

Risk Factors

Risks Related to Our Business

Our results of operations can be significantly affected by 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 each of the years ended December 31, 2004, 2003 and 2002, 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. Our exposure to fluctuations in the euro/ U.S. dollar exchange rate has increased considerably over the last few years due to increased sales outside of Europe.

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, a depreciation of the U.S. dollar against the euro (such as has occurred since the second half of 2003) harms our competitive position against that of other companies whose costs and expenses are denominated in U.S. dollars. For financial reporting purposes, such depreciation negatively affects our reported results of operations since U.S. dollar-denominated earnings that are converted to euros are stated at a decreased 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.

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 net income of €15.7 million and €17.4 million, respectively, marking a return to profitability. After recording a net loss of €10.4 million in 2003, primarily due to a charge for the restructuring of our land seismic acquisition business unit, we recorded net income of €11.1 million in 2004. 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 lead to profitability in future years.

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. In addition the tax treatment of certain of our complex transactions is difficult to predict with certainty, and, although we believe that we have made appropriate provisions for taxation, the imposition of tax on such transactions could require cash payments by us.

We and our subsidiaries and our affiliated entities also conduct business in countries known to experience government corruption. We are committed to doing business in accordance with our code of ethics but there is a risk that we, our subsidiaries or affiliated entities or their respective officers, directors, employees and agents may take action in violation of applicable laws, including the Foreign Corrupt Practices Act of 1977. Any such violations could result in substantial civil and/ or criminal penalties and might adversely affect our business and

results of operations or financial condition. See “Directors, Senior Management and Employees – Board Practices – Audit Committee”.

Future businesses and technologies that we may acquire may be difficult to integrate, disrupt our business, dilute stockholder value or divert management attention.

An aspect of our current business strategy is to seek new businesses, technologies and products to broaden the scope of our existing and planned product lines and technologies. For example, we acquired several manufacturers of seismic products in 2003 and 2004 in order to expand Sercel’s product line. We also believe that the seismic industry should continue to consolidate with the goal of exploiting synergies and to promoting the emergence of seismic operators possessing larger financial and technological bases. Although we regularly explore opportunities with respect to possible acquisitions of businesses, technologies or products, we do not currently have any understandings, commitments or agreements relating to any such material transactions. Future transactions of this type could result in the incurrence of debt and contingent liabilities and an increase in amortization expenses related to goodwill and other intangible assets, which could have a material adverse effect upon us.

Risks we could face with respect to recent and future acquisitions include:

- difficulties in the integration of the operations, technologies, products and personnel of the acquired company;
- diversion of management’s attention away from other business concerns; and
- expenses of any undisclosed or potential legal liabilities of the acquired company.

The risks associated with acquisitions could have a material adverse effect upon our business, financial condition and results of operations. We cannot assure that we will be successful in consummating future acquisitions on favorable terms, if at all.

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.

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. For example, under specific circumstances, we may extend the length of payment terms we grant to our customers. 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.

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 in our industry, 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 geosciences 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 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. We hold or have applied for approximately 140 patents, in various countries, for products and processes. These patents last for between four and 20 years, depending on the date of filing and the protection accorded by each country. In addition, we enter into confidentiality and license agreements with our employees, customers and potential customers 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 depend on attracting and retaining qualified employees to develop our business know-how.

Our results of operations depend in part upon our business know-how. We believe that development 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 develop and protect our know-how.

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 2003, our three largest clients accounted for 14.7%, 8.5% and 5.5% of our operating revenues, respectively. During 2004, our two largest clients accounted for 6.7% and 6.1% of our operating revenues, respectively. The loss of a substantial amount of the business of any of these clients could have a material adverse effect on our operating revenues and our business.

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.

We will be required to adopt new accounting standards as of and for the three months ended March 31, 2005 and subsequent fiscal periods that may materially change our financial statements and financial reporting.

European Union regulations currently require that all companies whose securities are listed in the European Union must apply IFRS in preparing their financial statements for financial years beginning on or after January 1, 2005. As a result, we will use IFRS in preparing our financial statements for the three months ended March 31, 2005 and subsequent financial periods. When prepared in accordance with the new IFRS standards in fiscal year 2005, our financial statements may differ materially from our financial statements prepared in accordance with French GAAP, particularly with respect to our accounting treatment of development costs and goodwill amortization. Consequently, the methods used by the financial community to assess our financial performance and value our ordinary shares could be affected. See "Management's Discussion and Analysis of Financial Condition and Result of Operations – Adoption of IFRS Accounting".

Risks Related to our Industry

We depend on capital expenditures by the oil and gas industry, and reductions in such expenditures have had, and may in the future 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 and by expectations regarding future oil and gas prices. Oil and gas prices may fluctuate based on relatively minor changes in the supply and demand for oil and gas, expectations regarding future 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 political developments in the Middle East, economic growth levels and the ability of 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. However, despite oil prices above \$30 per barrel since mid-2003, oil companies only began to significantly increase their demand for seismic services in mid-2004, due to uncertainty about future price levels for oil and gas. We believe that global geopolitical uncertainty, particularly following the events of September 11, 2001 and the conflict in Iraq in 2003, harmed the confidence and visibility that are essential in our clients' long term decision-making processes. As a consequence, they have delayed or cancelled many projects. Continued geopolitical uncertainty in the Middle Eastern producing region (where we are particularly active) could lead oil companies to delay or cancel additional geophysical projects. Any events that affect worldwide oil and gas supply, demand or prices or that generate uncertainty in the market 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 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. We are subject to particularly intense competition in the land seismic acquisition market, notably from Chinese companies that have entered the market and have expanded their international market share. 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, as well as changes in government regulations. In addition, if geophysical service competitors increase their capacity in the future (or fail to reduce capacity if demand decreases), the excess supply in the seismic services market could apply downward pressure on prices.

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 could result in significant operating losses.

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.

Risks Related to our Indebtedness

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, 2004, our total consolidated long-term debt, consolidated total assets and shareholders' equity were €267.2 million, €939.6 million and €395.7 million, respectively.

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, 2004, we had no outstanding borrowings under our syndicated credit facility, leaving us with U.S.\$60 million of availability thereunder. We have availability of €10.2 million under all other 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.

To service our indebtedness, we will require a significant amount of cash. Our ability to generate cash depends on many factors beyond our control.

Our ability to make payments on and refinance our indebtedness and to fund planned capital expenditures will partly depend on our ability to generate cash in the future. This, to a certain extent, is subject to general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control.

We cannot assure you that our business will generate sufficient cash flow from operations, that we will realize operating improvements on schedule, that we will find purchasers for the assets we intend to sell or that future borrowings will be available to us in an amount sufficient to enable us to pay our indebtedness or to fund our other liquidity needs. If we are unable to satisfy our debt obligations, we may have to undertake alternative financing plans, such as refinancing or restructuring our indebtedness, selling assets, reducing or delaying capital investments or seeking to raise additional capital. We cannot assure you that any refinancing or debt restructuring would be possible, that any assets could be sold or, if sold, the timing of the sales and the amount of proceeds realized from those sales, or that additional financing could be obtained on acceptable terms.

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

As of December 31, 2004, we had total long-term debt of €267.2 million and total shareholders' equity of €395.7 million. We may need to borrow additional amounts in the future to meet our anticipated working capital and capital expenditure needs. In addition, our 10⁵/₈% senior notes and our new U.S.\$60 million syndicated credit facility, which was signed on March 12, 2004 and replaces our previous syndicated credit facility, contain restrictive covenants. These covenants include 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. Complying with the restrictions contained in some of these covenants requires us to meet certain ratios and tests, notably with respect to consolidated interest coverage, total assets, net debt, equity and net income. The requirement that we comply with 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, fund 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 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 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.

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 drawdown 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 the main part of our financial debt at December 31, 2004 consisted of a bond issue maturing in November 2007 and bearing a fixed interest rate and subordinated bonds convertible into new ordinary shares or redeemable into new shares and/or existing shares and/or in cash maturing in November 2012 and also 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.

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, 91300 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.

Business Overview

We believe 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 57% and Products accounted for 43% of our consolidated revenues for the year ended December 31, 2004. We generate revenues (by location of customers) on a worldwide basis. For the year ended December 31, 2004, 30% of our consolidated revenues were from the Americas, 40% from the Middle East and the Asia-Pacific region, 20% from Europe and CIS, and 10% from Africa.

Industry Conditions

Overall demand for geophysical services and equipment 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.

We believe that the medium-term outlook for the geophysical services sector, particularly the offshore segment, and the demand for geophysical products is fundamentally positive for a number of reasons:

- Renewed geopolitical stability in the aftermath of the Iraq conflict, while uncertain, may gradually restore confidence and visibility in the oil and gas industry, improving the prospects for new projects by our clients.
- Economic growth, particularly in more active regions such as Asia (notably China and India), is generating increased energy demand and leading to higher energy prices and increased exploration efforts.
- The need to replace depleting reserves and maximize the recovery of oil in existing reservoirs should encourage capital expenditures by our clients in exploration and production, which we expect will benefit the seismic industry.
- The scope of application of geophysical services has considerably increased over the last several years as a result of significant research and development efforts. Geophysical services can now potentially be applied to the entire sequence of exploration, development and production as opposed to exploration only. This is particularly true with technologies such as 4D (time lapse seismic data). The broader scope for services could increase the accessible markets for the geophysical industry.