the collection of the high revenues of the last quarter of 2019 and the decrease in the activity in the first half 2020.

Net cash provided by operating activities was US$226 million in 2020 compared to US$328 million in 2019.

Investing activities

The following table presents the main items linked to investing activities for each of the periods stated:

	Six months ended June 30,	
(In millions of US dollars)	2020	2019
Net cash used in investing activities	**166.9**	**133.6**
Of which		
Industrial capital expenditures	*12.5*	*20.0*
Capitalized development costs	*24.1*	*16.4*
Multi-client Data	*139.9*	*95.8*

The net cash used in investing activities was US$167 million in 2020 compared to US$134 million in 2019, mainly driven by Multi-client data investments, increasing by US$44 million from a low point in 2019.

In 2020, we had four on-going Multi-client projects, including one onshore survey in the United-States (Central Basin Platform) and three offshore programs: two marine streamer surveys in Brazil and Australia (Nebula and Gippsland projects respectively) and one nodes survey in the UK North Sea.

As of June 30, 2020, the net book value of our Multi-client data library as reported was US$480 million compared to US$531 million as of December 31, 2019. Excluding IFRS 15 adjustments, the segment net book value of our Multi-client data library was US$340 million as of June 30, 2020, compared to US$376 million as of December 31, 2019.

Financing activities

Net cash used by financing activities was US$76 million during the six months ended June 30, 2020, compared to net cash used of US$73 million for the six months ended June 30, 2019 mainly related to lease repayments and financial expenses paid.

Net cash flows from discontinued operations

The following table presents a summary of the cash flow of the discontinued operations for each of the periods stated:

	Six months ended June 30,	
(In millions of US dollars)	2020	2019
Net cash flow incurred by discontinued operations	(41.1)	(114.7)

Net financial debt

Net financial debt as of June 30, 2020 was US$783 million compared to US$716 million as of December 31, 2019. The ratio of net financial debt to equity was 60% as of June 30, 2020 compared to 46% as of December 31, 2019.

“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 our statement of financial position at June 30, 2020 and December 31, 2019:

(In millions of US dollars)	June 30, 2020	December 31, 2019
Bank overdrafts	-	-
Current portion of financial debt	55.8	59.4
Financial debt	1,273.0	1,266.6
Gross financial debt	**1,328.8**	**1,326.0**
Less cash and cash equivalents	(545.7)	(610.5)
Net financial debt	**783.1**	**715.5**

EBIT and EBITDAS (unaudited)

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.

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

	Six months ended June 30, 2020		
(In millions of US dollars)	**Segment Figures**	**IFRS 15 adjustments**	**As reported**
EBITDAS	**191.0**	**18.3**	**209.3**
Depreciation and amortization	(100.8)	-	(100.8)
Multi-client surveys impairment and amortization	(180.4)	(6.0)	(186.4)
Depreciation and amortization capitalized to Multi-client surveys	8.4	-	8.4
Share-based compensation expenses	(2.6)	-	(2.6)
Operating income	**(84.4)**	**12.3**	**(72.1)**
Share of (income) loss in companies accounted for under equity method	0.1	-	0.1
EBIT	**(84.3)**	**12.3**	**(72.0)**
Cost of financial debt, net			(65.7)
Other financial income (loss)			(30.0)
Total income taxes			(37.6)
Net income from continuing operations			**(205.3)**

	Six months ended June 30, 2019		
(In millions of US dollars)	**Segment Figures**	**IFRS 15 adjustments**	**As reported**
EBITDAS	**289.9**	**(15.9)**	**274.0**
Depreciation and amortization	(65.1)	-	(65.1)
Multi-client surveys impairment and amortization	(162.6)	23.4	(139.2)
Depreciation and amortization capitalized to Multi-client surveys	4.0	-	4.0
Share-based compensation expenses	(2.5)	-	(2.5)
Operating income	**63.7**	**7.5**	**71.2**
Share of (income) loss in companies accounted for under equity method	0.1	-	0.1
EBIT	**63.8**	**7.5**	**71.3**
Cost of financial debt, net			(65.8)
Other financial income (loss)			0.5
Total income taxes			(5.6)
Net income from continuing operations			**0.4**

Net cash flow

"Net cash flow" is defined as "Net cash flow provided by operating activities" plus "Total net proceeds from disposals of assets", minus *(i)* "Total capital expenditures" and "Investments in Multi-client surveys, net cash" as set out in our consolidated statement of cash flows in the "Investing section", *(ii)* "Lease repayment" and "Financial expenses paid" as set out in our consolidated statement of cash flows in the "Financing section", and *(iii)* "Net cash flows incurred by Discontinued Operations".

Net cash flow 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 net cash flow differently than we do. Net cash flow is not a measure of financial performance under IFRS and should not be considered as an alternative to cash flow from operating activities or any other measures of performance derived in accordance with IFRS

Net cash flow amounted to outflows of US$60 million in 2020 compared to inflows of US$13 million in 2019. Net cash flow before net cash flow incurred by Discontinued Operations represented outflows of US$19 million in 2020, compared to inflows of US$127 million in 2019.

(In millions of US$)	Six months ended June 30, 2020	2019
Net cash flow provided by operating activities	226.2	328.3
Total capital expenditures (including variation of fixed assets suppliers, excluding Multi-client surveys)	(36.6)	(36.4)
Investments in Multi-client surveys, net cash	(139.9)	(95.8)
Total net Proceeds	(0.1)	-
Lease repayments	(28.8)	(28.7)
Financial expenses paid	(39.5)	(40.1)
Net cash flow before net cash flows incurred by Discontinued Operations	**(18.7)**	**127.3**
Net cash flows incurred by Discontinued Operations	(41.1)	(114.7)
Net cash flow	**(59.8)**	**12.6**

Contractual Obligations, commitments and contingencies

The following table sets forth our future cash obligations (not discounted) as of June 30, 2020:

	Payments due by period				
(In millions of US$)	Less than 1 year	2-3 years	4-5 years	After 5 years	Total
Long-term debt obligations:					
Financial debt (including cumulated PIK) [(a)]	0.3	614.1	738.0	4.2	1,356.6
Other long-term obligations (cash interests)	79.3	166.4	26.7	-	272.4
Total Long-term debt obligations	**79.6**	**780.5**	**764.7**	**4.2**	**1,629.0**
Lease obligations	53.4	59.0	27.0	12.9	152.3
Total Contractual Cash Obligations [(b)]	**133.0**	**839.5**	**791.7**	**17.1**	**1,781.3**

(a) *PIK : Payment In Kind interest*

(b) *Payments in other currencies are converted into U.S. dollar at June 30, 2020 exchange rates.*

Capacity Agreement

As described above in Note 2, on January 8, 2020, CGG and Shearwater entered in a Capacity Agreement at the Marine Closing Date, for which the main terms of the agreement are as follows:

- Work exclusively with Shearwater's global fleet of high-end 3D and source vessels for our Multi-client marine and nodes data acquisition projects up to 730 vessel days per year on average for the next five years:
  - » pay a pre-agreed day rate for the first 2.5 years and the higher of market rate or the pre-agreed day rate for the remaining 2.5 years;
  - » reimburse Shearwater for project-related operational costs and fuel; and
- Compensate Shearwater for days during which more than one of its high-end seismic vessels are idle for a maximum of three vessels (the "Idle Vessels Compensation"). The maximum Idle Vessel Compensation for a full year represents US$(22) million. As of June 30, 2020 the Idle Vessels remaining maximum commitment until the end of the five-year commitment period was US$(99) million.

Contingencies

As described above in Note 2, CGG has agreed to substitute itself for Shearwater CharterCo AS as charterer of GSS subsidiaries' five high-end seismic vessels (equipped with streamers) in the event of a payment default under the charter party between the GSS subsidiaries and Shearwater CharterCo AS. This payment default can only be triggered either by CGG non-payment under the Payment Instructions Agreement, or by Shearwater's insolvency.

The Step-In Agreements will not impact the financial statement of position unless a trigger, as described above in Note 2, occurs. In such circumstances, the obligations under the Capacity Agreement should be terminated and replaced by the obligations under the Step-In Agreements, representing a lower amount of commitment compared to the Capacity Agreement.

Others

Please refer to Note 7