

GENERAL GEOPHYSICS CO

Form 20-F

May 14, 2003

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Compagnie Générale de Géophysique
Annual Report 2002
Form 20-F

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SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 20-F

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

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

For the Fiscal Year Ended December 31, 2002

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

For the Transition Period from _____ to _____

Commission File Number _____

Compagnie Générale de Géophysique

(Exact name of registrant as specified in its charter)

General Company of Geophysics

(Translation of registrant's name into English)

Republic of France

(Jurisdiction of incorporation or organization)

1, rue Léon Migaux

91341 Massy

France

(33) 1 64 47 3000

(Address of principal executive offices)

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

Title of each class

Name of each exchange on which registered

**American Depositary Receipts representing
Ordinary Shares, nominal value 2 per share**

New York Stock Exchange

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

None

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(Title of class)

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

10 5/8% Senior Notes due 2007

(Title of class)

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

11,680,718 Ordinary Shares, nominal value 2 per share

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ x

No ☐ o

Indicate by check mark which financial statement item the registrant has elected to follow.

Item 17 ☐ o

Item 18 ☒ x

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PRESENTATION OF INFORMATION

In this annual report, references to United States or U.S. are to the United States of America, references to U.S. dollars, \$ or U.S.\$ are to United States dollars, references to France are to the Republic of France, and references to Euro or are to the single currency introduced at the start of the third stage of European Economic and Monetary Union pursuant to the Treaty Establishing the European Union.

We present our consolidated financial statements in euro. We presented our consolidated financial statements in French francs for periods through December 31, 2000; however, we have adopted the euro as our reporting currency for the periods after January 1, 2001. We have restated our 2000 annual consolidated financial statements in euro at the fixed exchange rate of 1.00 = FF 6.55957. Although these statements depict the same trends as would have been shown had they been presented in French francs, they may not be directly comparable to the financial statements of other companies originally reported in a currency other than the French franc and subsequently restated in euro. Prior to the adoption of the euro, the currencies of other countries fluctuated against the French franc, but because the euro did not exist prior to January 1, 1999, historical exchange rates for euro are not available. A comparison of our financial statements and those of another company that had historically used a reporting currency other than the French franc that takes into account actual fluctuations in exchange rates could be materially different from a comparison of our financial statements and those of another company as translated into euro.

As CGG is listed on the New-York Stock Exchange (American Depositary Shares), we have to file on Form 20F with the SEC our annual financial statements reconciled with the accounting principles generally accepted in the United States (U.S. GAAP).

For the year ended December 31, 2000 there were no material differences between French GAAP and U.S. GAAP. Beginning with the financial statements for fiscal year 2001, French GAAP differs in certain significant respects from U.S. GAAP.

The differences between French GAAP and U.S. GAAP as they relate to the Group, and the reconciliation of net income and shareholders equity to U.S. GAAP are described in note 27 to our consolidated financial statements.

Unless otherwise indicated, statements in this annual report relating to market share, ranking and data are derived from management estimates based, in part, on independent industry publications, reports by market research firms or other published independent sources. Any discrepancies in any table between totals and the sums of the amounts listed in such table are due to rounding.

As used in this annual report CGG , we , us and our means Compagnie Générale de Géophysique and its subsidiaries, except as otherwise indicated.

FORWARD-LOOKING STATEMENTS

This annual report includes forward-looking statements, including, without limitation, certain statements made in the sections entitled Business and Operating and Financial Review and Prospects. We have based these forward-looking statements on our current views and assumptions about future events.

These forward-looking statements are subject to risks, uncertainties and assumptions we have made, including, among other things:

changes in international economic and political conditions, and in particular in oil and gas prices;

our ability to reduce costs;

our ability to finance our operations on acceptable terms;

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

the effects of competition;

political, legal and other developments in foreign countries;

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the timing and extent of changes in exchange rates for non-U.S. currencies and interest rates;

the accuracy of our assessment of risks related to acquisitions, projects and contracts, and whether these risks materialize;

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

our ability to sell our seismic data library;

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

our success at managing the risks of the foregoing.

We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. In light of these risks, uncertainties and assumptions, the forward-looking events discussed in this annual report might not occur.

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2000 STOCK OPTION PLAN

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STATEMENT RE COMPUTATION OF RATIOS

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CERTIFICATION OF CHIEF FINANCIAL OFFICER

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PART I

Item 1: IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

Item 2: OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

Item 3: KEY INFORMATION

Selected Financial Data

The table below sets forth selected consolidated financial and operating data as of and for each of the five years in the period ended December 31, 2002, which should be read in conjunction with, and is qualified in its entirety by reference to, our consolidated financial statements and Operating and Financial Review and Prospects included elsewhere in this annual report. The selected financial data for each of the years in the five-year period ended December 31, 2002 have been derived from our audited consolidated financial statements prepared in accordance with French generally accepted accounting principles (**GAAP**), which differ in certain respects from U.S. GAAP.

As CGG is listed on the New-York Stock Exchange (American Depositary Shares), we have to file on Form 20F with the SEC our annual financial statements reconciled with the accounting principles generally accepted in the United States (**U.S. GAAP**).

For the year ended December 31, 2000 there were no material differences between French GAAP and U.S. GAAP. Beginning with the financial statements for fiscal year 2001, French GAAP differs in certain significant respects from U.S. GAAP.

The differences between French GAAP and U.S. GAAP as they relate to the Group, and the reconciliation of net income and shareholders equity to U.S. GAAP are described in note 27 to our consolidated financial statements.

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	As of and for the year ended December 31,				
	2002	2001	2000	1999	1998
	(in millions, except per share and Operating Data)				
Statement of Operations Data:					
<i>Amounts in accordance with French GAAP:</i>					
Operating revenues	700.7	802.9	695.3	506.7	623.0
Cost of operations	(531.4)	(641.7)	(579.9)	(460.9)	(492.1)
Gross profit	169.3	161.2	115.4	45.8	130.9
Research and development expenses, net	(27.1)	(35.3)	(26.9)	(24.6)	(27.2)
Selling, general and administrative expenses (<i>excluding goodwill amortization</i>)	(86.7)	(84.8)	(83.2)	(78.3)	(69.9)
Other revenues (expenses)	6.1	13.7	13.5	2.4	(38.5)
Operating income (loss)	61.6	54.8	18.8	(54.7)	(4.7)
Interest and other financial income and expense, net	(32.6)	(23.0)	(15.9)	(9.6)	(5.0)
Exchange gains (losses), net	7.9	(1.4)	(5.8)	(3.4)	(3.8)
Equity in income (losses) of investees	6.4	8.8	2.6	0.7	(0.6)
Income (loss) before income taxes and minority interest	43.3	39.2	(0.3)	(67.0)	(14.1)
Income taxes	(17.4)	(16.8)	(10.6)	(7.8)	(9.1)
Goodwill amortization	(6.3)	(6.5)	(4.7)	(1.4)	(9.2)
Minority interest	(2.2)	(0.2)	3.6	9.7	(4.6)
Net income (loss)	17.4	15.7	(12.0)	(66.5)	(37.0)
Per share amounts: Basic ⁽¹⁾	1.49	1.35	(1.28)	(12.51)	(7.30)
Diluted ⁽²⁾	1.49	1.35	(1.28)	(12.51)	(7.30)
<i>Amounts in accordance with U.S. GAAP:</i>					
Operating revenues	719.0	795.0	695.3	506.7	623.0
Operating income (loss)	81.9	48.6	14.1	(56.1)	(13.9)
Net income (loss)	15.1	9.3	(12.0)	(66.5)	(37.0)
Per share amounts: Basic ⁽¹⁾	1.29	0.80	(1.28)	(12.51)	(7.30)
Diluted ⁽²⁾	1.29	0.80	(1.28)	(12.51)	(7.30)
Balance Sheet Data:					
<i>Amounts in accordance with French GAAP:</i>					
Cash and cash equivalents	116.6	56.7	60.1	64.5	30.0
Working capital ⁽³⁾	170.9	191.8	180.3	86.8	71.1
Property, plant and equipment, net	265.0	280.7	140.7	160.6	144.0
Multi-client data library	127.1	91.9	77.5	55.2	23.8
Total assets	1,024.7	1,014.4	839.3	685.5	508.4
Total long-term debt ⁽⁴⁾	307.8	279.5	251.8	156.5	95.2
Shareholders' equity	437.5	462.8	320.7	269.5	166.9
<i>Amounts in accordance with U.S. GAAP:</i>					
Total assets	1,036.8	1,008.0	839.3	685.5	508.4
Total long-term debt ⁽⁵⁾	307.8	279.5	251.8	156.5	95.2
Shareholders' equity	431.0	456.4	320.7	269.5	166.9
Other Historical Financial Data and Ratios:					
<i>Amounts derived from French GAAP data:</i>					
EBITDA ⁽⁵⁾	208.1	189.5	146.7	33.9	112.2
Adjusted EBITDA ⁽⁶⁾	210.1	200.5	150.5	37.6	107.4
Adjusted EBITDA/ Net interest expense	7.4x	8.7x	9.5x	3.9x	21.5x
Capital expenditures	130.6	55.0	39.5	57.1	89.1
Investments in multi-client data library	130.1	78.8	92.5	56.8	33.8
Ratio of earnings to fixed charges ⁽⁷⁾	2.2x	2.0x			

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	As of and for the year ended December 31,				
	2002	2001	2000	1999	1998
	(in millions, except per share and Operating Data)				
<i>Amounts derived from U.S. GAAP data:</i>					
EBITDA ⁽⁵⁾	228.4	191.4	146.7	33.9	112.2
<i>Operating Data (at end of period):</i>					
Land crews in operation	14	12	20	16	24
Streamers in operation	42	48	30	27	18
Data processing centers in operation	26	26	25	22	19

- (1) Basic per share amounts have been calculated on the basis of 11,680,718 issued and outstanding shares in 2002, 11,609,393 issued and outstanding shares in 2001, 9,389,214 issued and outstanding shares in 2000, 5,314,905 issued and outstanding shares in 1999 and 5,069,948 issued and outstanding shares in 1998.
- (2) Diluted per share amounts have been calculated on the basis of 11,680,718 issued and outstanding shares in 2002, 11,609,393 issued and outstanding shares in 2001, 9,485,053 issued and outstanding shares in 2000, 5,330,652 issued and outstanding shares in 1999 and 5,226,115 issued and outstanding shares in 1998. In 2001, the effects of stock options were not dilutive (treasury stock method).
- (3) Consists of trade accounts and notes receivable, inventories and work-in-progress and other current assets less trade accounts and notes payable, accrued payroll costs, income tax payable, advance billings to customers and other current liabilities.
- (4) Total long-term debt means total long-term debt, including current maturities, capital leases and accrued interest.
- (5) EBITDA is defined as operating income (loss) excluding non-recurring revenues (expenses) plus depreciation and amortization. EBITDA 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 EBITDA differently than we do. EBITDA is not a measure of financial performance under French GAAP or U.S. GAAP 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 French GAAP or U.S. GAAP.
- (6) Adjusted EBITDA is defined as operating income (loss) excluding non-recurring revenues (expenses) plus depreciation, amortization and additions (deductions) to valuation allowances of assets and add-back of dividends received from equity companies.
- (7) The term earnings is the amount of pre-tax income from continuing operations before adjustment for minority interests in consolidated subsidiaries or income or loss from equity investees, plus fixed charges, plus amortization of capitalized interest, plus distributed income to equity investees, plus the share of pre-tax losses of equity investees for which charges arising from guarantees are included in fixed charges, less interest capitalized, less preference security dividend requirements of consolidated subsidiaries, less the minority interest in pre-tax income of subsidiaries that have not incurred fixed charges. The term fixed charges means the sum of the following: (a) interest expensed or capitalized, (b) amortized premiums, discounts and capitalized expenses related to indebtedness, (c) an estimate of the interest within rental expense, and (d) preference security dividend requirements of consolidated subsidiaries. The term preference security dividend is the amount of pre-tax earnings that is required to pay the dividends on outstanding preference securities, computed as the amount of the dividend divided by one minus the effective income tax rate applicable to continuing operations. The deficiency of earnings to fixed charges was 7.6 million for the year ended December 31, 2000, 69.1 million for the year ended December 31, 1999 and 22.7 million for the year ended December 31, 1998.

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Under the Treaty on European Union negotiated at Maastricht, The Netherlands, in 1991 (the Maastricht Treaty) and signed by the then 12 EU Member States in early 1992, the European Monetary Union (the EMU), with a single European currency under the monetary control of the European Central Bank, was introduced. On January 1, 1999, the last stage of the EMU came into effect with the adoption of fixed exchange rates between national currencies and the euro. On January 1, 2002, the euro became the official currency of the following 12 EU Member States: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal and Spain. As a result, national currencies (including the French franc) ceased to exist during the first quarter of 2002, after transition periods during which national currencies of such Member States and the euro co-existed.

The establishment of the EMU may have a significant effect on the economies of the participant countries. Whereas the introduction of the euro has eliminated exchange rate risks in respect of the currencies of those member states that have adopted the euro, there can be no assurance as to the relative strength of the euro against other currencies.

Exchange Rates

The following table sets forth, for the periods and dates indicated, certain information concerning the exchange rates for the French franc for the years 1997 and 1998, expressed in French francs per U.S. dollar, and for the euro since 1999, expressed in U.S. dollars per euro. Information concerning the U.S. dollar exchange rate is based on the noon buying rate in New York City for cable transfers in foreign currencies as certified for customs purposes by the Federal Reserve Bank of New York (the Noon Buying Rate). Such rates are provided solely for convenience and no representation is made that French francs or euro were, could have been, or could be, converted into U.S. dollars at these rates or at any other rate. Such rates were not used by us in the preparation of our audited consolidated financial statements included elsewhere in this annual report. The Noon Buying Rate on May 9, 2003 was U.S.\$1.15 per euro.

U.S. dollar translations included for convenience throughout this annual report for dates other than the last day of the periods presented above have been made at the Noon Buying Rates on such dates.

Year ended December 31,	French francs				Euro			
	Period-end	High	Low	Average ⁽¹⁾	Period-end	High	Low	Average ⁽¹⁾
1997	6.02	6.35	5.19	5.85				
1998	5.59	6.21	5.39	5.90				
1999					1.01	1.18	1.00	1.06
2000					0.94	1.03	0.83	0.92
2001					0.89	0.95	0.84	0.90
2002					1.05	1.05	0.86	0.95
Month								
October 2002					0.99	0.99	0.97	0.98
November 2002					0.99	1.01	0.99	1.00
December 2002					1.05	1.05	0.99	1.02
January 2003					1.07	1.08	1.04	1.06
February 2003					1.08	1.08	1.07	1.07
March 2003					1.09	1.11	1.05	1.08

(1) The average rate is the average of the Noon Buying Rates on the last day of each month in the period.

Capitalization and Indebtedness

Not applicable.

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Reasons for the Offer and Use of Proceeds

Not applicable.

Risk Factors

We depend on capital expenditures by the oil and gas industry and reductions in such expenditures have had, and may continue to have, a material adverse impact on our business.

Demand for our products and services has historically been dependent upon the level of capital expenditures by oil and gas companies for exploration, production and development activities. These expenditures are significantly influenced by oil and gas prices. Oil and gas prices may fluctuate based on relatively minor changes in the supply and demand for oil and gas and certain other factors beyond our control. Lower or volatile oil and gas prices tend to limit the demand for our services and products.

Factors affecting the prices of oil and gas include:

level of demand for oil and gas;

worldwide political, military and economic conditions, including the ability of the Organization of Petroleum Exporting Countries (OPEC) to set and maintain production levels and prices for oil;

level of oil and gas production;

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

global weather conditions.

The markets for oil and gas historically have been volatile and are likely to continue to be so in the future.

Historically, there has been an average lag of six months between recovery in the market for petroleum products and implementation by oil companies of projects requiring seismic services. The significant decline in crude oil prices that began in 1998 caused a substantial decline in demand for our products and services in 1998 and 1999 and materially adversely affected our results of operations for 1998 and 1999. While oil and gas prices have risen since mid-1999, we did not experience a significant increase in demand for our products and services until the fourth quarter of 2000. Since then, demand for seismic services has gradually increased, despite the economic slowdown and lower energy demand of late 2001. Furthermore, the events of September 11, 2001 have created significant uncertainty in the current outlook. In addition to the human toll that was exacted, the events of September 11, 2001 have exacerbated a recent weakening in the global economy that could potentially have an adverse effect on our industry. The dynamics of the global oil and gas market could be further unsettled as the political reaction to September 11, 2001 and, more recently, the military operations in Iraq may possibly affect the Middle Eastern producing region, an area in which we are particularly active. Any sustained decrease in worldwide oil and gas demand and prices could reduce exploration and development activities and negatively affect our operations. We cannot assure you as to future oil and gas prices or the resulting level of industry spending for exploration, production and development activities.

We have had operating losses in the past and we cannot assure you that we will be profitable in the future.

We recorded net losses each year from 1998 to 2000. In 2001 and 2002, we recorded a net income of approximately 16 million and 17 million respectively, marking a return to profitability. We have taken measures designed to respond to the circumstances existing in the industry underlying prior year losses; however, we cannot assure you that the implementation of these actions will be effective in maintaining profitability in future years.

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We are subject to intense competition, which could limit our ability to maintain or increase our market share and to maintain our prices at profitable levels.

Most of our contracts are obtained through a competitive bidding process, which is standard for the industry in which we operate. While no single company competes with us in all of our segments, we are subject to intense competition with respect to each of our segments. We compete with large, international companies as well as smaller, local companies. In addition, we compete with major service providers and government-sponsored enterprises and affiliates. Some of our competitors operate more data acquisition crews than we do and have substantially greater financial and other resources. These and other competitors may be better positioned to withstand and adjust more quickly to volatile market conditions, such as fluctuations in oil and gas prices and production levels, and changes in government regulations.

We rely on significant customers, so the loss of a single or a few customers could have a material adverse impact on our business.

A relatively small number of clients account for a significant percentage of our revenues. During 2000, our two largest clients accounted for 8.3% and 8.0%, respectively, of our operating revenues. During 2001, our three largest clients accounted for 7.7%, 7.5% and 5.2% of our operating revenues, respectively. During 2002, our two largest clients accounted for 7.6%, and 7.1% of our operating revenues, respectively. If we were to lose a substantial amount of the business of any of these clients, this could have a material adverse effect on our operating revenues.

Our land and marine seismic acquisition activities are seasonal in nature.

Our land and marine seismic acquisition activities are seasonal in nature. We generally experience decreased revenues in the first quarter of each year due to the effects of weather conditions in the Northern Hemisphere and to the fact that our principal clients are generally not prepared to fully commit their annual exploration budget to specific projects during that period.

We have historically experienced higher levels of activity in our equipment manufacturing operations in the fourth quarter as our clients seek to fully deploy annual budgeted capital.

Our debt agreements may limit our ability to respond to changes in market conditions or to pursue business opportunities.

As of December 31, 2002, we had 290 million of long-term debt outstanding and total shareholders' equity of 438 million. We may need to borrow additional amounts in the future to meet our anticipated working capital and capital expenditure needs. Our syndicated credit facility imposes operating and financial restrictions on our business. These provisions include limitations on our ratios of net debt to equity and net debt to EBITDA and require us to maintain minimum levels of net worth. In addition, certain of these provisions grant liens on our accounts receivable and those of our subsidiary, Sercel S.A. Our 10 5/8% senior notes also contain restrictive covenants, including restrictions on payments and investments, the incurrence of indebtedness, the creation of liens, the entry into sale and leaseback transactions, the issuance and sale of subsidiary stock and the payment of dividends and other payments by certain of our subsidiaries. Many of the restrictions contained in these covenants depend on our ability to meet certain ratios and tests with respect to consolidated interest coverage, total assets and net income. These provisions may negatively affect our ability to react to changes in market conditions, take advantage of business opportunities we believe to be desirable, obtain future financing, funds needed capital expenditures, significantly increase research and development expenditures, or withstand a continuing or future downturn in our business.

If we are unable to comply with the restrictions and covenants in our debt agreements, there could be a default under the terms of these agreements, which could result in an acceleration of payment of funds that we have borrowed.

If we are unable to comply with the restrictions and covenants in our current or future debt agreements, there would be a default under the terms of these agreements. Our ability to meet our financial ratios and tests may be

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

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

We invest significant amounts in acquiring and processing seismic data that we own. By making such investments, we assume the risk that:

we may not fully recover the costs of the data through future sales. The amounts of these data sales are uncertain and depend on a variety of factors. Many of these factors are beyond our control. In addition, the timing of these sales can vary greatly from period to period. Technological or regulatory changes or other developments could also adversely affect the value of the data;

the value of our multi-client data could be significantly adversely affected if any material adverse change occurred in the general prospects for oil and gas exploration, development and production activities in the areas where we acquire multi-client data; and

any reduction in the market value of such data will require us to write down its recorded value, which could have a significant adverse effect on our results of operations.

We have high levels of fixed costs that will be incurred regardless of our level of business activity.

Our business has high fixed costs, and downtime or low productivity due to reduced demand, weather interruptions, equipment failures or other causes can result in significant operating losses.

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

Technology changes rapidly, and new and enhanced products are frequently introduced in the market for our products and services, particularly in our equipment manufacturing and data processing and geoscience sectors. Our success depends to a significant extent upon our ability to develop and produce new and enhanced products and services on a cost-effective and timely basis in accordance with industry demands. While we commit substantial resources to research and development, we cannot assure you that we will not encounter resource constraints or technical or other difficulties that could delay our introduction of new and enhanced products and services in the future. In addition, our continuing development of new products inherently carries the risk of obsolescence with respect to our older products. We cannot assure you that new and enhanced products and services, if introduced, will gain market acceptance or will not be adversely affected by technological changes or product or service introductions.

We depend on attracting and retaining qualified employees to protect our business know-how.

Our results of operations depend in part upon our business know-how. We believe that protection of our know-how depends in large part on our ability to attract and retain highly skilled and qualified personnel. Any inability of ours in the future to hire, train and retain a sufficient number of qualified employees could impair our ability to manage and maintain our business and to protect our know-how.

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We depend on proprietary technology.

Our results of operations depend in part upon our proprietary technology. We rely on a combination of patents, trademarks and trade secret laws to establish and protect our proprietary technology. In addition, we enter into confidentiality and license agreements with our employees, customers and potential customers and limit access to and distribution of our technology. However, we cannot assure you that actions we take to protect our proprietary rights will be adequate to deter the misappropriation or independent third party development of our technology. Although we have not been involved in any material litigation regarding our intellectual property rights or the possible infringement of intellectual property rights of others, we cannot assure you that such litigation will not be brought in the future. In addition, the laws of certain foreign countries do not protect proprietary rights to the same extent as either the laws of France or the laws of the United States.

We are subject to risks related to our international operations that could harm our business and results of operations.

With operations worldwide, and with a majority of our revenues derived outside of the United States and Western Europe, including emerging markets, our business and results of operations are subject to various risks inherent in international operations. These risks include:

instability of foreign economies and governments;

risks of war, seizure, renegotiation or nullification of existing contracts; and

foreign exchange restrictions, laws and other policies affecting trade and investment.

While we carry insurance against political risks associated with such operations, in amounts we consider appropriate in accordance with industry practices, we cannot assure you that we will not be subject to material adverse developments with respect to our international operations.

The nature of our business is subject to significant ongoing operating risks for which we may not have adequate insurance or for which we may not be able to procure adequate insurance on economical terms, if at all.

Our seismic data acquisition activities, particularly in deepwater marine areas, are often conducted under harsh weather and other hazardous conditions and are subject to risks of loss from business interruption, delay or equipment destruction. We carry insurance against the destruction of or damage to our seismic equipment and against business interruption for our data processing activities in amounts we consider appropriate in accordance with industry practice. However, we cannot assure you that our insurance coverage will be adequate in all circumstances or against all hazards, or that we will be able to maintain adequate insurance coverage in the future at commercially reasonable rates or on acceptable terms.

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

Our operations can be significantly affected by fluctuations in exchange rates, particularly between the euro and the U.S. dollar. We incur a large portion of our operating expenses in currencies other than the currency in which corresponding net sales are generated. In particular, we incur substantial euro operating costs while a substantial majority of our net sales are U.S. dollar-denominated. Appreciation of the euro versus the U.S. dollar makes us less competitive, because our operating costs increase, while depreciation of the euro versus the U.S. dollar makes us more competitive. In addition, for financial reporting purposes, the appreciation of the euro against the U.S. dollar adversely affects our reported results of operations since U.S. dollar-denominated earnings that are converted to euro are stated at a reduced value. While we attempt to reduce the risks associated with such exchange rate fluctuations through our hedging policy, we cannot assure you that we will be effective or that fluctuations in the value of the currencies in which we operate will not materially affect our results in the future.

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Our working capital needs are difficult to forecast and may be subject to significant and rapid increases which could result in additional financing requirements that we may not be able to obtain at all or on satisfactory terms.

It is difficult for us to predict with certainty our working capital needs. This is due primarily to working capital requirements related to our marine seismic acquisition business and related to the development and introduction of new lines of geophysical equipment products. We may therefore be subject to significant and rapid increases in our working capital needs that we may have difficulty financing on satisfactory terms or at all due to limitations in our existing debt agreements.

Our substantial debt could adversely affect our financial health and prevent us from fulfilling our obligations.

We have a significant amount of debt. As of December 31, 2002, our total consolidated long-term debt, consolidated total assets and shareholders' equity were 290 million, 1.025 billion and 438 million, respectively. Although our ratio of earnings to fixed charges was 2.2 for the year ended December 31, 2002 and 2.0 for the year ended December 31, 2001, earnings before fixed charges were inadequate to cover fixed charges by approximately 8 million for the year ended December 31, 2000. We cannot assure you we will be able to generate earnings to cover fixed charges in future years.

Our substantial debt could have important consequences to you. For example, it could

increase our vulnerability to general adverse economic and industry conditions;

require us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures and other general corporate purposes;

limit our flexibility in planning for, or reacting to, changes in our businesses and the industries in which we operate;

place us at a competitive disadvantage compared to our competitors that have less debt; and

limit, along with the financial and other restrictive covenants of our indebtedness, among other things, our ability to borrow additional funds.

Failing to comply with restrictive covenants in our loan agreements or the indenture relating to our senior notes could result in an event of default that, if not cured or waived, could have a material adverse effect on us.

Despite current debt levels, we and our subsidiaries may still be able to incur substantially more debt.

We and our subsidiaries may be able to incur substantial additional debt (including secured debt) in the future. As of December 31, 2002, we had no outstanding borrowings under our syndicated credit facility and availability of 64,575,000 under all credit facilities. If new debt is added to our and our subsidiaries' current debt levels, the related risks that we, and they, now face could intensify.

Our results could be affected by changes in interest rates.

Our sources of liquidity include credit facilities with financial institutions charging variable interest rates over the course of draw-down periods of from one to twelve months. As a result, our interest expenses could increase if short term interest rates increase. However, our exposure to interest rate fluctuations is reduced to the extent that 70.5% of our financial debt at December 31, 2002 consisted of senior notes maturing in November 2007 and bearing a fixed interest rate. A large part of our sources of liquidity also consists of long term credit facilities and capital leases of various durations with fixed interest rates.

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Item 4: INFORMATION ON THE COMPANY

History and Development of the Company

We were established in 1931 to market geophysical techniques for appraising underground geological resources. Since that time we have gradually come to specialize in seismic techniques adapted to exploration for and production of oil and gas, while continuing to carry on other geophysical activities. Compagnie Générale de Géophysique is the parent company of the CGG group. We are a *société anonyme* incorporated under the laws of the Republic of France and operating under the French *Code de commerce*. Our registered office is 1, rue Léon Migaux, 91341 Massy, France. Our telephone number is (33) 1 64 47 3000.

Over the course of the last three years, we completed numerous acquisitions and dispositions which are described under Operating and Financial Review and Prospects Acquisitions and Dispositions in Item 5, and elsewhere in this annual report.

On February 8, 2002, we issued \$55 million aggregate principal amount of 10 5/8% Senior Notes due 2007 in the international capital markets, a re-opening of a U.S.\$170 million issuance of 10 5/8% Senior Notes due 2007 on November 22, 2000. We used the approximately U.S.\$52.5 million of net proceeds to repay approximately \$22 million of outstanding indebtedness under our existing syndicated credit facility and to repay approximately \$10 million in other long-term revolving debt. We used the balance for general corporate purposes.

For a description of our principal capital expenditures, please see Item 5.

Business Overview

We are a leading international provider of geophysical services and a leading manufacturer of geophysical equipment. We provide geophysical services principally to oil and gas companies that use seismic imaging to help explore for, develop and manage oil and gas reserves by:

- identifying new areas where subsurface conditions are favorable for the accumulation of oil and gas;

- determining the size and structure of previously identified oil and gas fields; and

- optimizing development and production of oil and gas reserves (reservoir management).

We sell our geophysical equipment primarily to other geophysical service companies.

Our operations are organized into two main segments: Services and Products. Services accounted for 72% and Products accounted for 28% of our consolidated revenues for the year ended December 31, 2002. We generate revenues on a worldwide basis. For the year ended December 31, 2002, 41% of our consolidated revenues were from the Americas, 26% from the Middle East and the Asia-Pacific region, 17% from Europe and CIS, and 16% from Africa.

Industry Conditions

Overall demand for geophysical services is dependent upon spending by oil and gas companies for exploration, production, development and field management activities. This spending depends in part on present and expected future oil and gas prices. Oil and gas prices increased significantly from mid-1999 through 2000, resulting in a modest increase in spending on geophysical services by our clients. In early 2001, economic conditions in Europe and the United States began to deteriorate, and oil and gas prices declined. The events of September 11, 2001 compounded the worsening economic climate. These conditions, in turn, resulted in a reduction in energy demand and downward pressure on energy prices, particularly gas in North America. Nevertheless, the seismic industry market continued its recovery, albeit at a slower rate. We believe that this resilience resulted in particular from the need by the oil and gas industry to replace reserves (which are currently being depleted at a rate estimated by industry analysts at 5 to 10% per year).

The worsening geopolitical climate which prevailed during the second half of 2002 caused a perception of potential oil and gas shortages in the overall economy, which in turn caused oil and gas prices to rise.

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Nevertheless, as a result of a growth in economic uncertainty, the increase in prices did not have a positive impact on our industry.

The oil and gas industry has increasingly relied on the use of 3D seismic data, which has fueled the growth in demand for geophysical services. The greater precision and improved subsurface resolution obtainable from 3D seismic data, combined with advanced processing techniques, have assisted oil and gas companies in finding new fields and more accurately delineating existing fields. These improved technologies have been key factors in improving drilling success ratios and lowering finding and field extension costs. Advanced 4D technology (using time as the fourth dimension) is also enhancing production monitoring methodologies and the management of existing oil and gas reservoirs by recording fluid movement in the reservoir. In addition, advances in technology have significantly reduced the size, weight, cost and power requirements of seismic data acquisition systems and increased the quality and quantity of data available to geoscientists. These improved technologies, coupled with advances in drilling and completion techniques, are significantly enhancing the ability of oil and gas companies to explore for, develop and manage oil and gas reserves cost-effectively.

Business Strategy

We intend to continue to strengthen our competitive position in the global geophysical services and products markets by capitalizing on growth opportunities resulting from both the application of new technologies in every sector of our business from exploration to production and reservoir management and from our diversified geographic presence.

To achieve our objective we have adopted the following strategies:

Focus on Growth Areas for Geophysical Services

We believe that the continued enhancement of our proprietary seismic data recording equipment and software will help us to remain among the leading providers of 3D land seismic surveys. We believe that our proprietary equipment and software provide us with a competitive advantage in specific growth markets, such as data acquisition in transition zones and difficult terrain, where recent technological advances have made seismic acquisition more feasible. We intend to focus on developing our technological capabilities in emerging markets for geophysical services, such as reservoir appraisal and production monitoring. We believe that, due to our extensive international experience, we also have a competitive advantage in certain geographic markets such as Europe, Africa, the Middle East and Latin America, where we have been operating longer than many of our competitors. We also believe that we have unique experience and expertise in complex land acquisition projects, a market that we expect may grow within the next several years.

To continue developing our marine acquisition services and to strengthen our position in this market segment, we significantly upgraded our fleet capacity with the launch in 1999 of the *CGG Alizé* and the acquisition in January 2001 of two marine seismic vessels from Aker. We improved our capacity with a technological upgrade of the *CGG Mistral*, completed in the first half of 2002, but in December 21, 2002, the *Mistral* sank, after an accidental fire broke out onboard. See Offshore SBU .

We intend to strengthen our position in the marine seismic market for non-exclusive data by further developing our non-exclusive data library. We believe that a strong position in this market segment is vital to enhance further our global competitive position, as it will assist us to adapt to current market demand and may provide opportunities for significant future sales. Our policy is to develop our non-exclusive data library, while carefully selecting survey opportunities in order to monitor our investment closely.

Given the growing importance of geophysics in reservoir characterization, we intend to further develop the synergies between our data processing and reservoir services. This approach places us in a better position to meet the requirements of our clients with an extensive range of integrated services. We also intend to increase our processing capability in developing disciplines, such as lithology prediction (identification of the rock layers covering and surrounding the oil trap), as well as applications relating to reservoir description and monitoring, including 3D pre-stack depth imaging, multi-component and 4D studies. We also plan to continue promoting and developing our dedicated processing center services within our clients' offices.

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Develop Technological Synergies for Products and Capitalize on New Generation Equipment

Sercel is the leading producer of land, marine and subsea geophysical equipment. We plan to continue developing synergies among the technologies available within Sercel and to capitalize fully on our position as a market leader. Through internal expenditures on research and development, we seek to improve existing products and maintain an active new product development program in all segments of the geophysical equipment market (land, marine and ocean-bottom).

Develop and Utilize Innovative Technology

We believe that growth in demand for geophysical services will continue to be driven by the development of new technologies. We expect multi-component (3C/4C) surveys and time-lapse (4D) surveys to become increasingly important for new production-related applications, particularly in the marine sector, and expect specialized recording equipment for difficult terrain to become more important in land seismic data acquisition. We believe that to remain competitive, geophysical services companies will need to combine advanced data acquisition technology with consistently improving processing capacity in order to reduce further delivery times for seismic services. Our strategy is to take advantage of our leading technology and our ability to integrate our full range of services to enhance our position as a market leader in:

land and transition zone seismic data acquisition applications;

innovative marine or subsea acquisition systems and services;

seismic data processing and reservoir services; and

manufacturing of land, marine and subsea data acquisition equipment.

In this respect, we intend to continue our high level of research and development investment to reinforce our technological leadership.

Emphasize Client Service

We believe it is important to operate in close proximity to our clients to develop a better understanding of their individual needs and to add measurable value to their business processes. We respond to these needs by creating new products or product enhancements that improve the quality of data and reduce the data delivery time to clients. We believe that our regional multi-client and dedicated data processing centers in our clients' offices provide us with an advantage in identifying contract opportunities, optimizing service to clients and developing products responsive to new market demands, such as seismic techniques applied to reservoir management. We believe that we are well positioned to benefit from the industry trend towards increased outsourcing that is leading oil and gas companies to place greater emphasis on relationships and service quality, including health, safety and protection of the environment, in their selection of geophysical services providers. We will continue to monitor our strategy towards service to clients through:

tailoring our data acquisition operations to meet specific client demands;

expanding regional multi-client and dedicated on-site processing centers;

recruiting and training customer-oriented service staff;

organizing client training seminars focused on our products and services;

developing easy access to our multi-client data library through the increasing application of e-business technologies;

developing corporate contracts with our main clients;

taking advantage of the possibilities created by the development of e-business technologies to reinforce our marketing efforts;

gaining access to new data acquisition markets, such as subsea and newly opening territories; and

reinforcing client satisfaction.

Table of Contents***Provide Integrated Services***

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

Industry Consolidation

We believe that consolidation in the seismic industry is the most promising avenue toward a recovery of margins and return on capital employed in the market that suffers from overcapacity and low pricing. In order to potentially play a leading role in this consolidation process, we acquired a 7.51% stake in Petroleum Geo Service ASA (PGS) in September 2002, which permits us to be involved in the restructuring process of PGS, without exposing our shareholders to that company's current level of indebtedness, beyond the 7.3 million initially invested. At December 31, 2002, we recorded this investment in our books for 3.2 million.

Operating Revenues Data***Revenues by Activity***

The following table sets forth our consolidated operating revenues by activity, and the percentage of total consolidated operating revenues represented thereby, during each of the periods stated:

	Year ended December 31,					
	2002		2001		2000	
	(in million, except percentages)					
Land SBU	184.6	26%	201.5	25%	196.7	28%
Offshore SBU	199.8	28%	201.7	25%	150.9	22%
Processing & Reservoir SBU	123.2	18%	108.3	14%	111.2	16%
Services	507.6	72%	511.5	64%	458.8	66%
Products	193.1	28%	291.4	36%	236.5	34%
Total	700.7	100%	802.9	100%	695.3	100%

Revenues by Region (by location of customers)

The following table sets forth our consolidated operating revenues by region, and the percentage of total consolidated operating revenues represented thereby, during each of the periods stated:

	Year ended December 31,					
	2002		2001		2000	
	(in million, except percentages)					
Americas	289.0	41%	293.7	37%	262.8	38%
Asia-Pacific/ Middle East	181.3	26%	215.0	27%	200.7	29%
Europe and CIS	116.5	17%	180.5	22%	105.1	15%
Africa	113.9	16%	113.7	14%	126.7	18%

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Total	<u>700.7</u>	<u>100%</u>	<u>802.9</u>	<u>100%</u>	<u>695.3</u>	<u>100%</u>
	■	■	■	■	■	■

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Services

Our services are organized into three SBUs for increased efficiency. We have established a network of country managers responsible for promoting our entire spectrum of products and services in our main markets, focusing on providing comprehensive solutions to client problems. We believe that our capacity to provide integrated geophysical services is a significant competitive advantage and will help us to implement all components of our strategy.

Land SBU

We are a leading land seismic contractor outside of North America. At December 31, 2002, we had 17 land crews performing specialized 3D and 2D seismic surveys, out of which 12 were recording data. Revenues from our Land SBU accounted for 25% and 26% of our revenues in 2001 and 2002, respectively.

Land Seismic Acquisition. Land seismic acquisition includes all seismic surveying techniques where the recording sensor is either in direct contact with, or in close proximity to, the ground. Our Land SBU offers integrated services, including the acquisition and processing of seismic data on land, in transition zones and on the ocean floor (seabed surveys). We believe that our expertise in harsh environments, environmentally sensitive areas and transition zones provides us with a competitive advantage in our principal markets: Europe, Africa, the Middle East, Asia and Latin America. These areas present higher barriers to entry and are less sensitive to pricing competition due to difficult working environments and the complexity of the projects. In Saudi Arabia, our land seismic acquisition activities are conducted through Arabian Geophysical & Surveying Co. (Argas), a joint venture owned 49% by us and 51% by Petromin, our local partner.

Description of Activity. Seismic surveying on land is carried out by installing geophones linked to digital recorders that are used to receive the signals from reflected acoustical waves. Vibroseismic vehicles are the preferred method of generating acoustical waves since the frequency of the waves they emit can be precisely modulated by a computerized system and is less susceptible to noise or error. In difficult terrain or transition zones, however, other methods of generating acoustical waves must be utilized, such as explosives or airguns. For the year 2002, approximately 46% of our land seismic studies used vibroseismic vehicles, 40% used explosives and 14% used airguns.

Seismic surveying in transition zones and seabeds is carried out by laying cables or other stationary measuring devices on the ocean floor. Ocean bottom cables allow seismic surveys to be conducted in areas not accessible to marine vessels, such as shallow water or the area around drilling platforms. Ocean bottom cables also provide high quality seismic data because they are in direct contact with the ocean floor.

Our land seismic crews are equipped with advanced proprietary equipment and software used in each stage of the land seismic acquisition process, including:

the Sercel 408UL (Sercel's latest generation equipment) seismic data recorders, which feature 24-bit digital recording technology;

Geoland quality control software, which is used to verify that the location of field data points during a survey corresponds to their theoretical position;

the Sercel VE 432 vibrator electronic control system, used to synchronize and verify the emission of acoustical waves by vibrators; and

GeovecteurPlus software, used for on-site processing and quality control of acquired data.

We believe that our proprietary equipment and software enable us to offer high quality, fully integrated land seismic services. We have pioneered real-time positioning of geophones and seismic sources, quality control of positioning during land surveys, and onsite processing, which together increase the accuracy and efficiency of such surveys.

One of the challenges inherent in land acquisition surveys is gathering data without disrupting the sensitive ecosystems in which such surveys are frequently located. We have developed a strong position in environmentally sensitive zones, such as mountainous regions, tropical forests and swamps, by following a strict policy of

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preserving the natural environment to the extent possible. We have designed shallow draft boats and ultra-light drilling equipment to facilitate operations in such sensitive zones. This equipment can be transferred safely and rapidly from one area to another. We also work in conjunction with the local community at site locations, hiring local employees and obtaining necessary local authorizations to alleviate potential opposition to our operations.

The difficulty of access to survey sites is a major factor in determining the number of personnel required to carry out a survey and the cost of a survey. Fully staffed land or transition zone areas range in size from 40 to 3,000 members (principally composed of local employees in the latter case), and the cost of a survey can range from several hundred thousand to several million dollars per month, depending on the size of the team and the type and difficulty of the study.

We work closely with our clients to plan surveys in accordance with their specifications. This provides us with a competitive advantage in being selected to carry out surveys, whether such surveys are awarded based on competitive bids or directly negotiated agreements with clients. We regularly conduct land acquisition surveys for over national and international oil companies.

Business Development. We continue to upgrade the equipment used by our land acquisition crews with state-of-the-art land recording systems. For the year ended December 31, 2002, activity remained strong in the 3D segment, which represented approximately 74% of our Land SBU operations. During that period, we completed complex transition zone and shallow water surveys in Nigeria, in the Arabian and Persian Gulfs and Indonesia.

Offshore SBU

We provide a full range of 3D marine seismic and borehole services, principally in the Gulf of Mexico, the North Sea and off the coasts of West Africa and Brazil as well as in the Asia-Pacific region, in the case of borehole services. The capacity to both acquire and process marine seismic data is an important element of our overall strategy to develop our leadership in marine seismic data acquisition and processing. Revenues from our Offshore SBU accounted for approximately 25% and 28% of our revenues in 2001 and 2002, respectively.

Marine Seismic Acquisition. We currently operate a fleet of five vessels, two of which we own, two of which we operate under renewable time charters with Louis Dreyfus Armateurs (LDA), one of the largest shipowners in France and one of which we operate under time charter indirectly in partnership with LDA. Time charters allow us to change vessels in order to keep pace with market developments and provide us with the security of continued access to vessels without the significant investment required for ownership. LDA also supplies crews for the three vessels not wholly owned by us (other than persons directly involved in seismic data acquisition). LDA has provided some of the additional capital necessary to modernize the vessels and has renegotiated the time charters for such vessels following their reconfiguration.

On December 21, 2000, we purchased from LDA its 40% interest in CGG Marine (one of our seismic operation companies), acquired 50% of the capital stock of the entity that directly owns the *CGG Mistral* and agreed to the subsequent upgrade of the *CGG Mistral* from six to ten streamers. On January 16, 2001, we acquired two marine seismic vessels and 1,000 square kilometers of seismic data from Aker.

From January through July 2002, the *CGG Mistral* was out of service as it went through a technological upgrade, including the increase from six to ten streamers capacity. After returning to service in July, however, the *Mistral* sank on December 21 after an accidental fire broke out onboard off the coast of Trinidad. All personnel on board were safely evacuated. The streamers on the *CGG Mistral*, which were deployed for operation at the time of the accident, were partially recovered and are under evaluation by our insurers for potential repair. We are aware of no impact on the environment and, taking into account amounts due to us under our insurance policies, the loss of the *CGG Mistral* did not have a material impact on our results of operations for 2002. We do not intend to replace this vessel.

Description of Activity. Marine seismic surveys are conducted through the deployment of submersible cables (streamers) and acoustic sources (airguns) from marine vessels. Such streamers are each up to ten kilometers long and carry hydrophone groups normally spaced 12.5 meters apart along the length of the streamer. The recording capacity of a vessel is dependent upon the number of streamers it tows and the number of acoustic

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sources it carries, as well as the configuration of its data recording system. By increasing the number of streamers and acoustic sources used, a marine seismic operator can perform large surveys more rapidly and efficiently.

As a result of the loss of the *CGG Mistral*, we now operate five marine seismic vessels. Each of our vessels is equipped with modern integrated equipment and software and has the capacity to conduct 3D surveys. Our vessels can deploy between six and ten streamers up to ten kilometers long and are equipped with on-board processing capability. Our on-board data processing employs our proprietary software.

Marine seismic acquisition requires advanced navigation equipment for positioning vessels, acoustic sources and streamers and specialized techniques for safe and rapid deployment and retrieval of acoustic sources and streamers. Each vessel operated by CGG Marine is fitted with a full complement of modern integrated equipment and software, including onboard computer equipment running our GeovecteurPlus software, used to process seismic data.

Multi-client Library Sales. Non-exclusive surveys accounted for approximately 66% of our marine seismic activities in 2002 as a result of two new multiclient programs we launched. The first covers in the Gulf of Mexico, the Garden Banks and the Mississippi Atwater Valley and totals 8,370 km² and the second, covering 7,618 km² of new data, is in Brazil. Both are highly pre-committed by clients.

Exclusive contract surveys generally provide for us to be paid a fixed fee per square kilometer of data acquired. When we acquire marine seismic data on an exclusive basis, the customer directs the scope and extent of the survey and retains ownership of the data obtained. In regions where there is extensive petroleum exploration, such as Brazil, the Gulf of Mexico, West Africa and the North Sea, we also undertake multi-client (or non-exclusive) surveys whereby we retain ownership of the seismic data. This enables us to license multiple companies to use the data. As a result, we have the potential to obtain multiple and higher revenues, while our customers who license the data have the opportunity to pay lower prices. Our policy is generally to require a minimum share of the estimated cost of each multi-client survey to be covered by pre-sales to clients prior to commencement. We treat these multi-client projects as investments. In determining whether to undertake multi-client surveys, we consider factors that include the availability of initial participants to underwrite a share of the costs to acquire such data, the location to be surveyed, the probability and timing of any future lease concessions and development activity in the area and the availability, quality and price of competing data.

Borehole Seismic. Our borehole services business records and processes seismic information in oil or gas wells that is used to map geological strata and to complement and enhance 2D and 3D seismic surveys. Over many years we have developed and brought to market new data acquisition and processing technology to record and process such data better, faster and at more levels within the well. In addition to this vertical seismic profiling service, we now offer highly sensitive downhole tools to record microseismic disturbances caused by hydrocarbon production or reservoir stimulation by hydrofracturing. This enables active faults and hydrofracturing progress to be mapped accurately in real time. Our clients include the major petroleum companies, both international and national, and the major logging contractors.

On December 27, 2002, we sold our borehole seismic activity business to Baker Atlas, a division of Baker Hughes for U.S.\$12 million cash and agreed to form a joint venture with Baker Atlas for the processing and interpretation of borehole seismic data in which we own a 49% stake. The joint-venture was incorporated in February 2003

Positioning. Effective December 24, 2001, we sold the three companies comprising our radio positioning business to Fugro for 7 million in cash. Until that time, we provided positioning services to companies mostly unrelated to the seismic industry. Our operational system was based on differential global positioning satellite technology, which is able to calculate the co-ordinates of any location on earth to within one meter. Following the sale to Fugro, we retained some internal radio positioning capacity for our own needs but do not have the capacity to offer stand-alone radio positioning services to third parties.

Business Development. We intend to maintain a technologically advanced fleet to enhance our position in the marine seismic data acquisition and processing market.

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We intend to continue to develop our offshore multi-clients program while carefully selecting survey opportunities in order to monitor our investment closely and to build a sound data library in promising exploration areas. We believe that a strong position in this market segment is vital to enhance further our global competitive position, as it will permit us to adapt to current market demand and will provide opportunities for significant future sales.

We intend to continue the development of advanced techniques, such as the use of solid streamers, plus on-board processing or data transmission from vessel to onshore processing centers or client facilities, to reduce data delivery time to clients.

Processing & Reservoir SBU

We provide seismic data processing and reservoir services through our network of 26 data processing centers (including the two dedicated 4D processing centers for which we were awarded contracts in 2001) and reservoir teams located around the world, and we have renewed our contracts to provide dedicated centers for two major oil and gas companies. Revenues from our Processing & Reservoir SBU accounted for approximately 14% and 18% of our revenues in 2001 and 2002, respectively.

Description of Activity. Our seismic data processing operations transform seismic data acquired in the field into 2D cross-sections or 3D images of the earth's subsurface, using Geocluster, our newly introduced proprietary seismic software. These images are then interpreted by geophysicists and geologists for use by oil and gas companies in evaluating prospective areas, selecting drilling sites and managing producing reservoirs. We process seismic data acquired by our own land and marine acquisition crews as well as seismic data acquired by non-affiliated third parties. Marine seismic data has been a significant source of the growth in demand for our data processing services, and represents over two-thirds of our operating revenues generated in our processing centers. In addition, we reprocess previously processed data using new techniques to improve the quality of seismic images.

Beyond conventional processing and reprocessing, we are also increasingly involved in reservoir-applied geophysics. Our Processing & Reservoir SBU offers reservoir-related services, an activity which encompasses large integrated reservoir studies from reprocessing to full reservoir simulation, as well as advanced technology studies such as reservoir characterization, stratigraphic inversion and stochastic reservoir modeling. In 2001 we were awarded contracts to operate dedicated 4D processing centers for BP and Shell.

While our reservoir teams mainly operate from Houston (covering South American projects), London and Massy (France), we also provide seismic data processing (conventional and reservoir-oriented) services through a large network of international and regional data processing centers located around the world. We operate six international processing centers located in Massy (France), London (U.K.), Oslo (Norway), Houston (U.S.), Kuala Lumpur (Malaysia) and Calgary (Canada). Five of these centers are linked by high-speed fiber optic connections and all of our centers have access to powerful high-performance computers. We complement our network of international centers with regional multi-client centers and dedicated centers which bring processing facilities within our clients' premises. Thirteen of our data processing centers are dedicated centers that are located in our clients' offices. We believe that these dedicated centers are responsive to the trend among oil and gas companies to outsource processing work while providing our clients with a high level of service. These centers enable our geoscientists to work directly with clients and tailor our services to meet individual clients' needs.

Each of the principal computers used at our centers is leased for a period of approximately two years, permitting us to upgrade to more advanced equipment at the time of renewal. In 2002, we had more than 10,000 PC clusters worldwide, a real-time computer capacity representing 15 teraflops as of January 1, 2003, five times more than at the start of 2002 and 30 times more than at the start of 2001. Our delivery time has decreased in recent years, enabling delivery of data to clients within the same timeframe as work performed directly onboard marine vessels. We believe that, with the combined capacity of our centers located in Massy and London, we have one of the largest computing capacities of any private facility in Europe.

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IT and Data Management. We compete in the data management market through sales of PetroVision, a software designed to manage and permit instant retrieval of large quantities of geological, geophysical, well and production data.

Processing Software Development and Sales. We sell Geocluster, our proprietary processing software, to the oil and gas industry as well as to scientific and university research centers. This software is currently available on most modern platforms in the market, including Linux platforms. Our other software products include:

Geovista, a set of software products used to produce accurate images of geological structures and showing depth;

Stratavista, advanced software used to determine specific rock properties from stratigraphic inversion of seismic data.

WaveVista, a new depth migration service based on wave equations

VectorVista, designed to provide greater understanding of seismic data acquired with multi-component techniques

ChronoVista, a set of software products used to produce accurate images of geological structures over time

Business Development. The Processing and Reservoir SBU currently operates 13 open centers and 13 dedicated centers within client offices. The deployment of new technologies developed by research and development teams and improved project management methods have increased efficiency crucial in the domain of time and depth migrations. The expertise in 4D that we acquired in the North Sea, in particular through our 4D dedicated centers in Aberdeen, has now been exported to the Gulf of Mexico, where this activity is growing.

Our expertise in fractured reservoirs has enabled us to develop in the Middle East. This has led to the award of first 4D land survey project and a reservoir study in Bahrain that supplements the acquisition and processing already completed by us in 1999. As a result, we opened a new regional data processing center in Abu Dhabi that became operational in 2001.

Our geographical presence was strengthened in Southeast Asia with the opening of the Kuala Lumpur hub, equipped with new computer facilities, which is becoming one of our three major regional hubs, after London and Houston, enabling us to increase our presence throughout the Asia-Pacific region.

Throughout 2001 and 2002, we have developed and promoted our high technology expertise, regional experience and flexibility with the ultimate goal of providing our clients with solutions that are innovative, adapted and more geared towards reservoir solutions.

We believe that our network of processing centers, the quality of our personnel, and our innovative technology provide us with a strong base to consolidate our presence in our markets and further expand our activities.

Products

We conduct our equipment development and production operations through our Sercel subsidiary. Sercel is the market leader in the development and production of seismic acquisition systems and specialized equipment in the land and offshore seismic markets. Sercel is operated as an independent division and makes most of its sales to purchasers other than CGG. Sercel currently operates six equipment manufacturing facilities, located in Nantes and Saint Gaudens (France), Houston (U.S.), Singapore, Alfreton (England) and Calgary (Canada). In China, Sercel is also a 40% partner in a manufacturing joint-venture with XPEIC (Xian Petroleum Equipment Industrial Corporation). Revenues from our Products segment accounted for approximately 36% and 28% of our consolidated operating revenues in 2001 and 2002, respectively.

Description of Activity. Sercel offers and supports worldwide a complete range of geophysical equipment for seismic data acquisition, including seismic recording equipment and vibroseismic vehicles, and provides its

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clients with integrated solutions. Sercel's principal product line is seismic recording equipment, particularly the 408UL 24-bit recording systems.

In November 1999, Sercel launched the latest generation seismic data recording system, the 408UL. The 408UL offers greater operating flexibility than any other previous generation system due to:

clusters of ultra-light acquisition modules allowing total flexibility of configuration, with the option of mixing different communication media (cable, radio, micro-wave, laser, fiber-optic) to form a true network allowing the user to define data routing and hence avoid obstacles in the field; and

an architecture fully supported by a new generation of object-oriented software.

Sercel significantly expanded its product range and increased its market share in the seismic equipment industry with the acquisitions of GeoScience Corporation in December 1999 and Mark Products in September 2000. As a result of these acquisitions, Sercel is a market leader in the development and production of both marine and land geophysical equipment. The 408UL is one of the industry's most advanced systems, and at the end of the year, the installed base reached more than 240,000 channels. Sercel, seeking to provide users with systems well-adapted to various environments, developed the 408UL system on the basis of an upgradeable architecture. In addition to recording systems, Sercel develops and produces a complete range of geophysical equipment for seismic data acquisition, including vibroseismic vehicles, streamers, ocean bottom cables, geophones, hydrophones, cables and connectors and other ancillary geophysical products. One important benefit of the GeoScience acquisition has been the introduction of 408UL system technology in Sercel's new streamer and seabed equipment product lines, based on concepts previously developed by GeoScience. Sercel has thus recently developed, among other products, an innovative solid streamer cable for marine seismic data acquisition that is designed to reduce downtime due to adverse weather conditions and thereby increase data acquisition productivity.

Backlog

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

Backlog estimates are based on a number of assumptions and estimates, including assumptions as to exchange rates between the euro and the U.S. dollar and estimates of the percentage of completion contracts. Contracts for services are occasionally modified by mutual consent and in certain instances are cancelable by the customers on short notice without penalty. Consequently, our backlog as of any particular date may not be indicative of our actual operating results for any succeeding period.

As of December 31, 2002, we estimate that our total backlog (Services and Products) was approximately 300 million, compared to total backlog of 287 million as of December 31, 2002.

Seasonality

Our land and marine seismic acquisition activities are seasonal in nature. We generally experience decreased revenues in the first quarter of each year due to the effects of weather conditions in the Northern Hemisphere and to the fact that our principal clients are generally not prepared to fully commit their annual exploration budget to specific projects during that period.

We have historically experienced higher levels of activity in our equipment manufacturing operations in the fourth quarter as our clients seek to fully deploy annual budgeted capital.

Intellectual Property

We continually seek the most effective and appropriate protection for our products, processes and software and, as a general rule, will file for patent, copyright or other statutory protection whenever possible. Our patents, trademarks, service marks, copyrights, licenses and technical information collectively represent a material asset to

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our business. However, no single patent trademark, copyright, license or piece of technical information is of material importance to our business when taken as a whole. As of December 31, 2002, we held 60 patents in respect of different products and processes worldwide. The duration of these patents varies from four to 20 years, depending upon the date filed and the duration of protection granted by each country.

Competition

Most contracts are obtained through a competitive bidding process, which is standard for the industry in which we operate. Important factors in awarding contracts include service quality, technological capacity, performance, reputation, experience of personnel, customer relations and long-standing relationships, as well as price. While no single company competes with us in all of our segments, we are subject to intense competition with respect to each of our segments. We compete with large, international companies as well as smaller, local companies. In addition, we compete with major service providers and government-sponsored enterprises and affiliates. Some of our competitors operate more data acquisition crews than we do and have substantially greater financial and other resources.

We believe that consolidation in the seismic industry is the most promising avenue toward a recovery of margins and return on capital employed in a market that suffers from overcapacity and low pricing. It is our intent, on a long-term basis, to work toward consolidation of the industry. In order to potentially play a leading role in this consolidation process, we acquired a 7.51% stake in PGS in September 2002, which permits us to be involved in the restructuring process of PGS, without exposing our shareholders to the current level of indebtedness of PGS, beyond the 7.3 million initially invested. At December 31, 2002, we recorded this investment in our books for 3.2 million.

Our principal competitor for the manufacture of seismic survey equipment is Input/ Output Inc. The market for seismic survey equipment is highly competitive and is characterized by continual and rapid technological change. We believe that technology is the principal basis for competition in this market as oil and gas companies have increasingly demanded new equipment for activities such as reservoir management and data acquisition in difficult terrain. Oil and gas companies have also become more demanding with regard to the quality of data acquired. Other competitive factors include price and customer support services.

Litigation

We are not, nor are any of our subsidiaries, involved in any litigation, arbitration or administrative proceedings relating to amounts which, individually or in the aggregate, are material and, to the best of our knowledge, there are no such litigation, arbitration or administrative proceedings pending or threatened.

Organizational Structure

We are the parent company of the CGG Group. Our principal subsidiaries are as follows:

Subsidiary	Jurisdiction of Organization	Head office	% of interest
Sercel SA	France	Carquefou, France	100.0
CGG Marine SAS	France	Massy, France	100.0
CGG Americas, Inc.	United States	Houston, Texas, United States	100.0
CGG Marine Resources Norge A/S	Norway	Hovik, Norway	100.0
Compañía Mexicana de Geofísica	Mexico	Mexico City, Mexico	100.0
CGG do Brazil	Brazil	Rio de Janeiro, Brazil	100.0
Exgeo CA	Venezuela	Caracas, Venezuela	100.0
Sercel Inc.	United States	Tulsa, Oklahoma, United States	100.0

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The following table sets forth certain information as of December 31, 2002 relating to our principal properties.

Location	Type of facilities	Size	Owned/ Leased	Lease Expiration Date
Paris, France	Executive offices for the Group	725 m ²	Leased	2009
Massy, France	Principal administrative offices for the Group	9,800 m ²	Leased	2005
Massy, France	Data processing center	12,200 m ²	Owned	N/A
London, England	Data processing center	24,975 m ²	Leased	2011
London, England	Administrative offices	2,074 m ²	Lease	2010
Houston, U.S.A.	Offices of CGG Americas, Inc.	6,905 m ²	Leased	2007
Houston, U.S.A.	Offices and manufacturing premises of Sercel	24,154 m ²	Leased/ Owned	2002 N/ A
Carquefou, France	Factory of Sercel. Activities include research and development relating to, and manufacture of, seismic data recording equipment	23,318 m ²	Owned	N/ A
Saint Gaudens, France	Factory of Sercel. Activities include research and development relating to, and manufacture of, geophysical cables, mechanical equipment and borehole seismic tools.	16,000 m ²	Owned	N/ A
Calgary, Canada	Manufacture of geophysical cables	55,000 m ²	Owned	N/ A
Alfreton, England	Manufacture of geophysical cables	5,665 m ²	Owned	N/ A
Singapore	Manufacture of geophysical cables	5,595 m ²	Owned	N/ A

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

The following table provides certain information concerning the five vessels operated by the Offshore SBU during 2002, excluding the CGG Mistral, which sank in December 2002 :

Vessel Name	Year Built	Year Added to Fleet	Year Reconfigured	Charter Expires	Number of Streamers	Vessel Length (in meters)
CGG Föhn	1985	1985	1997	2004	8(1)	84.5
CGG Harmattan	1993	1993	1996	2004	8(1)	96.5
CGG Alizé	1999	1999		2007	10	100.0
CGG Amadeus	1999	2001			8	87.0
CGG Symphony	1999	2001			10	120.7

(1) In high resolution mode.

Environmental Matters and Safety

Our operations are subject to a variety of laws and regulations relating to environmental protection. We invest financial and managerial resources to comply with such laws and regulations. Although such expenditures historically have not been material to us, and we believe that we are in compliance in all material respects with

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applicable environmental laws and regulations, the fact that such laws and regulations are changed frequently prevents us from predicting the cost of impact of such laws and regulations on our future operations. We are not involved in any legal proceedings concerning environmental matters and are not aware of any claims or potential liability concerning environmental matters that could have a material adverse impact on our business or consolidated financial condition.

Efforts to improve safety and environmental performance over the last few years continued as some procedures were strengthened and others implemented to increase awareness among personnel and subcontractors, including obligatory regular meetings in the field and onboard. A comprehensive Health, Safety and Environment management system, placing particular emphasis on risk management, has been established to cover all activities and is being continuously adapted for each segment.

Item 5: OPERATING AND FINANCIAL REVIEW AND PROSPECTS

Operating Results

The following operating and financial review and prospects should be read in connection with our consolidated financial statements and the notes thereto included elsewhere in this annual report, which have been prepared in accordance with French GAAP.

As CGG is listed on the New-York Stock Exchange (American Depositary Shares), we have to file on Form 20F with the SEC our annual financial statements reconciled with the accounting principles generally accepted in the United States (U.S. GAAP). For the year ended December 31, 2000 there were no material differences between French GAAP and U.S. GAAP. Beginning with the financial statements for fiscal year 2001, French GAAP differs in certain significant respects from U.S. GAAP. The differences between French GAAP and U.S. GAAP as they relate to the Group, and the reconciliation of net income and shareholders' equity to U.S. GAAP are described in note 27 to our consolidated financial statements.

Factors Affecting Results of Operations

We divide our businesses into two segments, geophysical services and geophysical products. We have organized our Services segment into three strategic business units, or SBUs, since 1999:

the Land SBU, for land and shallow water seismic acquisition activities;

the Offshore SBU, for marine seismic acquisition activities, multi-client library sales and borehole seismic services; and

the Processing & Reservoir SBU, for seismic data processing, data management and reservoir studies.

Our Products segment includes primarily our equipment manufacturing subsidiary Sercel.

During 2000 and 2001, our operational capability was enhanced by several strategic acquisitions, which broadened the market presence of both our Products segment and our Offshore (SBU).

During 2002, we did not acquire any further operations, but we acquired a 7.51% financial stake in Petroleum Geo Services ASA (PGS). PGS, a Norwegian corporation, has its headquarters in Oslo and is listed in Oslo and on the Nasdaq. PGS has two business segments, one relating to seismic data acquisition and processing, and the other covering floating production and storage operations (FPSO).

On July 4, 2002, we acquired a 30% stake in the share capital of CGG Asia-Pacific (formerly Teknosif Sdn Bhd) with a value of 405,000 Malaysian Ringgit (0.1 million). CGG Asia-Pacific is engaged in data processing activities and is incorporated in Malaysia. This transaction did not generate any material goodwill.

In August 2002, we disposed of our shareholding in Paradigm Geophysical Ltd. (PGEO) and sold to Baker Hughes Inc. (Baker Hughes) in December 2002 our borehole seismic data acquisition business as described below in Acquisitions and Dispositions .

Also, in December 2002, our seismic vessel the *CGG Mistral* sank after fire broke out accidentally off the coast of Trinidad. All personnel on board were safely evacuated. The streamers on the *CGG Mistral*, which were

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deployed for operation at the time the fire broke out, were partially recovered. We are aware that the fire did not have any material impact on the environment. Further, taking into account amounts due to us under our insurance policies, the loss of the *CGG Mistral* did not have a material impact on our results of operations for 2002. We do not expect any material impact on earnings for 2003.

During 2000 and 2001, our shareholders' equity increased by an aggregate of \$191 million, and it decreased by an aggregate of \$25 million in 2002. We issued U.S.\$170 million (\$191 million) of seven-year senior notes at the end of 2000, and an additional U.S.\$55 million (\$62 million) of such senior notes in February 2002.

Overall demand for geophysical services is dependent upon spending by oil and gas companies for exploration, production, development and field management activities. This spending depends in part on present and expected future oil and gas prices. Oil and gas prices increased significantly from mid-1999 through 2000, resulting in a modest increase in spending on geophysical services by our clients. In early 2001, economic conditions in Europe and the United States began to deteriorate, and oil and gas prices declined. The events of September 11, 2001 compounded the worsening economic climate. These conditions, in turn, resulted in a reduction in energy demand and downward pressure on energy prices, particularly gas prices in North America. Energy prices in 2002 fluctuated at a more favorable level in the second half of the year and continued to move at high levels during the first quarter of 2003 in an environment of uncertainty stemming from the Iraq crisis. We believe that beyond the current short-term outlook, the need by the major oil and gas operators to replace reserves (which are currently being depleted at a rate estimated by industry analysts at 5% to 10% per year) will be a factor tending to support energy prices and increase demand for our services.

Our revenues for 2002 decreased 13% compared with revenues for 2001. Expressed in U.S. dollars, the decrease amounted to 8%. The decrease resulted primarily from a slowdown in our Products segment, which experienced a decrease in revenues (excluding intra-group sales) of 34% for 2002 compared to 2001, as a result of a weaker equipment market globally. Expressed in U.S. dollars, the decrease amounted to 30%. Revenues for 2002 for our Land SBU decreased 8% compared to 2001. Revenues from our Offshore SBU were stable despite the sale of our radio positioning business in December 2001 and the upgrading of the *CGG Mistral*, which put it out of service from January through July 2002. Revenues from our Processing & Reservoir SBU increased 14% for 2002 compared to 2001. Our backlog as of December 31, 2002 was \$270 million (U.S.\$283 million), compared to \$300 million (U.S.\$264 million) as of December 31, 2001, representing a 7% increase in U.S. dollar terms. This was attributable primarily to our Services segment.

Our results of operations have also been affected by higher proportion of non-exclusive surveys in 2002 when compared to 2001 because non-exclusive surveys have larger initial financing requirements. In 2001, our marine seismic activities were fairly balanced between exclusive and non-exclusive surveys, with non-exclusive surveys accounting for approximately 43% of our marine seismic activities in 2001. For the year ended December 31, 2002, non-exclusive surveys accounted for approximately 66% of our marine seismic activities due to an important survey conducted in Brazil during the year 2002 that was highly pre-committed.

Acquisitions and Dispositions

On December 27 2002, we sold our borehole seismic activity business to Baker Atlas, a division of Baker Hughes for U.S.\$12 million cash and agreed to form a joint venture with Baker Hughes for the processing and interpretation of borehole seismic data. The joint venture, in which we own a 49% stake, was incorporated in February 2003 and is currently operational.

In September 2002, we acquired 7,757,400 shares of PGS for approximately \$7.3 million, representing a 7.51% stake in that company.

We believe that consolidation in the seismic industry is the most promising avenue towards a recovery of margins and return on capital employed in a market that suffers from overcapacity and low pricing. It is our intent, on a long-term basis, to work toward consolidation of the industry. We acquired the PGS stake with the objective of playing a leading role in this consolidation process without exposing our shareholders to the current level of indebtedness of PGS beyond the \$7.3 million initially invested. As of December 31, 2002, this investment was recorded in our books for \$3.2 million.

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On May 21, 2002, Talamantes B.V., a Dutch company and PGEO entered into a merger agreement providing for the merger of PGEO into Talamantes or one of its subsidiaries. Pursuant to the merger agreement, all PGEO outstanding ordinary shares were to be converted into the right to receive \$5.15 in cash each, without interest. In consideration of the execution of the merger agreement by PGEO, we entered into a voting agreement, dated as of May 21, 2002, with Talamantes by which we agreed to vote in favor of the merger. The merger was completed on August 13, 2002 and our PGEO shares were converted into the right to receive the merger consideration upon surrender of the shares. We received U.S.\$7.7 million in merger consideration in September 2002.

Effective December 24, 2001, we sold the three companies comprising our radio positioning business to Fugro N.V., a Dutch corporation, for 7 million in cash.

On January 16, 2001, we acquired two marine seismic vessels and certain seismic data from an affiliate of Aker. As consideration for this acquisition, we paid U.S.\$25 million in cash, which we funded using a portion of the proceeds of our offering of senior notes in November 2000, and we issued 1,591,407 shares of our common stock at a value of approximately 69.27 per share, representing approximately 110 million, to Aker.

Critical Accounting Policies

Our significant accounting policies, which we have applied consistently in all material respects, are more fully described in Note 1 to our consolidated annual financial statements contained in this annual report. However, certain of our accounting policies are particularly important to the portrayal of our financial position and results of operations. As we must exercise significant judgment when we apply these policies, their application is subject to an inherent degree of uncertainty. We believe the following critical accounting policies require our more significant judgments and affect estimates used in the preparation of our consolidated financial statements.

Multi-client survey accounting

Multi-client surveys consist of seismic surveys to be licensed to customers on a non-exclusive basis. All costs directly incurred in acquiring, processing and otherwise completing seismic surveys are capitalized into the multi-client library. The multi-client library is stated at this cost less accumulated amortization or fair value if lower. We review the library for potential impairment for each survey on an ongoing basis.

Revenue recognition

Revenues related to multi-client surveys result from pre-commitments and licenses after completion of the surveys (after-sales).

Pre-commitments Generally we obtain commitments from a limited number of customers before a seismic project is completed. These commitments cover part or all of the survey area blocks. In return for the commitment, the customer typically gains the ability to direct or influence the project specifications, advance access to data as it is being acquired, and favorable pricing.

We recognize pre-commitments as revenue based on the ratio of project cost incurred to total estimated project cost, which we believe reflects the physical progress of the project.

After sales Generally we grant a license entitling non-exclusive access to a complete and ready for use, specifically defined portion of our multi-client data library in exchange for a fixed and determinable payment. We recognize after sales revenue upon the client executing a valid license agreement and having been granted access to the data. Within thirty days of execution and access, the client may exercise our warranty that all the data conforms to technical specifications.

After sales volume agreements We enter into a customer arrangement in which we agree to grant licenses to the customer for access to a specified number of blocks of the multi-client library. These arrangements typically enable the customer to select and access the specific blocks for a limited period of time. We recognize revenue when the blocks are selected and the client has been granted access to the data.

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Amortization

We amortize the multi-client surveys according to three different sets of parameters depending on the area or type of surveys considered:

Gulf of Mexico surveys: amortized on the basis of 66.6% of revenues. Starting at time of data delivery, a minimum straight-line depreciation scheme is applied on a three years period, should total accumulated depreciation from sales be below this minimum level,

Rest of the world surveys: same as above except depreciation is 83.3% of revenues and straight-line depreciation is a five year period from data delivery,

Long term strategic 2D surveys: amortization on sales according to the above area split and straight-line depreciation on a seven years period from data delivery.

Exclusive survey accounting (Proprietary/Contract services)

We perform seismic services for a specific customer. We recognize proprietary/contract revenue as the services are rendered. We evaluate the progress to date, in a manner generally consistent with the physical progress of the project, and recognize revenue based on the ratio of the project's cost to date to the total project cost.

Other geophysical services

Revenue from our other geophysical services is recognized as the services are performed.

Goodwill amortization and impairment of long-lived assets

We amortize goodwill on a straight-line basis over future periods of benefit, as estimated by management, which may range from five to twenty years. We select the period of benefit based on the strategic significance of the asset acquired.

We assess the impairment of identifiable intangibles, long-lived assets and goodwill whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important that could trigger an impairment review include the following:

significant underperformance relative to expected operating results based upon historical and/or projected data;

significant changes in the manner of our use of the acquired assets or the strategy for our overall business; and

significant negative industry or economic trends.

When we determine that the carrying value of intangibles, long-lived assets and goodwill may not be recoverable based upon the existence of one or more of the above indicators of impairment, we compare that the carrying value of each group of autonomous assets (independent operating units or subsidiaries) with the undiscounted cash flows that they are expected to generate based upon our expectations of future economic and operating conditions. Should this comparison indicate that an asset is impaired, the write-down recognized is equivalent to the difference between carrying value and either value or the sum of discounted future cash flows.

Year ended December 31, 2002 compared to year ended December 31, 2001

Operating Revenues

Our consolidated operating revenues for 2002 decreased 13% to 700.7 million from 802.9 million for 2001. Because approximately 85% of our operating revenues during 2002 and 2001 were in U.S. dollars, the decrease in the value of the U.S. dollar that occurred during the second half of 2002 had a negative impact on our operating revenues as expressed in euros in our financial statements. Expressed in U.S. dollars, our consolidated operating revenues decreased 8% to U.S.\$665.1 million from U.S.\$719.5 million in 2001. This decrease was

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primarily attributable to decreases in operating revenues in our Products segment and, to a lesser extent, our Land SBU.

Services

Operating revenues for our Services segment (excluding internal sales) for 2002 were fairly stable at 507.6 million from 511.5 million for 2001. Expressed in U.S. dollars, operating revenues increased 5% to U.S.\$482.9 million for 2002 from U.S.\$458.6 million for 2001 due to continued growth in Offshore SBU multi-client library sales and strong operating performance of our Processing & Reservoir SBU.

Land SBU. Operating revenues for our Land SBU for 2002 decreased 8% to 184.6 million compared to 201.5 million for 2001. In U.S. dollars, operating revenues decreased 2% to U.S.\$176.1 million for 2002 from U.S.\$180.5 million for 2001. This slight decrease was a consequence of our low backlog in the fourth quarter of 2001, which mainly affected operating revenues for the first quarter of 2002. On average, 15 crews were in operation in 2002 compared to 14 in 2001.

Offshore SBU. Operating revenues for our Offshore SBU for 2002 were essentially stable at 199.8 million compared to 201.7 million for 2001. In U.S. dollars, operating revenues increased 5% to U.S.\$190.1 million from for 2002 U.S.\$181.1 million for 2001. Despite the temporary unavailability of the *CGG Mistral* from January through July 2002 and the sale of our radio positioning business, operating revenues were essentially stable due to better operating performance of our vessels and improved pricing for certain exclusive surveys.

Multi-client data sales increased 35% to 134 million for 2002 from 99 million for 2001 essentially due to high level of pre-commitment sales. Exclusive contracts accounted for 34% of our Offshore SBU sales in 2002 compared to 57% in 2001. The net book value of our marine multi-client data library was 125.8 million as of December 31, 2002 compared to 91.3 million as of December 31, 2001.

Processing & Reservoir SBU. Operating revenues for our Processing & Reservoir SBU for 2002 increased 14% to 123.2 million compared to 108.3 million for 2001. In U.S. dollars, operating revenues increased 20% to U.S.\$116.7 million for 2002 from U.S.\$97 million for 2001 due to the increased market penetration of our high end products.

Products

Operating revenues for our Products segment for 2002 decreased 18% to 262.4 million from 321.2 million for 2001. Expressed in U.S. dollars, operating revenues decreased 14% to U.S.\$247.4 million for 2002 from U.S.\$287.6 million for 2001. Excluding intra-group sales, operating revenues decreased 34% to 193.1 million for 2002 compared to 291.4 million for 2001. Sales of land products experienced softer demand than in the prior year, which had benefited from exceptionally strong market conditions in 2001. Marine product sales, however, doubled, which was attributable to the sales of four Seal systems.

Operating Expenses

Cost of operations, including depreciation and amortization, decreased 17% to 531.4 million for 2002 from 641.7 million for 2001. As a percentage of operating revenues, cost of operations decreased to 76% for 2002 compared to 80% for 2001, largely due to more efficient operations, principally in the Processing & Reservoir and Offshore SBUs. Gross profit increased to 169.3 million for 2002 compared to 161.2 million for 2001.

Research and development expenditures, net of government grants, decreased 23% to 27.1 million for 2002 from 35.3 million for 2001 due primarily to the costs of developing and testing prototype marine products in 2001.

Selling, general and administrative expenses increased 2% to 86.7 million for 2002 from 84.8 million for 2001, due primarily to the payment of certain corporate consulting fees, especially in connection with our acquisition of PGS shares. As a percentage of operating revenues, selling, general and administrative costs increased to 12% in 2002 compared to 11% in 2001.

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Other revenues decreased 55% to 6.1 million for 2002 from 13.7 million for 2001. Other revenues for 2002 consisted essentially of non-recurring gains of 8 million related to the sale of our Borehole seismic activity business and a non-recurring loss of 2 million due to the sale of our Paradigm stock. Other revenues for 2002 also included an asset write-down of 62 million related to the shipboard fire that caused our seismic vessel the *CGG Mistral* to sink, which included the value of the vessel and the equipment on board. This write down was offset by the insurance indemnities recorded in the same amount, of which we received U.S.\$42 million in early 2003. Other revenues for 2001 included primarily revenues of 8 million related to the sales of our interest in one of our Gulf of Mexico multi-client surveys and non-recurring gains of 5 million. Such 5 million gain came mostly from the sale of our radio positioning business and net restructuring credits that were offset by anticipated Land SBU contract losses in Argentina.

Operating Income (Loss)

We had an operating income for 2002 of 61.6 million compared to an operating income of 54.8 million for 2001.

Operating income from our Services segment was 27.4 million for 2002 compared to 0.5 million for 2001. This significant increase resulted primarily from the improvement of the profitability in our Offshore and Processing & Reservoir SBUs.

Operating income from our Products segment was 51.2 million for 2002 compared to 71.2 million for 2001. The decrease was due primarily to the weakening U.S. dollar and decreased demand for land products, which generally carry a higher profit margin than marine products.

Financial Income and Expenses, Net

Net interest and financial expenses increased 42% for 2002 to 32.6 million from 23.0 million for 2001. The increase resulted primarily from the issuance in February 2002 of an additional U.S.\$55 million 10 5/8% Senior Notes due 2007, which increased our cost of debt, and from an allowance of 4.1 million resulting from the fall in value of PGS stock.

Net debt was 201.7 million as of December 31, 2002 compared to 229.0 million as of December 31, 2001. This decrease was principally the result of a weaker dollar at the end of 2002 than at the end of 2001, since most of our debt is denominated in dollars. Gross financial expenses (excluding PGS allowance) were 32 million for 2002 compared to 27 million for 2001 primarily as a result of the issuance of senior notes. Financial income was 3 million for 2002 compared to 4 million for 2001, as a result of overnight deposits.

Foreign exchange gain was 7.9 million for 2002 compared to a foreign exchange loss of 1.4 million for 2001 due primarily to (i) the weakening of the U.S. dollar against the euro that began during the second quarter of 2002 and (ii) our hedging policy. In connection with hedging our currency exposure risks, we hedge the U.S. dollar by forward sales, which can have either a favorable or adverse impact on financial result due to the actual variation in the exchange rate for the euro and the U.S. dollar.

Equity in Income (Losses) of Investees

Income from investments accounted for under the equity method decreased to 6.4 million for 2002 from 8.8 million for 2001, primarily due to the particular strong performance of Argas, our Saudi Arabian joint venture, in 2001.

Income Taxes

Income taxes were essentially stable at 17.4 million for 2002 compared to 16.8 million for 2001. We are not subject to a worldwide taxation system, and the income tax paid in foreign countries, mainly based on revenues, does not generate comparable tax credits in France, our principal place of business.

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Net Income (Loss)

Net income for 2002 was 17.4 million, after deducting minority interest of 2.2 million resulting from our 50% interest in the entity that was formed for the purpose of directly owning the *CGG Mistral*, compared to a net income of 15.7 million for 2001.

Year ended December 31, 2001 Compared to Year ended December 31, 2000

Operating Revenues

Our consolidated operating revenues increased 15% to 803 million in 2001 from 695 million in 2000. The increase was primarily attributable to greater sales of seismic equipment, particularly land seismic equipment, as well as additional revenues from our Offshore SBU resulting from the increase in our acquisition capacity following the purchase of the two vessels from Aker in January 2001.

Services

Operating revenues for our Services segment (excluding internal sales) increased 11% to 512 million in 2001 from 459 million in 2000. This increase was due primarily to increased marine seismic survey activity by our Offshore SBU resulting from the acquisition of the two vessels noted immediately above.

Land SBU. Operating revenues for our Land SBU increased 2% to 202 million in 2001 from 197 million in 2000. The modest increase reflected the limited recovery of the worldwide market for seismic services, primarily in the area of land-based seismic surveys in North America and the Middle East. As we have a strong position in the Middle East, the recovery resulted in slightly improved revenues for our Land SBU, even though the recovery did not extend to regions outside of North America and the Middle East.

Offshore SBU. Operating revenues for our Offshore SBU increased 34% to 202 million in 2001 from 151 million in 2000. The increase was due primarily to increased marine seismic survey activity resulting from our additional acquisition capacity with the purchase of two vessels from Aker, the *CGG Symphony* and the *CGG Amadeus*. We estimate that operating revenues of our Offshore SBU were approximately 9 million lower than they would have been due to adverse weather conditions off the coast of Morocco during the second quarter of 2001.

Multi-client data sales remained relatively constant at 99 million in 2001 compared to 98 million in 2000. Total sales of multi-client surveys, including land multi-client surveys, exceeded related capital investments by 29 million in 2001 compared to 10 in 2000. Exclusive contracts accounted for 57% of our marine seismic sales in 2001, compared to 35% of such sales in 2000, reflecting a stronger market for exclusive surveys, particularly in the North Sea and Gulf of Mexico.

Processing & Reservoir SBU. Operating revenues for our Processing & Reservoir SBU decreased by 3% to 108 million in 2001, compared to 111 million in 2000. During 2001, our Processing & Reservoir SBU was subject to adverse pricing pressures resulting from continued high levels of processing capacity available to our customers.

Products

Operating revenues for our Products segment increased 25% to 321 million in 2001 from 257 million in 2000, notwithstanding the sale of our software division at the end of 2000. The increase was due primarily to growth in sales of onshore acquisition systems, including strong sales of our 408 UL system. For Sercel only (equipment sales), total revenues increased 32% from year to year, to 321 million in 2001 from 244 million in 2000, reflecting the continuing strength of the 408 UL system. Excluding intra-group sales, revenues increased 23% to 291 million in 2001 compared to 237 million in 2000.

Operating Expenses

Cost of operations, including depreciation and amortization, increased 11% to 642 million in 2001 from 580 million in 2000. As a percentage of operating revenues, cost of operations decreased to 80% in 2001

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compared to 83% in 2000 due to improvements in our cost and operational efficiency, principally with respect to our Land SBU. Gross profit increased to 161 million in 2001 from 115 million in 2000.

Selling, general and administrative expenses increased 4% to 92 million in 2001 from 88 million in 2000. As a percentage of operating revenues, selling, general and administrative costs decreased to 11% in 2001 compared to 13% in 2000, resulting from realization of the full effect of our 1999 restructuring programs, notwithstanding an increase in volume due to the integration of Mark Products and the Aker vessels.

Research and development expenditures, net of government grants, increased 30% to 35 million in 2001, compared to 27 million in 2000 and representing 4% of operating revenues in both periods.

Other income amounted to 14 million in 2001. This amount included gains of 8 million related to the sale of our interest in one of our Gulf of Mexico multi client surveys, and non-recurring gains of 5 million. These gains came mostly from the sale of our radio positioning businesses and net restructuring credits that were offset by anticipated Land SBU contract losses in Argentina. In 2000, other income also amounted to 14 million. This amount included gains of 2 million related to sales of fixed assets, and non-recurring gains of 15 million related to partial sales of businesses, offset by non-recurring expenses of 3 million related to net restructuring credits.

Operating Income (Loss)

We generated operating income of 48 million in 2001, compared to 14 million in 2000. Our Services segment generated an operating loss of 1 million in 2001, compared to an operating loss of 14 million in 2000. Operating income for our Services segment was affected by adverse weather conditions off the coast of Morocco during the second quarter of 2001, which we estimate reduced operating income by approximately 9 million. Our Products segment generated operating income of 66 million, a record level, in 2001 compared to 37 million in 2000.

Financial Income and Expenses, Net

Net interest expense increased 44% to 23 million in 2001 from 16 million in 2000. This was due to an increase in average net debt outstanding to 217 million in 2001 compared to 154 million in 2000, principally as a result of our issuance of U.S.\$170 million of 10 5/8% Senior Notes due 2007 in November 2000. A February 2002 issuance of an additional U.S.\$55 million 10 5/8% Senior Notes due 2007, the first interest payment for which will be due in May 2002, will further increase our interest expense. Net debt totalled 229 at December 31, 2001 compared to 204 million at December 31, 2000.

Gross financial expenses were 27 million compared to 19 million in 2000, as a result of increased borrowings to finance operations. Financial income, resulting primarily from overnight deposits, was 4 million compared to 3 million in 2000.

Foreign exchange losses decreased to 1 million in 2001 compared to 6 million in 2000 primarily due to favorable hedges, particularly on increased Product segment sales. In connection with hedging our currency exposure, U.S. dollars are hedged by forward sales, which can have either a favorable or unfavorable impact due to the variation of expected future exchange rates for the euro and the U.S. dollar.

Equity in Income of Investees

Income from investments accounted for under the equity method was 9 million in 2001 compared to 3 million in 2000, due primarily to the improved financial performance of Argas, our Saudi Arabian joint venture.

Income Taxes

Income taxes increased 55% to 17 million in 2001 from 11 million in 2000, principally due to our higher levels of activity during the period, particularly in certain countries where our operations are subject to taxation based on revenues or by means of withholding. Additionally, increased income attributable to our interest in Argas resulted in higher tax charges for the parent company.

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Since we earn the majority of our taxable income outside of France, foreign taxation significantly affects our overall income tax expense. We are not subject to a worldwide taxation system and the income tax paid in foreign countries, mainly when based on revenues, does not generate comparable tax credits in France, our principal place of business.

Net Income (Loss)

The year 2001 marked a return to profitability, as our net income in 2001 was 16 million compared to a net loss of 12 million in 2000 after including minority interest income of 0.2 million in 2001 relating to the entity that directly owns the *CGG Mistral* and 4 million in 2000, relating to CGG Marine.

Liquidity and Capital Resources

Our principal needs for capital are the funding of ongoing operations, capital expenditures, investments in our multi-client data library and acquisitions. We have financed our capital needs with cash flow from operations, borrowings under bank facilities and more recently, our offerings of senior notes. We believe that net cash provided by operating activities, the additional financial resources generated by our offerings of senior notes and available borrowings under bank facilities will be sufficient to meet our liquidity needs for the foreseeable future.

Operating Activities

For 2002, our net cash provided by operating activities, before changes in working capital and the asset write-down of 62 million related to the *CGG Mistral*, was 161.2 million compared to 153.3 million for 2001. Changes in working capital in 2002, before insurance indemnities booked approximately for the same amount of the asset write down, had a positive impact on cash from operating activities of 57.8 million compared to a negative impact of 17.3 million for 2001. This was principally attributable to important payments from Offshore clients at year end and improved management of our accounts receivable.

Net operating cash flow for 2002 was 219.0 million compared to 136.0 million for 2001.

For 2001, our net cash provided by operating activities was 136 million, compared to 25 million for 2000, which was principally attributable to improvement in our operating income and a decrease in our working capital needs in 2001. Changes in working capital in 2001 had a negative impact on cash from operating activities of 17 million compared to a negative impact of 93 million in 2000. Our working capital needs decreased largely due to improved management of our accounts receivable.

Investing Activities

During 2002, we incurred capital expenditures of 130.6 million (including 8.6 million of equipment acquired under capital lease), related primarily to the upgrading of the *CGG Mistral*, the investment in Solid Seal technology for our *Amadeus* seismic vessel and the acquisition of 408UL seismic data recording systems.

During 2002, we also invested 130.1 million in our multi-client library, primarily in deepwater areas offshore in the Gulf of Mexico and Brazil. As of December 31, 2002, the net book value of our land and marine multi-client data library was 127.1 million compared to 91.9 million as of December 31, 2001.

Net cash used in investing activities was 249.9 million after taking into account the acquisition of 7.51% stake in PGS, the proceeds from the sale of our Paradigm stock and the proceeds from the sale of our borehole seismic activity business.

At December 31, 2002, our commitments for capital expenditures were in an amount of 6 million and related primarily to geophysical equipment.

During 2001, we incurred capital expenditures of 42 million related primarily to purchases of geophysical equipment, and 13 million related to equipment obtained under capital lease financings (non-cash transactions). During 2001, we invested 79 million in our multi-client library, primarily in strategic deepwater areas offshore from the Gulf of Mexico and Brazil. At December 31, 2001, the net book value of both our

marine and land multi-client library was 92 million.

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During 2000, we incurred capital expenditures of \$33 million related primarily to purchases of geophysical equipment, and \$6 million related to equipment obtained under capital lease financings (non-cash transactions). In the same year, we invested \$93 million in our multi-client library, primarily in strategic deepwater areas offshore from the Gulf of Mexico and Brazil. During this period, we expanded our multi-client library by over 20,000 square kilometers of 3D data. At December 31, 2000, the net book value of both our marine and land multi-client library was \$76 million.

Financing Activities

Net debt was \$201.7 million as of December 31, 2002, and \$229.0 million as of December 31, 2001. The ratio of net debt to equity decreased to 46.1% at the end of December 2002 compared to 49.5% at the end of December 2001.

Adjusted EBITDA for 2002 was \$210 million compared to \$201 million for 2001.

Net cash provided by financing activities for 2002 was \$68.9 million, resulting principally from the U.S.\$55 million issuance of senior notes in February 2002. We also borrowed a total of U.S.\$36.9 million from new bank facility in order to finance streamers and equipment related to the upgrade the *CGG Mistral*. An amount of U.S.\$20 million was repaid in the first quarter of 2003 with the insurance proceeds after the sinking of the vessel.

Net cash provided by financing activities in 2001 was a negative \$8 million, principally reflecting the net repayment of draw-downs under our U.S.\$90 million syndicated credit facility, notwithstanding the U.S.\$25 million paid to Aker as part of the purchase price of the two vessels acquired in January 2001.

Net cash provided by financing activities in 2000 was \$83.7 million, primarily related to our first offering of senior notes described above, which replaced part of our bank debt and increased our available cash.

On February 5, 2002, we issued an additional U.S.\$55 million aggregate principal amount at par value of 105/8% Senior Notes due 2007 in the international capital markets. With the net proceeds of approximately U.S.\$52.5 million, we repaid approximately U.S.\$22 million of outstanding indebtedness under our existing syndicated credit facility, repaid approximately U.S.\$10 million in other long-term revolving debt and used the balance for general corporate purposes.

On November 22, 2000, we issued U.S.\$170 million aggregate principal amount of 10 5/8% Senior Notes due 2007 in the international capital markets. We used the approximately \$164.9 million of net proceeds to repay a portion of outstanding indebtedness under our existing syndicated credit facility and to fund the U.S.\$25 million cash portion of the purchase price of two marine seismic vessels and certain seismic data from an affiliate of Aker.

On August 31, 2000, we signed an agreement with our bank syndicate, including Royal Bank of Canada as a new participant, to extend our main syndicated line of credit from U.S.\$130 million to U.S.\$180 million. The additional U.S.\$50 million tranche C was entirely subscribed by Royal Bank of Canada, and expired in November 2000 upon repayment in full of Tranche C with a portion of the net proceeds from our offering of senior notes in November 2000. We accepted certain additions to the collateral to this line of credit and consequently pledged in favor of the banks the shares of Sercel Holding S.A. This pledge expired automatically on September 30, 2001.

On September 15, 1999, we entered into a new multi-currency U.S.\$130 million syndicated credit facility with a group of banks led by Société Générale and Natexis Banques Populaires. The facility consolidated and replaced approximately 80% of our existing bank lines at that date and consists of a five-year U.S.\$90 million tranche, which began amortizing after September 15, 2002, and a U.S.\$40 million tranche due in two years (which we repaid). The syndicated credit facility bears interest at a graduated rate beginning with a spread of 175 basis points over three-month LIBOR, PIBOR or EURIBOR until September 15, 2000 and averages 150 basis points over these rates for the life of the loan thereafter. We agreed to limitations on our net debt compared to equity, excluding goodwill, (1.3, 1.15 and 1.0 for the periods ending June 30, 2000, June 30, 2001 and June 30, 2004, respectively), to the maintenance of a net debt to EBITDA ratio (3.0, 2.5 and 2.0 for the periods ending

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June 30, 2000, June 30, 2001 and June 30, 2004, respectively), to a minimum net worth test (minimum equity of 122 million, 137 million and 160 million for the periods ending June 30, 2000, June 30, 2001 and June 30, 2004, respectively) and to the completion of a capital increase of not less than 46 million by December 31, 1999 as part of the syndicated facility. In addition, we granted the lenders under the syndicated facility a lien on the accounts receivable of CGG and Sercel S.A. in an amount up to the amount of any outstanding borrowings under these facilities.

On September 28, 2000, our shareholders approved the issuance of 352,237 new shares to Shaw Industries at a price of 75 per share as consideration for the purchase of the Mark Products division. The shares were issued on September 29, 2000. As a result of this issuance, our shareholders' equity increased by approximately 27 million.

On December 20, 2000, our shareholders approved, at an extraordinary shareholders meeting, the issuance of 413,969 new shares to LDA at a price of 69.3 per share as consideration for the purchase of LDA's 40% interest in our subsidiary CGG Marine, our acquisition of 50% of the capital stock of the entity that will directly own the CGG Mistral and the subsequent upgrade of the CGG Mistral from six to ten streamers. The shares were issued on December 21, 2000. As a result of the issuance, our shareholders' equity increased by approximately 29 million.

On December 20, 2000, our shareholders approved, at the same extraordinary general meeting of shareholders, the issuance of 1,591,407 new shares to Aker at a price of 69.3 per share as part of the consideration for our acquisition of two marine vessels and certain seismic data from an affiliate of Aker. The shares were issued upon the closing of the transaction, which occurred on January 16, 2001. As result of the issuance, our shareholders' equity increased by approximately 110 million.

Contractual Obligations

The following table sets forth our future cash obligations as of December 31, 2002.

	Payments Due by Period				Total
	Less than 1 year	2-3 years	4-5 years	After 5 years	
	(in million)				
Long-Term Debt	41.9	7.4	217.4	1.9	268.6
Capital Lease Obligations	14.6	15.6	10.6		40.8
Operating Leases	47.9	54.9	39.2	2.8	144.8
Other Long-Term Obligations (bond interest)	23.0	45.6	45.6		114.2
Total Contractual Cash Obligations	127.4	123.5	312.8	4.7	568.4

Research and development

Our ability to compete effectively and maintain a significant market position in our industry depends to a substantial extent upon our continued technological innovation. We have focused on rationalizing our research and development activities both to reduce costs and to focus our research and development efforts primarily on reservoir characterization, multi-component seabed seismic processing techniques, structural imaging and advanced seismic recording equipment. Our research and development teams, totaling approximately 200 employees, are divided among operating division. We also access new sources of information or technology by entering into strategic alliances with equipment manufacturers, oil and gas companies, universities, or other clients or by acquiring technology under license from others. We have historically entered into and continue to pursue common research programs with the *Institut Français du Pétrole*, an agency of the French government.

While the market for our products and services is subject to continual and rapid technological changes, development cycles from initial conception through introduction can extend over several years.

Our efforts have resulted in the development of numerous inventions, new processes and techniques, many of which have been incorporated as improvements to our product lines. During 2000, 2001 and 2002, our research

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and development expenditures were 30 million, 39 million, and 30 million, respectively, of which approximately 12%, 9% and 10%, respectively, was funded by French governmental research entities, such as the *Fonds de Soutien aux Hydrocarbures* (which funding is to be repaid to such organizations from sales of products or services developed with such funds).

We have budgeted 28 million for research and development expenditures in 2003, of which we expect to receive approximately 3 million from the *Fonds de Soutien aux Hydrocarbures*.

Trend Information

Euro

We operate in an essentially U.S. dollar-denominated environment in which the introduction of the euro has had limited consequences. On January 1, 1999, 11 member states of the European Union, including France, where we have our headquarters, adopted fixed exchange rates between their national currencies and the euro. On January 1, 2002, the euro became the official currency of 12 European Union countries. As a result, their national currencies (including the French franc) ceased to exist during the year.

As part of our ongoing systems updates, we have made the necessary modifications to our existing information, financial and management control systems and software to permit us to bill, invoice and report in euro. As of January 1, 2001 we adopted the euro as our reporting currency. The total cost of addressing the euro issue has not been material to our financial condition, results of operations or liquidity.

Currency Fluctuations

As a company that derives a substantial amount of its revenue from sales internationally, we are subject to risks relating to fluctuations in currency exchange rates. In the year ended December 31, 2002 and the years ended December 31, 2001 and 2000 over 90% of our operating revenues and approximately two-thirds of our operating expenses were denominated in currencies other than the euro. These included the U.S. dollar and, to a significantly lesser extent, other non-euro Western European currencies, principally the British pound and the Norwegian kroner. In addition, a significant portion of our revenues that were invoiced in euros related to contracts that were effectively priced in U.S. dollars, as the U.S. dollar often serves as the reference currency when bidding for contracts to provide geophysical services.

Fluctuations in the exchange rate of the euro against such other currencies, particularly the U.S. dollar, have had in the past and can be expected in future periods to have a significant effect upon our results of operations. Since we participate in competitive bids for data acquisition contracts that are denominated in U.S. dollars, an appreciation of the U.S. dollar against the euro improves our competitive position against that of other companies whose costs and expenses are denominated in U.S. dollars. For financial reporting purposes, such appreciation positively affects our reported results of operations since U.S. dollar-denominated earnings that are converted to euros are stated at an increased value.

We attempt to match foreign currency revenues and expenses in order to balance our net position of receivables and payables denominated in foreign currencies. For example, charter costs for our five vessels, as well as our most important computer hardware leases, are denominated in U.S. dollars. Nevertheless, during the past five years such dollar-denominated expenses have not equaled dollar-denominated revenues principally due to personnel costs payable in euros.

In order to improve the balance of our net position of receivables and payables denominated in foreign currencies, we maintain a portion of our financing in U.S. dollars. At December 31, 2002, 2001 and 2000 our total outstanding long-term debt denominated in U.S. dollars amounted to U.S.\$273 (260 million), U.S.\$181 million (203 million) and U.S.\$187 million (200 million), respectively, which amounted to 85%, 74% and 81%, respectively, of our total long-term debt outstanding at such dates.

In addition, to be protected against the reduction in value of future foreign currency cash flows, we follow a policy of selling U.S. dollars forward at average contract maturity dates that we attempt to match with future net U.S. dollar cash flows (revenues less costs in U.S. dollars) expected from firm contract commitments, generally

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over the ensuing six months. A similar policy, to a lesser extent, is carried out with respect to contracts denominated in British pounds. As of December 31, 2002, 2001 and 2000, we had U.S.\$133 million (the Euro counter-value under the contract was 137 million, U.S.\$89 million (the Euro counter-value under the contract was 101 million) and U.S.\$101 million (counter-value of 108 million), respectively, of notional amounts outstanding under euro/ U.S. dollar forward exchange contracts.

We do not enter into forward foreign currency exchange contracts for trading purposes.

Inflation

Inflation has not had a material effect on our results of operations during the periods presented. We operate in, and receive payments in the currencies of, certain countries with historically high levels of inflation, such as Mexico, Brazil, Indonesia and Venezuela. We attempt to limit such risk by, for example, indexing payments in the local currency against, principally, the U.S. dollar exchange rate at a certain date to account for inflation during the contract term.

Income Taxes

We conduct the majority of our field activities outside of France and pay taxes on income earned or deemed profits in each foreign country pursuant to local tax rules and regulations. We do not receive any credit in respect of French taxes for income taxes paid by foreign branches and subsidiaries. Net tax expenses in recent periods were attributable to activities, principally in land acquisition, carried on outside of France. We have significant tax loss carryforwards that are available to offset future taxation on income earned in certain OECD countries. We recognize tax assets if a minimum history of profit for the past three years exists and budget estimates also indicate a profit for the following year.

Seasonality

Our land and marine seismic acquisition activities are seasonal in nature. We generally experience decreased revenues in the first quarter of each year due to the effects of weather conditions in the Northern Hemisphere and to the fact that our principal clients are generally not prepared to fully commit their annual exploration budget to specific projects during such period. We have historically experienced higher levels of activity in our equipment manufacturing operations in the fourth quarter as our clients seek to fully deploy annual budgeted capital.

U.S. Accounting Standards

In July 2001, the FASB issued SFAS No. 141, Business Combinations, and SFAS No. 142, Goodwill and Other Intangible Assets. Additionally, SFAS No. 141 requires the use of the purchase method of accounting for all business combinations initiated after June 30, 2001. SFAS No. 141 requires intangible assets to be recognized if they arise from contractual or legal rights or are separable, i.e., it is feasible that they may be sold, transferred, licensed, rented, exchanged or pledged. As a result, it is likely that more intangible assets will be recognized under SFAS No. 141 than under its predecessor, Accounting Principles Board (APB) Opinion No. 16, although in some instances previously recognized intangibles are to be subsumed into goodwill. SFAS No. 141 requires that upon adoption of SFAS No. 142, that companies reclassify the carrying amounts of certain intangible assets and goodwill based on the criteria of SFAS No. 141.

Under SFAS No. 142, goodwill is no longer amortized on a straight-line basis over its estimated useful life, but is tested for impairment on an annual basis and whenever indicators of impairment arise. The goodwill impairment test, which is based on fair value, is performed on a reporting unit level. A reporting unit is defined as a SFAS No. 131 operating segment or one level lower. Goodwill is no longer be allocated to other long-lived assets for impairment testing, under SFAS No. 121, Accounting for the Impairment of Long-lived Assets and Long-lived Assets to be disposed of. Additionally, goodwill on equity method investments is no longer amortized; however, it continues to be tested for impairment in accordance with APB Opinion No. 18, The Equity Method of Accounting for Investments in Common Stock. Under SFAS No. 142, intangible assets with indefinite lives are not amortized; instead they are carried at the lower of cost or market value and tested for impairment at least annually. All other recognized intangible assets continue to be amortized over their estimated useful lives.

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SFAS No. 142 is effective for fiscal years beginning after December 15, 2001, although goodwill on business combinations consummated after July 1, 2001 will not be amortized. We adopted SFAS No. 141 and 142 on January 1, 2002 and have not had to record any impairment.

In August 2001, the FASB issued SFAS No. 144, Accounting for the Impairment or Disposal of Long-Lived Assets. SFAS No. 144 establishes a single accounting model for long-lived assets to be disposed of by a sale consistent with the fundamental provisions of SFAS No. 121. While it supersedes portions of APB Opinion 30, Reporting the Results of Operations – Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions, it retains the discontinued operations presentation, yet it broadens that presentation to include a component of an entity (rather than a segment of a business). However, discontinued operations are no longer recorded as net realizable value and future operating losses are no longer recognized before they occur. SFAS No. 144 also establishes criteria for determining when an asset should be treated as held for sale. SFAS No. 144 is effective for fiscal years beginning after December 15, 2001 and interim periods within those fiscal years, with an early application encouraged. The provisions of SFAS No. 144 are generally to be applied prospectively. We adopted SFAS No. 144 on January 1, 2002 and have not had to record any impairment.

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

Under French law, the Board of Directors determines our business strategy and monitors business implementation. Subject to the specific powers granted by the ordinary general shareholders' meeting, the Board of Directors deals with any issues relating to our affairs. In particular, the Board of Directors prepares and presents the year-end accounts to the ordinary general shareholders' meeting. Our Board of Directors consists of between six and fifteen members elected by our shareholders. Each director must own at least one director-qualifying share. Under French law, a director may be an individual or a legal entity for which an individual is appointed as permanent representative.

Our *statuts* (memorandum and articles of association) provide that each director is elected for a six-year term by the ordinary general shareholders' meeting. There is no obligation for directors to be French nationals. According to French corporate law, the number of terms that a director may serve is limited to five.

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

The following table sets forth the names of our current directors, their positions, the dates of their initial appointment as directors (or, in the case of shareholder representatives, the date from which the shareholder became entitled to appoint a director) and the expiration dates of their current term.

Name	Position	Initially Appointed	Term Expires
Robert Brunck ⁽¹⁾⁽²⁾	Chairman of the Board and Chief Executive Officer	1998	2008
Gérard Friés ⁽¹⁾	Director	2002	2008
Robert Castaigne ⁽¹⁾⁽²⁾	Director	1992	2004
Jean Dunand ⁽³⁾	Director	1999	2007
Yves Lesage ⁽³⁾	Director	1988	2003
John MacWilliams ⁽³⁾	Director	1999	2005
Claude Mandil	Director	2002	2008
Christian Marbach ⁽³⁾	Director	1995	2007
Daniel Valot ⁽²⁾	Director	2001	2006
Robert Semmens ⁽¹⁾⁽²⁾	Director	1999	2005

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(1) Member of Strategic Planning Committee.

(2) Member of Appointment-Remuneration Committee.

(3) Member of Audit Committee.

Mr. Brunck, 53, has been our Chairman and Chief Executive Officer since May 1999. Mr. Brunck was Vice Chairman and President from September 1998 to May 1999 and was our President and Chief Operating Officer from February 1995 to September 1998. Mr. Brunck was Vice President of Administration and Development from 1991 to 1995 and Chief Financial Officer from 1989 to 1991. He is President of the Supervisory Board of Sercel Holding, Chairman of CGG Americas Inc. and Director of the Ecole Nationale de Géologie and the Consortium Français de Localisation S.A., and Chairman of Armines.

Mr. Friés, 47, has been Senior Executive Vice President of Institut Français du Pétrole since September 2001. Mr. Friés was Vice President of the geoscience research center of Totalfina Exploration UK plc from 1999 to September 2001 and was a Director of Elf Gabon from 1997 to 1999. Mr. Friés is Chairman and CEO of CPX Holding, the representative of CPX Holding on the Board of Directors of Geoservices S.A. a Director of Axens S.A and a member of the Supervisory Board of RSI.

Mr. Castaigne, 56, has been Chief Financial Officer and a member of the Executive Committee of TotalFinaElf since 1994. Mr. Castaigne is Chairman of the Board of Directors of Total Chimie and Total Nucléaire and is a Director of TEP Algérie, Omnium Insurance and Reinsurance Company Limited; Société Financière d Auteuil; Total Nigeria Ltd; Total Fina Elf Exploration Norge; Total Fina Elf Holdings UK; Total Fina Elf Exploration UK; Hutchinson; Eramet; Petrofina; Sanofi Synthelabo; Atofina and Elf Aquitaine.

Mr. Dunand, 63, was Financial and Legal Director of ISIS from 1999 to December 2001. Mr. Dunand was Deputy General Manager (Russia and CIS) of Total Exploration-Production from 1994 to 1999. Mr. Dunand is the Controller of Ipedex Développement.

Mr. Lesage, 65, has been CGG Honorary Chairman since May 1999. Mr. Lesage was Chairman and Chief Executive Officer of CGG from January 1995 to May 1999. Mr. Lesage was Chairman, President and Chief Executive Officer of SOGERAP from 1994 to 1995. Mr. Lesage is a Director of Bureau de Recherches Géologiques et Minières and is President of the Comité d Etudes Pétrolières & Marines and of the Comité Industriel Statutaire de l Amont IFP.

Mr. MacWilliams, 47, has been a Partner of The Beacon Group LLC since 1993. Mr. MacWilliams is a director of Alliance Resource Partner L.P., Soft Switching Technologies Inc. and Titan Methanol Company.

Mr. Mandil, 61, is Executive Director of the International Energy Agency and a member of the Supervisory Board of Technip-Coflexip.

Mr. Marbach, 65, Ingénieur des Mines, was Advisor to the General Management of Suez-Lyonnaise des Eaux from 1996 to 2000. Mr. Marbach was Chairman and Chief Executive Officer of Coflexip and Coflexip Stena Offshore from 1991 to 1996. Mr. Marbach is a member of the Supervisory Board of Lagardère and is a Director of Erap, Supervisor of Sofinnova and President of the Small and Medium Size Business Agency, a private sector group.

Mr. Valot, 58, has been Chairman of the Management Board of Technip-Coflexip since December 2001. Mr. Valot was Chairman and Chief Executive Officer of Technip from 1999 to December 2001. Mr. Valot was President of Total Exploration and Production, and was a member of the TOTAL Group Executive Committee from 1995 to 1999. Mr. Valot is Chairman of the Management Board of Technip-Coflexip and of the Supervisory Board of Technip Germany a Director of Institut Français du Pétrole and of Coflexip, Chairman of Technip Americas, President of Technip Far East and Technip Italy and is a permanent representative of Technip-Coflexip to the Board of Directors of Technip France.

Mr. Semmens, 45, is an independent consultant and was Managing Director of The Beacon Group LLC from 1993 to 2000. Mr. Semmens is a Director of Khanty Mansysk Oil Corporation and is a member of the Supervisory Board of Sercel Holding.

Table of Contents***Executive Officers***

Under French law and our current *statuts*, the Chairman and Chief Executive Officer has full executive authority to manage our affairs. The Board of Directors has the power to appoint and remove, at any time, the Chairman and Chief Executive Officer. Pursuant to French law and our current *statuts*, the Chairman and Chief Executive Officer, where those functions are exercised by the same person, has full power to act on our behalf and to represent us in dealings with third parties, subject only to those powers expressly reserved by law to the Board of Directors or our shareholders. The Chairman and Chief Executive Officer determines and is responsible for the implementation of the goals, strategies and budgets for our different businesses, which are reviewed and monitored by the Board of Directors. In accordance with French corporate law, our current *statuts* provide for the election by the Board of Directors of one person to assume the position of Chairman and Chief Executive Officer or the division of such functions between two different persons. In its session of May 15, 2002, the Board of directors decided that Mr Brunck would assume the position of Chairman and Chief Executive Officer until the expiry of his term as a director, unless otherwise decided by the Board. Our current *statuts* provide that the Board of Directors may appoint up to five President and Chief Operating Officers (Directeurs Généraux Délégués) upon proposal of the Chief Executive Officer, whether or not this position is assumed by the Chairman of the Board.

The following table sets forth the names of our current executive officers who serve as members of our Executive Committee and Group Management Committee and as Secretary of the Comité de Direction du Groupe, their current positions with us and the first dates as of which they served as our executive officers.

Comité Exécutif (Executive Committee)

Name	Current Position	Executive Officer Since
Robert Brunck	Chairman and Chief Executive Officer	1989
Gérard Chambovet	Senior Executive Vice President, Services	1995
Thierry Le Roux	Senior Executive Vice President, Products	1995
Michel Ponthus	Senior Executive Vice President, Finance and Human Resources and Chief Financial Officer	1995
Christophe Pettenati-Auzière	Senior Executive Vice President, Strategy, Planning and Control	1997

Mr. Chambovet, 50, has been Senior Executive Vice President of our Services segment since October 1998. Mr. Chambovet was Executive Vice President of our Acquisition Product line from March 1995 to October 1998 and was Manager of our data processing center in Massy, France from 1987 to 1995.

Mr. Le Roux, 49, has been Senior Executive Vice President of our Products segment since October 1998. Mr. Le Roux was Executive Vice President of CGG's Geophysical Equipment operations from March 1995 to October 1998. Mr. Le Roux was Business Development Manager from 1992 to 1995 and Far East Manager from 1984 to 1992.

Mr. Ponthus, 56, has been Senior Executive Vice President, Finance and Human Resources, and Chief Financial Officer since October 1998. Mr. Ponthus was our Chief Financial Officer from March 1995 to October 1998 and prior to joining CGG, Mr. Ponthus was Administrative and Financial Vice President of Petitjean Industries from 1990 to 1995.

Mr. Pettenati-Auzière, 50, has been Senior Executive Vice President, Strategy, Planning and Control since January 2001. Mr. Pettenati-Auzière was Senior Executive Vice President of our Offshore SBU from July 1999 to January 2001, Vice President of Business Development and Investor Relations from December 1998 to July 1999 and Vice President of Seismic Acquisition from April 1997 to December 1998. He was Executive Vice President of International Operations for Coflexip from 1990 to 1996.

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The following table sets forth the names of the executive officers who, together with the Executive Committee, constitute the Group Management Committee, their current positions, and the dates as of which they were first appointed.

Comité de Direction du Groupe (Group Management Committee)

Name	Current Position	Executive Officer Since
Guillaume Cambois	Executive Vice President, Data Processing and Reservoir SBU	2001
Jean Charot	Executive Vice President SBU Offshore	2002
Dominique Robert	Executive Vice President, Land SBU	2000
Pascal Rouiller	Chief Operating Officer, Sercel Group	1997
<i>Secretary of the Management Committee</i>		
Annick Laroche	Vice President	1996

Mr. Cambois, 38, has been Executive Vice President, Processing and Reservoir SBU, since July 2001. Mr. Cambois was Vice President, Processing SBU Technology from 1999 to 2001, Manager of the Calgary processing center from 1998 to 1999 and Manager of Research and Development of the Houston processing center from 1995 to 1998.

Mr. Charot, 52, has been Executive Vice President of our Offshore SBU since June 2002. Mr. Charot was President of CGG Marine from December 1999 to June 2002 and Managing Director BSD Division from 1998 to December 1999.

Mr. Robert, 51, has been Executive Vice President of our Land SBU since December 2000. Mr. Robert was chief operating officer of Flagship from January 2000 to December 2000 and Vice President of the Asia Pacific Region from September 1995 to January 2000.

Mr. Rouiller, 49, has been Chief Operating Officer of the Sercel Group since December 1999. Mr. Rouiller was Vice President of our Product segment from October 1995 to December 1999 and Vice President of the Asia Pacific Region from May 1992 to September 1995.

Mrs. Laroche, 53, has been Vice President since January 1999. Mrs. Laroche was Vice President of CGG's Software Product line from April 1996 to December 1998 and was Vice President of Petrosystems (renamed Flagship) from 1994 to 1996.

Compensation

The aggregate compensation of our executive officers is determined by the Appointment-Remuneration Committee of the Board of Directors in order to ensure the competitiveness of our compensation compared to our international competitors. The Appointment-Remuneration Committee refers to benchmarks prepared by independent consultants at the request of the general management. The aggregate compensation includes a fixed element and a bonus. The amount of the bonus depends upon the achievement of financial targets for items such as consolidated net income, operating income and free cash flow of our various activities and upon completion of certain individual qualitative objectives. With this bonus, the aggregate compensation may substantially vary from one year to another. The bonus due to the general management for a given fiscal year is paid during the first semester of the next fiscal year.

The aggregate compensation as a group of the executive officers (including the Chairman and Chief Executive Officer) who were members of the Group Management Committee paid in fiscal year 2002 was 2,581,761, including the 2001 bonus. The aggregate compensation of Mr. Brunck, Chairman and Chief Executive Officer, for the fiscal year ended December 31, 2002 was 504,305 of which 30% represented his 2001 bonus. In addition, Mr. Brunck received 23,611 in his capacity as a Director. Directors as a group received in January 2003 aggregate compensation of 150,000 for services provided in their capacity as such during the fiscal

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year ended December 31, 2002. No amounts were set aside or accrued by us or our subsidiaries to provide pension, retirement or similar benefits to the executive officers or directors.

Board Practices

We employ our executive officers under standard employment services agreements that have no fixed term. Directors' service contracts do not provide for benefits upon termination.

The Strategic Planning Committee, chaired by Mr. Brunck, is in charge of studying our strategic plans and our financial transactions projects.

The Audit Committee is chaired by Mr. Marbach. The other members are Mr. Dunard, Mr. Lesage and Mr. MacWilliams. It ensures that the accounts are prepared using consistent and appropriate accounting methods, examines the effectiveness of our internal reporting and verifies the internal audit and the external auditors' plan of review. This committee provides advice on the appointment or renewal of our external auditors and reviews any specific financial or accounting matter that appears to be relevant or topical.

As part of its mission, the Audit Committee reviews the most important audit assignments as well as those whose conclusions are the basis for important decisions. The Audit Committee reviews the way its recommendations have been implemented.

Sessions of the Audit Committee are open to the members of the Executive Committee, the external auditors (in order to report on their audit reviews) and the Internal Audit Vice-President (in order to review important assignments).

The Audit Committee customarily meets before each Board meeting. During 2002, the Committee met five times. In the course of such meetings, the Audit Committee reviewed the draft 2001 accounts, the semi-annual accounts and the updated forecasts of the financial year, in each case before they were presented to the Board. The Audit Committee informed the Board of its opinion on such accounts and forecasts. As part of its mission, the Audit Committee also met with our external auditors who communicated to the Audit Committee the scope and results of their work. The Audit Committee was consulted when we issued U.S.\$ 55 million aggregate principal amount of 10 5/8% Senior Notes in February 2002, which notes were issued in addition to the outstanding Senior Notes issued in November 2000. Finally, the Audit Committee reviewed our 2003 budget.

The Audit Committee also reviewed our internal audit activities, which internal audit activities are based on a program determined by our Executive Committee and presented to the Audit Committee. This program is prepared as a function of our operational and financial risks and on the basis of a systematic review of the entities in each SBU every three years.

In addition, the Audit Committee regularly examines our multi-clients surveys and, particularly, financing rates in order to verify whether such rates comply with budget forecasts and assess the fair value of such surveys recorded in our balance sheet.

The Audit Committee has also been in charge of the selection of a new statutory auditor, through a tender offer process launched by us, in order to replace one of the two current statutory auditors as a result of the contemplated merger, in France, of Ernst & Young and Barbier Frinault et Autres. The Audit Committee made a recommendation to the Board of Directors, which in turn proposed the election of the external auditors to our ordinary general shareholders' meeting (to be held on May 15, 2003), as required by French law.

Finally, the Audit Committee studied the consequences for us (and for the Audit Committee itself) of the Sarbanes Oxley Act of 2002.

The Appointment-Remuneration Committee, chaired by Mr. Semmens, proposes to the Board of Directors the remuneration of the Chairman and Chief Executive Officer and the officers, as well as any stock option plans and employee shareholding plans. This Committee also reviews proposals for appointments of directors, members of the committees and any Senior Executive Vice President.

Table of Contents**Employees**

As of December 31, 2002, we had approximately 3,440 permanent employees worldwide, as well as several thousand auxiliary field personnel on temporary contracts. Approximately 2,418 of our employees are involved in our Services segment and 1,022 in our Products segment. We have never experienced a material work stoppage and consider our relations with our employees to be good. We believe that our highly educated and experienced staff constitutes one of our most valuable assets. We permanently employ more than 2,500 technicians and persons holding engineering degrees and have developed a significant in-house training program.

In accordance with French law for employees employed under French contracts, we, and each of our French subsidiaries have a *Comité d'Entreprise* (Employees Representation Committee) consisting of representatives elected by our employees. The Employees Representation Committee reports regularly to employees, represents employees in relations with management, is consulted on significant matters relating to employee working conditions and is regularly informed of economic developments.

Our total workforce has decreased from 3,490 at December 31, 2001 to 3,440 at December 31, 2002 (before the effective transfer in February 2003 of 95 employees as a consequence of the sale of our borehole seismic division to Baker Hughes). Our total workforce at December 31, 2000 was 3,285. We are preparing for the future by intensifying on a permanent basis our training program, thus putting the emphasis on strengthening the technical and personal skills available to us. In France, the regulations pertaining to reduced working hours were implemented in their entirety in 2000.

Share Ownership

In accordance with French law, we are authorized annually by our shareholders at the extraordinary general meeting to issue ordinary shares for sale to our employees and employees of our affiliates who elect to participate in our *Plan d'Epargne Entreprise Groupe* (Group Employee Savings Plan) (the Group Plan). Our shareholders, at the extraordinary general meeting held on May 15, 2002, renewed our authorization to issue up to 500,000 ordinary shares in sales to employees and affiliates who participate in the Group Plan. We may offer ordinary shares pursuant to the Group Plan at a price neither higher than the average market price for the 20 business days preceding the date on which the Board of Directors set the commencement date for the offering nor lower than 80% of such average market price.

We intend to establish employee savings plans for our other international subsidiaries on terms similar to the Group Plan, subject to applicable local regulations, in order to issue ordinary shares to employees of such subsidiaries, particularly in North America and Europe.

Pursuant to resolutions adopted by our Board of Directors on May 5, 1997, January 18, 2000, March 14, 2001 and May 15, 2002, our Board of Directors has granted options to certain of our employees, executive officers and directors to subscribe for an aggregate of 725,100 ordinary shares. This total has been adjusted pursuant to French law and the terms of the options to total 738,310. Options with respect to 647,063 ordinary shares remained outstanding at March 31, 2003. The following table sets forth certain information relating to these stock option plans as of March 31, 2003:

Date of Board of Directors Resolution	Options Granted	Options Exercised (Ordinary Shares) at March 31, 2003	Options Outstanding at March 31, 2003 ⁽¹⁾	Exercise price per Ordinary Share	Expiration Date
May 5, 1997	100,000 ⁽²⁾	14,148	57,863 ⁽³⁾	61.03 ⁽³⁾	May 4, 2005
January 18, 2000 ⁽⁴⁾	231,000		214,250	49.90	January 17, 2008
March 14, 2001 ⁽⁵⁾	256,000		242,000	71.20	March 13, 2009
May 15, 2002 ⁽⁶⁾	138,100		132,950	43.47	May 14, 2010
Total	725,100	14,148	647,063		

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- (1) The stock option plans provide for the cancellation of the options if the holder is no longer our employee, director or officer. As of March 31, 2003 the number of options so canceled was 73,892.
 - (2) Pursuant to French law and the terms of the stock option plans, the numbers of options granted and the exercise price were adjusted following our rights offering in December 1999.
 - (3) As adjusted for our capital increase effected in December 1999 pursuant to French law.
 - (4) Options under the 2000 plan cannot be exercised before January 2003.
 - (5) Options under the 2001 plan vest by one-fifth each year from March 2001 and cannot be exercised before March 14, 2004.
 - (6) Options under the 2002 plan vest by one-fifth each year from May 2002 and cannot be exercised before May 16, 2005.
- As of March 31, 2003, options to purchase an aggregate of 326,897 ordinary shares were held by directors and executive officer members of our Management Committee. None of the directors and executive officers holds, on an individual basis, options giving right to acquire 1% or more of the outstanding capital. At the extraordinary general shareholders meeting to be held on May 15, 2003, a new stock option plan will be submitted to the approval of shareholders whereby options to purchase up to 7% of our share capital outstanding on the date of allocation may be granted in one or several allocations by the Board of Directors to certain of our employees and executive officers during the 38-month period following the plans approval.

Item 7: MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

Major Shareholders

The table below sets forth certain information with respect to (i) groups known to us to own a significant percentage of our securities and (ii) the total number of shares of our common stock (called ordinary shares) owned by our directors and officers as a group, as of March 31, 2003 and for the past three years.

Identity of Person or Group

	March 31, 2003		December 31, 2002		December 31, 2001		December 31, 2000	
	% of shares	% of voting rights	% of shares	% of voting rights	% of shares	% of voting rights	% of shares	% of voting rights
The Beacon Group	15.21	20.55	15.21	20.53	15.21	23.26	17.62	15.55
Institut Français du Pétrole	12.30	10.57	12.30	10.56				
ISISTechnip-Coflexip					12.30	18.80	14.24	20.96
Total Chimie	4.02	6.9	4.02	6.90	4.02	5.16	4.65	6.89
ShawCor	3.02	5.18	3.02	5.18	3.02	2.30	3.49	3.08
Louis Dreyfus Armateurs	2.65	2.27	2.65	2.27	3.54	2.71	4.10	3.62
Directors and Officers ⁽¹⁾	*	*	*	*	*	*	*	*
Public	62.8	54.53	62.8	54.56	61.91	47.77	55.89	49.9

* Less than 1%

- (1) As of March 31, 2003, the Directors and Officers held 21,352 ordinary shares. As of March 31, 2003, through the employees savings plan instituted in 1997, group employees held 57,300 ordinary shares corresponding to 0.49% of the share capital.

Our *statuts* provide that, as from May 22, 1997, each ordinary share that is fully paid and has been held in registered form by the same shareholder for a period of at least two consecutive years will entitle such shareholder to two votes at meetings of shareholders. As of March 31, 2003, The Beacon Group, IFP and Total Chimie held respectively 1,777,071, 1,436,622 and 469,392 fully paid ordinary shares in registered form for two consecutive years, giving Beacon Group Energy, IFP and Total Chimie respectively, 20.55%, 10.57% and 6.9% of the voting

power of the ordinary shares as of such date. Substantially all ordinary shares held by other

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shareholders are presently held in bearer form, and, even if converted to registered form, would not be eligible for double voting rights as of May 31, 2003. Therefore, excluding any ordinary shares issuable in connection with stock option plans or employee savings plans, Beacon Group Energy, IFP and Total Chimie would, if they sold no ordinary shares in the interim, hold in the aggregate approximately 38.02% of the voting power of the ordinary shares outstanding as of March 31, 2003.

Aker RGIF, the parent company of Aker Geo Seismic, which acquired, through contribution in kind, in January 2001, 1,591,417 shares representing 13.6% of our then outstanding capital, offered to the minority shareholders of Aker Maritime the opportunity to have their shares bought back by way of a distribution of CGG shares then held by Aker Maritime and a payment in cash. As a result thereof, as of January 2, 2002, Aker Maritime held less than 2% of our voting rights. To the best of our knowledge, Aker Maritime is no longer a shareholder in our company.

Total Chimie and ISIS executed a shareholders' agreement dated January 31, 1995. Pursuant to the shareholders' agreement, any sale to a third party of either signatory's stake in CGG that would reduce such signatory's holding to less than 10% of our total outstanding share capital as of January 1995 is subject to a right of first refusal by the other signatory. This right of first refusal does not apply in the event such sale is made to an affiliate of the selling signatory, provided that such affiliate becomes a party to the shareholders' agreement. The shareholders' agreement expired in July 2001.

On July 26, 2001, Technip, a French company, launched an offer to acquire ISIS, a holder of 12.3% of our outstanding common shares. As a result of the offer, Technip acquired 99.05% of the share capital of ISIS. In connection with this transaction, Technip, ISIS and Institut Français du Pétrole (IFP) entered into a memorandum of understanding, dated July 21, 2001 (as amended), pursuant to which ISIS agreed to hold our ordinary shares for one year from October 2001. During the subsequent three-year period, ISIS would either have the right to cause IFP to purchase our common shares currently owned by ISIS or be obligated to sell those common shares to IFP, in either case in exchange for Technip common shares, subject to market prices.

In June 2002, Technip-Coflexip and Isis merged, as a result of which our common shares owned by Isis were transferred to Technip-Coflexip. Pursuant to the terms of the memorandum of understanding between Technip-Coflexip and IFP, dated July 21, 2001, described above, Technip-Coflexip transferred its common shares of CGG to IFP on December 9, 2002.

Related Party Transactions

We provide geophysical services and equipment to oil and gas exploration and production subsidiaries of the TotalFinaElf Group pursuant to contracts entered into on an arm's-length basis. Total Chimie is a member of the TotalFinaElf Group. Aggregate operating sales to this group amounted to \$40 million in 2002, \$60 million in 2001 and \$56 million in 2000.

Interests of Experts and Counsel

None.

Item 8: FINANCIAL INFORMATION

Consolidated Statements and Other Financial Information

Reference is made to Item 18 for a list of all financial Statements and notes thereto filed as a part of this annual report.

Item 9: THE OFFER AND LISTING

Offer and Listing Details

The trading market for our outstanding ordinary shares is the Premier Marché of Euronext Paris S.A., where the ordinary shares have been listed since 1981. American Depositary shares, or ADSs, representing ordinary shares have been traded on the New York Stock Exchange since May 1997. Each ADS represents one-fifth of one

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ordinary share. The ADSs are evidenced by American Depositary receipts, or ADRs, issued by The Bank of New York, as Depositary, and are traded under the symbol GGY. The Bank of New York has advised us that as of December 31, 2002, there were 826,990 ADSs outstanding, representing 165,398 ordinary shares which are held of record by five registered holders. On the basis of this information, the ADSs held on such date in the United States represented approximately 1.41% of our outstanding ordinary shares. Our by-laws provide that fully paid ordinary shares may be held in either registered or bearer form at the option of the shareholders.

Price Information on Euronext Paris.

The tables below set forth, for the periods indicated, the reported high and low prices for the outstanding ordinary shares on Euronext Paris. In accordance with the European Economic and Monetary Union regulations, as of January 1, 1999 all shares listed on Euronext Paris are traded in euro rather than French francs.

The table below indicates the high and low market prices for the most recent six months:

	Price per Share ⁽¹⁾	
	High	Low
	(euro)	
2003		
March	14.92	9.11
February	13.69	11.01
January	17.00	12.67
2002		
December	22.95	14.95
November	22.40	16.80
October	20.50	13.35

Note:

(1) Source: Euronext Paris.

The table below indicates the quarterly high and low market prices for the two most recent financial years:

	Price per Share ⁽¹⁾	
	High	Low
	(euro)	
2003		
First Quarter	15.20	10.93
2002		
First Quarter	44.69	33.16
Second Quarter	50.05	33.02
Third Quarter	38.60	16.25
Fourth Quarter	22.95	13.35
2001		
First Quarter	76.50	60.00
Second Quarter	82.50	58.05
Third Quarter	66.00	30.80
Fourth Quarter	48.50	32.00

Note:

(1) Source: Euronext Paris.

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The table below indicates the high and low market prices for the five most recent financial years:

	Price per Share ⁽¹⁾	
	High	Low
	(euro)	
2002	50.05	13.35
2001	83.00	30.00
2000	92.00	46.00
1999	64.00	34.00
1998	173.00	45.00

Note:

(1) Source: Euronext Paris.

Price Information on the NYSE

The table below sets forth, for the periods indicated, the high and low sale prices for the ADSs representing our ordinary shares on the New York Stock Exchange:

The table below indicates the high and low market prices for the most recent six months:

	High	Low
	(U.S.\$)	
2003		
March	2.12	3.05
February	3.00	2.30
January	3.62	2.75
2002		
December	4.45	3.02
November	4.01	3.42
October	3.94	2.50

The table below indicates the quarterly high and low market prices for the two most recent financial years:

	High	Low
	(U.S.\$)	
2003		
First Quarter	2.91	2.70
2002		
First Quarter	7.90	6.00
Second quarter	9.00	6.40
Third Quarter	7.31	3.32
Fourth Quarter	4.45	2.50
2001		
First Quarter	14.00	11.19
Second Quarter	14.40	10.10
Third Quarter	10.89	6.45
Fourth Quarter	8.20	5.95

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The table below indicates the yearly high and low market prices on a yearly basis for the five most recent financial years:

	High	Low
	(U.S.\$)	
2002	9.00	2.50
2001	14 2/5	5 19/20
2000	15 1/2	9 1/8
1999	13 1/2	7 1/8
1998	37	10

Trading on Euronext Paris

Official trading of listed securities on Euronext Paris is transacted through stockbrokers and other financial intermediaries, and takes place continuously on each business day from 10:00 a.m. through 5:00 p.m., with a pre-opening session from 8:30 a.m. through 10:00 a.m. during which transactions are recorded but not executed. Any trade effected after the close of a stock exchange session is recorded, on the next Paris Bourse trading day, at the closing price for the relevant security at the end of the previous day's session. Euronext Paris publishes a daily Official Price List that includes price information concerning listed securities. Euronext Paris has introduced continuous trading during trading hours by computer for most listed securities. Shares listed on Euronext Paris are placed in one of three categories depending on the volume of transactions. Our outstanding ordinary shares are listed on the Premier Marché in the category known as Continu, which includes the most actively traded shares (with a minimum annual trading volume of 2,500 trades).

Plan of Distribution

Not applicable.

Markets

Our ordinary shares are listed on Euronext Paris. American Depositary Receipts representing our ordinary shares are listed on the New York Stock Exchange. Our 10 5/8% Senior Notes due 2007 are listed on the Luxembourg Stock Exchange.

Selling Shareholders

Not applicable.

Dilution

Not applicable.

Expenses of the Issue

Not applicable.

Item 10: ADDITIONAL INFORMATION**Share Capital**

Not applicable.

Memorandum and Articles of Association

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Our company is a *société anonyme*, a form of limited liability company, established under the laws of France, and we are registered with the Trade Register of Evry, France under the number 969 202 241. The following paragraphs set forth information concerning our share capital and provide related descriptions of

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certain provisions of our by-laws (*statuts*), and applicable French law. This description is only a summary and does not describe everything that our *statuts* contain.

Object and Purposes

Under Article 2 of our *statuts*, our object is to develop and operate, in any form and under any conditions whatsoever, any and all businesses relating to the geophysical surveying of soil and subsoil in any and all countries, on behalf of third parties or ourselves. Moreover, we may participate directly or indirectly in any business, firm or company whose object would be likely to promote our object. Finally, and generally, we may engage in any business, industrial, mining, financial, personal or real property operations relating directly or indirectly to the above object without limitation or reserve.

Directors

For a further description of the Board of Directors' powers under French law and our *statuts*, see Item 6: Directors, Senior Management and Employees.

Directors' Power to Vote on Agreements in Which They Are Materially Interested

In accordance with our *statuts*, agreements between us and a director are subject to prior authorization of the Board of Directors, unless the agreements are concluded on an arm's-length basis in the normal course of business. The Chairman of the Board of Directors must, on receipt of such authorization, then inform the statutory auditors (who prepare a report on the agreement) and submit the agreement to approval by a General Shareholders' Meeting. The shares of the director in question are not counted toward the quorum or in the vote. If the General Shareholders' Meeting refuses to approve the agreement, third parties may still rely on it, but the director may be held liable to us for any loss we incur under the agreement.

Directors' Power to Vote Compensation to Themselves

Under our *statuts*, the Shareholders' Meeting may provide for the payment to the directors of an annual fixed sum, the amount of which remains unchanged until further decision. The Board of Directors allocates this amount between its members in the manner it deems appropriate. Also, under our *statuts*, the Board of Directors elects a chairman, and the Board decides the amount of his compensation.

Under our *statuts*, the Board of Directors may appoint one chief executive officer in charge of the day to day management of the company. The Board of Directors determines the chief executive officer's compensation.

Borrowing Powers Exercisable by the Directors

Under our *statuts*, directors other than legal entities are forbidden to take out loans from CGG in any form whatsoever or to have CGG grant them an overdraft in current account or otherwise. It is also forbidden to have CGG stand as surety for them or back their commitments in respect of third parties. This prohibition also applies to chief operating officers and to permanent representatives of legal-entity directors. It also applies to the spouses, lineal forebearers or descendants of the persons referred to in this paragraph and also to any trustee.

Under article L.225-43 of the French Commercial Code, directors and executive officers may not borrow money or obtain a guarantee from us. Any such loan or guarantee would be void and may not be relied upon by third parties.

Retirement of Directors Under an Age Limit Requirement

Under our *statuts*, the Chairman of the Board's term of office ends, at the latest, after the annual Ordinary Shareholders' Meeting following the date on which he reaches the age of 65. However, the Board of Directors may further extend the office of the Chairman, one or more times for a total period not to exceed three years. In accordance with article L.225-19 of the