

# SCHLUMBERGER ANNUAL REPORT 1992



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FRONT COVER: THE DSI® DIPOLE  
SHEAR SONIC IMAGER TOOL READY  
TO LOG A WELL IN ABU DHABI.  
FROM LEFT ARE RAMIRO APONTE,  
GENERAL FIELD ENGINEER, MUATAZ  
MAHMOUD, JUNIOR OPERATOR,  
AND SENIOR OPERATORS BABUR-  
AJAN NARIKKODAN, M. V. SUREN-  
DRAN, AND K. LAKSHMANARAJAN.  
A NEW TECHNIQUE OF INTERPRET-  
ING DSI DATA ALLOWED THE CLIENT  
TO IMPROVE HYDROCARBON  
RECOVERY, DOUBLING THE NUM-  
BER OF DSI SURVEYS PER MONTH  
IN ABU DHABI.

## Schlumberger in Brief

	1992	1991	1990
Operating Revenue	\$ 6,331,509,000	\$ 6,145,171,000	\$ 5,306,217,000
Net income	\$ 661,603,000	\$ 815,652,000 <sup>1</sup>	\$ 570,281,000
Net income per share	\$ 2.75	\$ 3.42 <sup>1</sup>	\$ 2.40
Dividends declared per share	\$ 1.20	\$ 1.20	\$ 1.20

<sup>1</sup>Includes a gain of \$177 million (\$0.74 per share) on the sale of an investment and a \$25 million (\$0.10 per share) charge for restructuring the North American oilfield operations.

## Letter from the Chairman

**Net income from operations** held level with 1991 and earnings per share declined 1% after excluding the gain on the sale of an investment of \$0.74 per share and a restructuring charge of \$0.10 per share taken in 1991.

1992 turned out to be a more difficult year than we had expected. The U.S. economy did not improve as hoped. Germany, which carried the European economies in 1991, struggled with the cost of reunification and began to falter under the weight of high interest rates. In Japan, lack of confidence caused by the financial and political scandals precipitated an unexpectedly sharp recession. The result for the global economy was a year of little growth and a flattening demand for energy. Many of our customers reacted to this worsening situation by reducing investments and postponing further developments.

Despite a 12% decline in active drilling rigs worldwide, Schlumberger Oilfield Services revenue was level with 1991. GECO-PRAKLA, led by strong activity in the North Sea, was our fastest growing operation. Wireline & Testing—Eastern Hemisphere and Latin America was a strong performer in an increasingly difficult business environment.

Measurement & Systems revenue increased 8%. Lifted by Water & Gas sales in the U.K., Germany, and France, Schlumberger Industries revenue increased 10%. Remote meter reading products, gas regulation, and metering services were key to this growth. During 1992, India and Portugal were added to the growing list of countries where our metering products are manufactured. Schlumberger Technologies revenue increased 5%. Led by sales of the ITS 9000 automatic test equipment family, ATE revenue increased 26%. Smart Cards & Systems and Urban Terminals & Systems continued to expand their operations.

**1992 was an important year** for Schlumberger as the strategies we have pursued since 1988 are beginning to have a profound effect on the company and its operations:

First, in Health, Safety and Environment, strong management commitment has increased the participation of all employees in accident prevention. To reduce road accidents—service organizations' greatest risk—defensive driver training has been stepped up and our vehicles are being equipped with electronic performance monitors. To reduce risk to the environment, all of our facilities throughout the world have been or are being upgraded and hazardous materials and processes are being phased out.

Second, the drive to refocus on product lines where we can have worldwide leadership intensified with three significant acquisitions.

- In January 1993, the remaining 50% of Dowell Schlumberger was acquired from Dow Chemical. This enormously successful joint venture, formed 33 years ago, has grown into a leading worldwide franchise in the important well cementing and stimulation market. With oil companies emphasizing improved productivity of their existing fields, Dowell Schlumberger has excellent potential for growth.
- In November 1992, we acquired from the Raytheon Company two oilfield service businesses—Seismograph Service Limited (SSL) and GeoQuest Systems, Inc. The addition of SSL to our GECO-PRAKLA seismic group firmly establishes Schlumberger as a major geophysical service company. GeoQuest, a leader in the fast-growing geoscience workstation market, brings critical



strengths to our existing Data Services business. The resulting merger, operating as GeoQuest, will take advantage of Schlumberger's worldwide presence to provide our customers with unmatched software products and services. GeoQuest software systems will help customers in their increasing need to integrate all types of oilfield data.

Indeed, the last 20 years has seen a growing emphasis on integration of oilfield data to improve exploration and development efficiency. Today's flat oil prices have motivated oil companies to address the human and organizational challenges of integration. By the end of the decade, we expect that integration will have transformed the economics of oil exploration and development, and will have a profound effect on what the oil companies expect from the oil service industry. Schlumberger, with its extensive range of oilfield services and its commitment to improving efficiency through the development of new technology, is a willing participant in this transformation.

At Measurement & Systems, we are following a similar refocusing strategy. The difficult economic environment in 1992 has made it very clear which product lines we can continue to develop; moreover, this approach will continue as we strive to improve the efficiencies of our businesses.

Third, the other thrusts of the Five-Year Plan are gathering momentum as shown in the feature article of this report. We are more focused on our customers, have improved the quality and time to market of our products and services, and continue to develop a truly international work force based on equal opportunity. After only five years, these important changes in our way of doing business are already taking permanent root and contributing to our competitive edge. Our successes to date are a source of motivation to redouble our efforts in these directions.

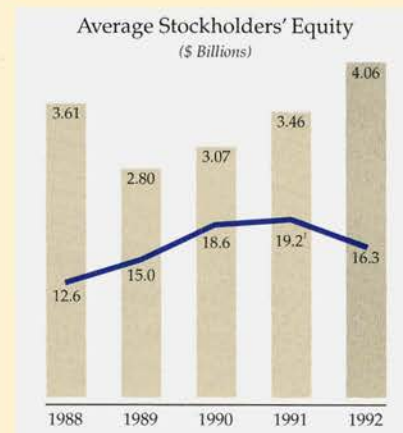
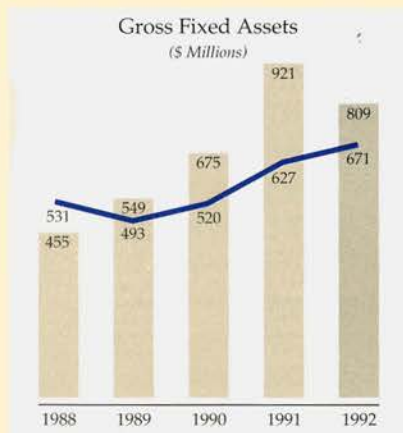
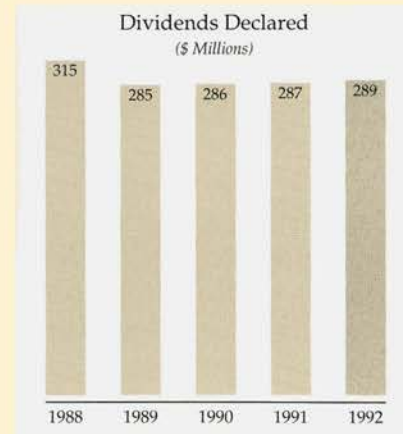
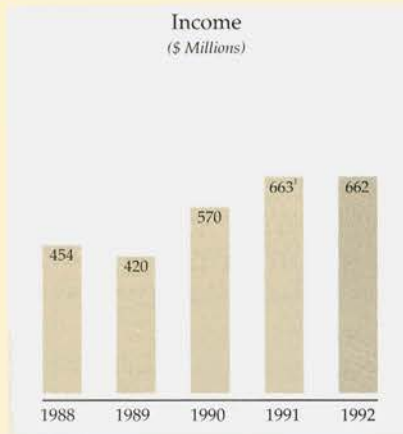
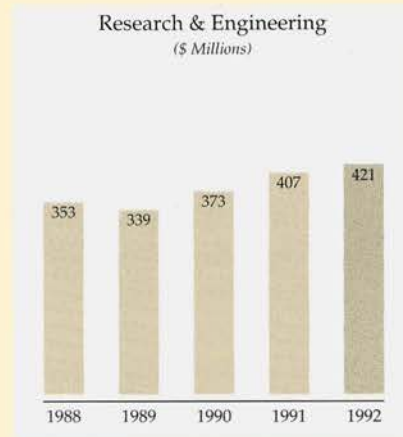
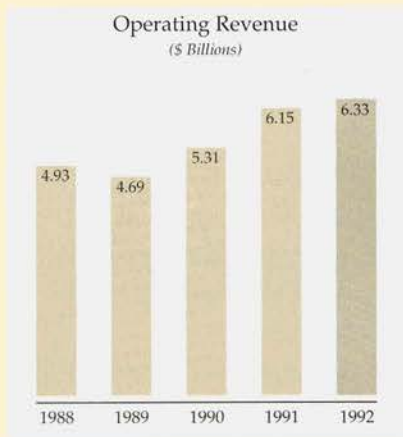
The post-Cold War world has revealed a situation full of contradictions where unrealistic expectations have been replaced by unwarranted pessimism. It was inevitable that the breakdown of the Soviet empire, which had played such a major role in the world during most of this century, would cause instabilities and uncertainties. But its collapse removes one of the main stumbling blocks to human progress and world stability. The world can now concentrate on one of the root causes of global instability—the huge gap in living standards between the industrialized nations and most of the rest of the world. Improved living standards in developing countries will require significant increases in energy consumption even if the latest energy efficient technology is deployed. Fossil fuels, in particular oil and gas, will be an important part of the extra energy needed. We believe, therefore, that our activities in oil and gas exploration and in energy management will play key roles in future expansion of the global economy.

Although there has been a flattening of demand in the OECD countries in the last year, the underlying worldwide trends are strong, and we are positioning ourselves with the people and products to benefit from the growth we expect for the rest of the decade.



*Euan Baird*  
*Chairman & Chief Executive Officer*  
*January 27, 1993*

ALL CHARTS REFER TO CONTINUING OPERATIONS



Depreciation —  
Additions —

— Return on Equity %

<sup>1</sup>Excludes a gain of \$177 million (\$0.74 per share) on the sale of an investment and a \$25 million (\$0.10 per share) charge for restructuring the North American oilfield operations.



## Financial Review

### Management's Discussion and Analysis of Results of Operations

Operating Revenue	(Stated in millions)		
	1992	1991	1990
Oilfield Services	\$ 3,849	\$ 3,847	\$ 3,240
Measurement & Systems	\$ 2,483	\$ 2,298	\$ 2,066

#### ● Oilfield Services

Worldwide oilfield activity declined in 1992 as the average number of drilling rigs worldwide fell 12%. North American oilfield activity declined sharply in the first half of 1992 before rising significantly in the second half of the year in response to expiring U.S. tax incentives and firmer prices for natural gas. Nevertheless, in 1992 North American drilling rigs were 17% below the prior year. Outside North America, drilling rigs declined 6% from 1991 levels with particular weakness in the North Sea. A weaker U.S. dollar compared with many European currencies and slack oil demand worldwide due to recession in parts of North America, Europe, and the Far East, were the chief factors in this decline as many oil companies postponed initiation of projects awaiting improving business conditions.

Despite the significant decline in rig activity, Oilfield Services revenue was flat with 1991 as continued commercialization of proprietary oilfield technology, firmer pricing in some markets, and internal growth offset much of the decrease in rigs.

In 1991, Oilfield Services revenue increased 19%, 11% on a comparable basis.

#### ● Wireline, Testing & Anadrill

Revenue in 1992 was 6% below 1991, reflecting the dramatic oilfield activity decline in North America, partly offset by growth in the Eastern Hemisphere and Latin America.

Commercial introduction of MAXIS 500\* Multitask Acquisition and Imaging Systems continued, reaching 176 units active worldwide at year-end while the number of proprietary downhole MAXIS logging tools doubled in 1992. Two new MAXIS downhole sensor systems, the AIT\* Array Induction Imager Tool and the ARI\* Azimuthal Resistivity Imager, were introduced in 1992 and met with enthusiastic client response. These higher resolution and deeper reading imaging measurements provide formation details that cannot be seen with conventional measurements. Another MAXIS service, the MDT\* Modular Formation Dynamics Tester introduced in 1992, brings a number of environmental, safety, and cost advantages over full-scale drillstem testing.

Logging While Drilling revenue grew 57% worldwide. These services help to steer the drillstring for optimum trajectory relative to subsurface geologic structure. At year-end, measurement-while-drilling tools with advanced sensors located within a meter of the bit were being field tested on offshore wells.

In 1991, revenue increased 5% over 1990 with significant growth in the Eastern Hemisphere and Latin America.

#### Wireline & Testing—North America

Revenue in 1992 declined 32% as the average number of active rigs fell 17%, 14% on land in the U.S. and 36% in the Gulf of Mexico. In June 1992, the U.S. rig count reached a low of 592, a depressed activity level unseen since the 1940s. Conversely, by year-end, rig count had recovered sufficiently to improve 21% over year-end 1991.

The Selectric\* and Pivot Gun\* systems are perforating innovations that improve operating efficiency and well productivity in both new and workover wells. The Selectric system permits many widely separated, thin zones to be perforated in one descent into the well. The Pivot Gun's shaped charges can be folded to pass through tight restrictions and opened in the well casing below. With shot penetration almost twice that of comparable perforating guns, Pivot Gun perforations offer the potential for increased production in both recompleted zones and new productive intervals.

In 1991, revenue declined 8% on a 14% decrease in the average number of active drilling rigs.

#### Wireline & Testing—Eastern Hemisphere and Latin America (Australasia, Africa, Far East, Middle East, Europe, Latin America)

Despite a 6% decline in the average number of active drilling rigs, revenue in 1992 improved 3% reflecting strong growth in the Middle East.

The introduction of RST\* Reservoir Saturation Tool, a MAXIS service, is providing more accurate formation evaluation in producing wells without shutting in production. The 1<sup>11/16</sup>-inch tool can log below small tubing strings and is often combined with production logging sensors for complete reservoir monitoring in a single logging run in the well.

To eliminate the need for expensive rig shut-down during perforating operations, S.A.F.E.\* perforating gun systems are being used offshore. Unlike conventional detonators, the S.A.F.E. system is unaffected by stray voltages generated by rig operations, radar, navigation equipment, and power lines.

In 1991, revenue improved 9% as activity was up in all areas except the Middle East and Southeast Asia.

#### Anadrill

Worldwide revenue declined 10% as modest growth in Europe and Africa was more than offset by the activity downturn in North America.

PowerPak\* steerable motors, developed by Anadrill, added significant revenue in directional drilling. These proprietary motors are more reliable, less costly to operate, and dramatically improve directional drilling performance. The SLIM1\* directional drilling service continued to show strong growth.

In 1991, revenue improved 21% with strong activity in Europe, Africa, and Latin America.



### *GeoQuest*

Strong growth was fueled by increased demand for the CHARISMA\* interpretation workstation and the commercialization of Geoshare\*, a software product that allows data transfer between geoscience applications from multiple vendors.

On November 20, 1992, GeoQuest Systems, Inc. was acquired from the Raytheon Company. GeoQuest Systems develops and markets integrated workstation software for geophysical and petroleum applications worldwide. Schlumberger Data Services, GeoQuest Systems, and FINDER Graphics were combined into a new business group named GeoQuest, whose mission is to provide oil companies with state-of-the-art software and computer services that will assist them in maximizing the value of exploration and production data. The merger will result in improved service from over 70 data services centers worldwide, and new products and technology for geoscientists from Schlumberger's worldwide research and engineering effort.

### ● *Drilling & Pumping Services*

#### *Sedco Forex*

Revenue increased 1% compared to 1991 as dayrates improved 6%, despite difficult market conditions following the collapse of both the Gulf of Mexico and the North Sea markets in the first half of the year. Dayrate improvements were, however, offset by decreased rig utilization.

The 1992 average Sedco Forex utilization rate was 71% compared to 81% in 1991: land rigs decreasing from 72% to 61% and offshore rigs from 89% to 80%. The industry-wide competitive offshore rig fleet utilization rate decreased from 75% to 69% over that period on an average of 513 rigs.

The Sedco Forex fleet at December 31, 1992 consisted of 75 rigs: 39 offshore and 36 land. During 1992, one semisubmersible, the *Sovereign Explorer*, two swamp barges, and the remaining 50% joint venture interest of the *Sedco 712* were acquired. Semisubmersible *Sedco H*, tender barge *Searex III*, swamp barge *Belle Isle*, and one land rig were retired. Jackup *Trident VII* was sold during the same period. At the end of 1992, three land rigs were stacked.

In 1992 Sedco Forex mobilized the dynamically positioned semisubmersible *Sedco 710* to Brazil from the North Sea for a long-term contract in the deep waters of the Albacora and Marlim fields.

During the year, *Sedco 702* and *Sedco 704* commenced operations on Tender Assisted Drilling (TAD) projects in Southeast Asia and the North Sea. Sedco Forex has a leadership position in the small but growing TAD market, in which a semisubmersible rig provides certain support services to a fixed offshore drilling and production structure.

In 1991, Sedco Forex revenue increased 37% as a result of higher rig utilization, higher dayrates, and higher rig count.

### *Dowell Schlumberger (50% owned)*

On January 29, 1993, Schlumberger completed the purchase of Dow Chemical's 50% interest in the Dowell Schlumberger group of companies.

Revenue was slightly above 1991, following a 9% growth over the previous year.

North American revenue declined 6% from 1991. A vigorous recovery in the latter part of the year, fueled by expiring U.S. tax incentives, increased fourth quarter revenue 36% over the same period last year.

Outside North America revenue was 5% ahead of last year, with improvement in all regions except the Far East. Strongest growth was registered in the Middle East, which was led by a significant expansion in Iran, and in Latin America by Mexico, Argentina, and Venezuela.

Coiled Tubing applications continued to grow in 1992 and included two successful field trials drilling wells using Coiled Tubing. Drilling Fluids Services successfully introduced MUDSCOPE\* mud monitoring services on several drilling projects, which substantially reduced the cost of mud to the customer. In Cementing, demand continues to grow for the VIP Mixer\*, a fully process-controlled, high energy mixing system that produces precise slurry quantities at previously unattainable levels of quality, thereby avoiding potential environmental disposal problems. Driven by Dowell Schlumberger's commitment to working closely with customers to find joint solutions to their problems, Design and Evaluation workstations, located in customer offices, led to a large number of strategic alliances with clients and confirmed Dowell Schlumberger's reputation as the technology leader in Pumping Services.

Industrial Cleaning revenue was 4% below 1991, as recessionary conditions in North America and Western Europe bit deeply into customer maintenance spending.

### ● *Seismic Services*

GECO-PRAKLA revenue was 18% above 1991, 16% excluding the operations of Seismograph Service Limited, a group of companies acquired from the Raytheon Company on November 20, 1992.

Marine revenue was 33% higher on strong activity in the North Sea and rapidly growing operations in Southeast Asia. During the year, three seismic acquisition vessels were added to the fleet: *GECO Emerald*, our latest purpose-built vessel was launched in March and is now operating in Southeast Asia, and *SEISQUEST* and *SEISVENTURER* acquired with Seismograph Service Limited. Several older 2D vessels were derigged or reassigned so that, at year-end, the marine fleet consisted of 21 vessels. In addition, three state-of-the-art vessels are under construction, *GECO Topaz*, *GECO Diamond*, and *SEISRANGER*, and are scheduled for commissioning in the first half of 1993. The deployment of *NESSIE 3\**, a new proprietary recording sys-



tem, and new proprietary, onboard Data Acquisition and Navigation software systems, TRIACQ\* and TRINAV\*, have substantially reduced turn-around-time of data acquired. Deployment of these systems combined with the investment in modern purpose-built seismic vessels firmly positions GECO-PRAKLA as a leader in marine acquisition technology.

Shallow Water and Transition Zone revenue was 91% higher with significant growth in Southeast Asia, Africa, and South America.

Land revenue was 3% above 1991 and included initial snow streamer activity in Norway and the deployment of crews to the Middle East. With its strong base in Africa, the addition of 12 land crews from Seismograph Service Limited complements GECO-PRAKLA's worldwide distribution of operations and offers opportunities for organizational synergy.

Data processing revenue was 4% below 1991 as a marked softening in prices more than offset substantial gains in the volumes of data processed. The acquisition of Seismograph Service Limited adds 11 data processing centers to GECO-PRAKLA's processing network.

Sales of Non-Exclusive Surveys declined 11% as stronger sales from the Norwegian 14th Round License were more than offset by lower interest in the U.K. 14th Round License and a soft market in the Gulf of Mexico.

Under the purchase agreement for Prakla-Seismos AG from the Federal Republic of Germany, Schlumberger acquired the remaining 49% interest in the company on December 31, 1992. Schlumberger previously acquired 51% of Prakla-Seismos on January 2, 1991.

In 1991, led by significant increases in marine activity, GECO-PRAKLA revenue was 87% higher, 25% excluding Prakla-Seismos.

#### ● Measurement & Systems

Revenue of these companies increased 8% in 1992 following an 11% increase in 1991. Schlumberger Industries improved profitability during 1992. Despite a very strong fourth quarter, Schlumberger Technologies registered a loss for the year.

#### ● Schlumberger Industries

Measured in U.S. dollars, revenue and orders rose by 10% and 6%, respectively, in 1992. In 1991, excluding the contribution of a recently acquired German gas meter company, revenue increased by 6% while orders were up 7%.

#### Electricity Management

In 1992, revenue and orders rose by 5% and 6%, respectively, compared with 1991.

In Europe, revenue increased despite flat demand due to a well-positioned product line. In the recession-hit U.K., utilities increased demand for top-of-the-range, solid-state prepayment meters and systems for bulk metering. In Italy, the national utility's program for installation of integrated meters increased overall demand, while in Austria, demand was up for new electronic meters with increased capacity for multi-tariff metering. Recovery in demand for all metering

products occurred in South America. Recession and shortage of financial resources in Eastern Europe triggered a downturn in activity in Hungary.

North American revenue was lower mainly reflecting the continued recession in Canada, particularly in the industrial meter market. The U.S. was also lower on weaker shipments of industrial meters.

In 1991, revenue was level and orders rose by 2% compared with 1990.

#### Water & Gas

Revenue and orders were up 17% and 10%, respectively, compared with 1991.

In Europe and Asia, all geographic areas reported gains in revenue. In the U.K., shipments rose substantially driven by accelerated demand from the national utility for both industrial and residential products, especially for budget prepayment meters. Excellent growth was reported for gas products in Germany where progressive industrialization generated higher demand for gas metering stations and domestic meters. Elsewhere in North Europe, production volumes remained stable, despite difficult economic conditions. The expansion of gas service activities accelerated markedly in France and Italy.

In North America, although overall growth was moderate in a recessionary environment, there were significant increases in demand for meters with remote reading capability.

In 1991, revenue and orders were up 28% and 32%, respectively, compared with 1990, of which the acquisition in Germany accounted for nearly half of the increases.

#### Defense Systems (France)

Revenue, in 1992, increased by 8% while orders fell by 8%. An increase in telemetry activity more than compensated for the fall in demand for linear recorders. The first ten rotary head recorders were delivered in the year. The fall in orders resulted from a decline in the market for test and defense recorders.

In 1991, revenue and orders increased 9% and 2%, respectively.

#### Security & Control

In 1992, revenue decreased 15% while orders were up 7%. Following the Persian Gulf crisis and the related climate of insecurity, demand for luggage scanners fell sharply and was only partially offset by revenue on the Eurotunnel freight scanning project. Orders benefited from booking a significant export order for electrical testers and a Sycoscan\* for the port of Le Havre.

In 1991, revenue and orders increased by 14% and 73%, respectively.

#### ● Schlumberger Technologies

Schlumberger Technologies revenue improved 5% in 1992 following a 7% increase in 1991. Orders were 4% and 6% higher, respectively.



### Automatic Test Equipment

Compared to 1991, revenue improved 26% and orders were 13% higher. Gains were achieved for Component Test as shipments of the 100 megahertz ITS 9000FX\* Series Component Tester more than doubled. Activity remained strong for the 20 megahertz s1650 VLSI Tester. The Diagnostic product line shipped the first IDS 7000\* Focused Ion Beam systems during the fourth quarter.

Revenue and orders declined 13% and 7%, respectively, in 1991.

### Applicon

Revenue and orders were down 22% and 27%, respectively. Activity was severely impacted by the worldwide economic slowdown. Initial deliveries of the Bravo\* V4.0 were made late in the year. This version, the first release under the Crescendo\* Product Plan, includes a new user interface, a conceptual modeler employing patented technology, and significant enhancements to manufacturing solutions.

Revenue was down 5% while orders were 2% higher in 1991.

### Retail Petroleum Systems

Revenue and orders improved 9% over 1991. During the second quarter, the acquisition of a gasoline dispenser manufacturer in the U.S. was completed.

In 1991, revenue and orders were 16% and 12% higher, respectively.

### Test & Transactions

Revenue increased 8% while orders were up 12%. Smart Cards & Systems and Urban Terminals & Systems continued to sustain rapid growth rates, especially with pay phones in the Czech Republic and Scandinavia and parking meters in Germany and the U.K. Despite new products, Board Test results were depressed by worldwide reductions in defense spending.

In 1991, revenue gained 15% while orders were up 5%.

### ● Net Income

(Stated in millions except per share amounts)

	1992		1991		1990	
	Amount	Per Share	Amount	Per Share	Amount	Per Share
Net Income	\$ 662	\$ 2.75	\$ 816	\$ 3.42	\$ 570	\$ 2.40

Net income in 1991 included a \$177 million (\$0.74 per share) after-tax gain on the sale of an investment and a \$25 million (\$0.10 per share) charge for restructuring the North American oilfield operations.

Excluding the items described above, net income was flat in 1992. Net income of Oilfield Services decreased due to declines at Wireline & Testing North America and Dowell Schlumberger, partially offset by improved results at Wireline & Testing outside North America, Sedco Forex, and GECO-PRAKLA. Net income for Schlumberger Industries was up, while Schlumberger Technologies had a loss in 1992 compared to a profitable 1991.

### ● Research & Engineering

Expenditures by business sector were as follows:

	(Stated in millions)		
	1992	1991	1990
<b>Oilfield Services</b>			
Wireline, Testing & Anadrill	\$ 195	\$ 196	\$ 173
Drilling & Pumping Services	32	34	30
Seismic	33	17	14
	<b>260</b>	<b>247</b>	<b>217</b>
<b>Measurement &amp; Systems</b>			
Schlumberger Industries	86	86	78
Schlumberger Technologies	75	74	78
	<b>161</b>	<b>160</b>	<b>156</b>
	<b>\$ 421</b>	<b>\$ 407</b>	<b>\$ 373</b>

### ● Interest Expense

Interest expense decreased \$25 million in 1992 and increased \$16 million in 1991. The decrease was due to a decline in both average rates and average outstanding balances. The increase in 1991 was due to the effect of higher average outstanding balances, only partially offset by lower average rates.

### ● Liquidity

A key measure of financial position is liquidity, defined as cash plus short-term investments less debt. The following table summarizes the Company's change in consolidated liquidity for each of the past three years:

	(Stated in millions)		
	1992	1991	1990
Net income	\$ 662	\$ 816	\$ 570
Depreciation & amortization	709	660	552
Gain on sale of investment	-	(177)	-
Other	(86)	(91)	(110)
	<b>1,285</b>	<b>1,208</b>	<b>1,012</b>
Increase in working capital requirements	(189)	(109)	(34)
Fixed asset additions	(809)	(921)	(675)
Dividends paid	(289)	(286)	(286)
Other	46	24	32
Increase (decrease) from ongoing operations	44	(84)	49
Purchase of Treasury shares	-	-	(82)
Proceeds from employee stock plans	70	73	63
Proceeds from sale of investment	-	354	-
Purchase of GECO common stock	-	-	(53)
Businesses acquired	(163)	(131)	(148)
Proceeds on sale of businesses	-	-	36
Other	(12)	(15)	(46)
Net (decrease) increase in liquidity	\$ (61)	\$ 197	\$ (181)
<b>Liquidity - end of period</b>	<b>\$ 663</b>	<b>\$ 724</b>	<b>\$ 527</b>



The decline in liquidity in 1992 was mainly due to the purchase of businesses. The improvement in liquidity during 1991 included the proceeds on the sale of an investment partially offset by the acquisition of Prakla-Seismos (\$131 million-net assets acquired included \$107 million of debt) and the purchase of eight drilling rigs from the Techfor Cosifor group (\$136 million).

Following the acquisition of the remaining 50% of Dowell Schlumberger on January 29, 1993, consolidated liquidity was reduced by \$590 million. The current consolidated liquidity level, combined with liquidity expected from ongoing operations, should satisfy future business requirements.

● *Fixed Assets*

Additions by business sector were as follows:

	(Stated in millions)		
	1992	1991	1990
Oilfield Services			
Wireline, Testing & Anadrill	\$ 309	\$ 420	\$ 400
Drilling & Pumping Services	225	235	98
Seismic	159	160	62
	693	815	560
Measurement & Systems			
Schlumberger Industries	77	69	77
Schlumberger Technologies	34	32	36
	111	101	113
Other	5	5	2
	<b>\$ 809</b>	<b>\$ 921</b>	<b>\$ 675</b>

● *Common Stock, Market Prices, and Dividends Declared per Share*

Quarterly high and low prices for the Company's Common Stock as reported by The New York Stock Exchange (composite transactions), together with dividends declared per share in each quarter of 1992 and 1991 were:

	Price Range		Dividends Declared
	High	Low	
1992			
Quarters			
First	\$ 64 <sup>3</sup> / <sub>4</sub>	\$ 54 <sup>1</sup> / <sub>4</sub>	\$ 0.30
Second	68 <sup>7</sup> / <sub>8</sub>	52 <sup>5</sup> / <sub>8</sub>	0.30
Third	69 <sup>7</sup> / <sub>8</sub>	59 <sup>1</sup> / <sub>2</sub>	0.30
Fourth	70 <sup>5</sup> / <sub>8</sub>	55 <sup>5</sup> / <sub>8</sub>	0.30
1991			
Quarters			
First	\$ 64 <sup>3</sup> / <sub>4</sub>	\$ 50 <sup>1</sup> / <sub>2</sub>	\$ 0.30
Second	65	56	0.30
Third	74	55 <sup>3</sup> / <sub>4</sub>	0.30
Fourth	70 <sup>3</sup> / <sub>4</sub>	58 <sup>1</sup> / <sub>8</sub>	0.30

The number of holders of record of the Common Stock of the Company at December 21, 1992 was approximately 30,000. There are no legal restrictions on the payment of dividends or ownership or voting of such shares. United States stockholders are not subject to any Netherlands Antilles withholding or other Netherlands Antilles taxes attributable to ownership of such shares.

● *Postretirement Benefits Other Than Pensions*

In December 1990, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 106, "Employers' Accounting for Postretirement Benefits Other Than Pensions." This statement requires the use of the accrual method for future postretirement benefits rather than accounting for these benefits on a pay-as-you-go basis. Adoption of this statement is required for fiscal years beginning after December 15, 1992. The Company will adopt this Statement effective January 1, 1993.

The Company and its U.S. subsidiaries provide certain health care benefits to former employees who have retired under the U.S. pension plans. The accumulated postretirement benefit charge on January 1, 1993 for all current retirees and the pro rata amount for active employees based on years of service will be \$248 million. Such amount will be recorded as an extraordinary item (cumulative effect of an accounting change) in the first quarter of 1993. In addition, the estimated annual expense for 1993 related to service cost and interest cost of \$29 million exceeds the amount expensed under the present accounting practice by \$20 million.

The principal actuarial assumptions are a discount rate of 8.5% and a medical cost trend rate of 13% graded to 6% over 10 years, and 6% thereafter.

● *Environmental Matters*

The Company and its subsidiaries comply with government laws and regulations and responsible management practices for the protection of the environment. The Consolidated Balance Sheet includes accruals for the estimated future costs associated with certain environmental remediation activities related to the past use or disposal of hazardous materials. Substantially all such costs relate to divested operations and to facilities or locations which are no longer in operation. Due to a number of uncertainties, including uncertainty of timing, the scope of remediation, future technology, regulatory changes and other factors, it is possible that the ultimate remediation costs may exceed the amounts accrued. However, in the opinion of management, such additional costs are not expected to be material relative to consolidated liquidity, financial position or future results of operations. Consistent with the Company's commitment to protection of the environment, safety, and employee health, additional costs, including capital expenditures are incurred related to current operations.

## Consolidated Statement of Income

Year Ended December 31,	(Stated in thousands except per share amounts)		
	1992	1991	1990
<i>Revenue</i>			
Operating	\$ 6,331,509	\$ 6,145,171	\$ 5,306,217
Interest and other income	123,489	117,027	127,430
Gain on sale of investment (before income taxes of \$58,449)	-	235,937	-
	6,454,998	6,498,135	5,433,647
<i>Expenses</i>			
Cost of goods sold and services	4,579,402	4,424,834	3,731,454
Research & engineering	421,237	407,236	372,736
Marketing	291,546	277,296	262,152
General	337,448	304,849	282,222
Interest	77,394	102,266	86,686
Taxes on income	86,368	166,002	128,116
	5,793,395	5,682,483	4,863,366
<i>Net Income</i>	\$ 661,603	\$ 815,652	\$ 570,281
Net income per share	\$ 2.75	\$ 3.42	\$ 2.40
Average shares outstanding (thousands)	240,878	239,005	238,056

See Notes to Consolidated Financial Statements  
Schlumberger Limited (Schlumberger N.V., Incorporated in the Netherlands Antilles) and Subsidiary Companies



## Consolidated Balance Sheet

<i>Assets</i>	<i>(Stated in thousands)</i>	
December 31,	1992	1991
<i>Current Assets</i>		
Cash	\$ 40,280	\$ 38,980
Short-term investments	1,304,965	1,426,620
Receivables less allowance for doubtful accounts (1992—\$32,418; 1991—\$36,020)	1,435,035	1,402,933
Inventories	562,491	596,644
Other current assets	110,008	100,368
	3,452,779	3,565,545
<i>Investments in Affiliated Companies</i>	371,774	371,948
<i>Long-Term Investments and Receivables</i>	52,732	51,796
<i>Fixed Assets less accumulated depreciation</i>	2,497,183	2,364,773
<i>Excess of Investment Over Net Assets of Companies Purchased less amortization</i>	564,356	439,647
<i>Other Assets</i>	67,881	59,810
	\$ 7,006,705	\$ 6,853,519
<i>Liabilities and Stockholders' Equity</i>		
<i>Current Liabilities</i>		
Accounts payable and accrued liabilities	\$ 1,398,756	\$ 1,437,590
Estimated liability for taxes on income	430,570	561,344
Bank loans	258,983	279,189
Dividend payable	73,085	72,515
Long-term debt due within one year	49,141	121,263
	2,210,535	2,471,901
<i>Long-Term Debt</i>	374,336	341,198
<i>Other Liabilities</i>	191,028	187,534
	2,775,899	3,000,633
<i>Stockholders' Equity</i>		
Common stock	518,139	468,274
Income retained for use in the business	6,063,005	5,690,588
Treasury stock at cost	(2,317,854)	(2,351,130)
Translation adjustment	(32,484)	45,154
	4,230,806	3,852,886
	\$ 7,006,705	\$ 6,853,519

See Notes to Consolidated Financial Statements

Schlumberger Limited (Schlumberger N.V., Incorporated in the Netherlands Antilles) and Subsidiary Companies

## Consolidated Statement of Cash Flows

Year Ended December 31,	<i>(Stated in thousands)</i>		
	1992	1991	1990
<b>Cash flows from operating activities:</b>			
Net income	\$ 661,603	\$ 815,652	\$ 570,281
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	708,788	659,591	552,297
Earnings of companies carried at equity, less dividends received (1992 – \$18,000; 1991 – \$26,776; 1990 – \$13,500)	(29,777)	(35,270)	(52,926)
Gain on sale of subsidiaries	–	–	(7,342)
Gain on sale of investment in Compagnie Générale des Eaux	–	(177,488)	–
Provision for losses on accounts receivable	5,018	1,604	(601)
Other adjustments	(55,242)	(54,465)	(49,933)
Change in operating assets and liabilities:			
Increase in receivables	(38,750)	(117,118)	(46,109)
Decrease (increase) in inventory	17,428	(3,664)	18,674
(Decrease) increase in accounts payable and accrued liabilities	(65,879)	48,878	68,810
Decrease in estimated liability for taxes on income	(151,747)	(70,615)	(39,635)
Other – net	(52,598)	(58,887)	(35,931)
<b>Net cash provided by operating activities</b>	<b>998,844</b>	<b>1,008,218</b>	<b>977,585</b>
<b>Cash flows from investing activities:</b>			
Purchases of fixed assets	(809,486)	(921,313)	(675,412)
Sales/retirements of fixed assets	62,760	37,949	35,560
Proceeds from sale of subsidiaries	–	–	36,029
Proceeds from sale of investment in Compagnie Générale des Eaux	–	353,669	–
Payment for purchase of businesses	(172,616)	(23,960)	(92,941)
Payment for purchase of GECO A.S. common stock	–	–	(53,079)
Decrease (increase) in short-term investments	118,995	(120,173)	28,086
Decrease in long-term investments and receivables	38,621	14,202	9,979
Increase in investment in Compagnie Générale des Eaux	–	–	(31,718)
<b>Net cash used in investing activities</b>	<b>(761,726)</b>	<b>(659,626)</b>	<b>(743,496)</b>
<b>Cash flows from financing activities:</b>			
Dividends paid	(288,622)	(286,164)	(285,505)
Purchase of shares for Treasury	–	–	(81,776)
Proceeds from employee stock purchase plan	35,805	32,701	26,884
Proceeds from exercise of stock options	34,036	40,087	35,725
Proceeds from issuance of long-term debt	201,047	214,890	146,145
Payments of principal on long-term debt	(204,710)	(207,034)	(106,310)
Net (decrease) increase in short-term debt	(13,374)	(151,943)	24,686
<b>Net cash used in financing activities</b>	<b>(235,818)</b>	<b>(357,463)</b>	<b>(240,151)</b>
Net increase (decrease) in cash	1,300	(8,871)	(6,062)
Cash, beginning of year	38,980	47,851	53,913
<b>Cash, end of year</b>	<b>\$ 40,280</b>	<b>\$ 38,980</b>	<b>\$ 47,851</b>

See Notes to Consolidated Financial Statements  
Schlumberger Limited (Schlumberger N.V., Incorporated in the Netherlands Antilles) and Subsidiary Companies



## Consolidated Statement of Stockholders' Equity

*(Dollar amounts in thousands)*

	<i>Common Stock</i>				<i>Translation Adjustment</i>	<i>Income Retained for Use in the Business</i>
	<i>Issued</i>		<i>In Treasury</i>			
	<i>Shares</i>	<i>Amount</i>	<i>Shares</i>	<i>Amount</i>		
Balance, January 1, 1990	303,474,780	\$ 410,343	65,819,259	\$ 2,349,633	\$ (40,165)	\$ 4,877,367
Translation adjustment, 1990					88,713	
Purchases for Treasury			1,395,985	81,776		
Sales to optionees less shares exchanged and other		305	(1,068,552)	(38,233)		
Employee stock purchase plan	797,041	26,884				
Net income						570,281
Dividends declared (\$1.20 per share)						(285,736)
Balance, December 31, 1990	304,271,821	437,532	66,146,692	2,393,176	48,548	5,161,912
Translation adjustment, 1991					(3,394)	
Sales to optionees less shares exchanged		(1,959)	(1,164,963)	(42,046)		
Employee stock purchase plan	671,626	32,701				
Net income						815,652
Dividends declared (\$1.20 per share)						(286,976)
Balance, December 31, 1991	304,943,447	468,274	64,981,729	2,351,130	45,154	5,690,588
Translation adjustment, 1992					(77,638)	
Sales to optionees less shares exchanged		760	(920,472)	(33,276)		
Shares issued for acquisition	236,813	13,300				
Employee stock purchase plan	715,388	35,805				
Net income						661,603
Dividends declared (\$1.20 per share)						(289,186)
Balance, December 31, 1992	305,895,648	\$ 518,139	64,061,257	\$ 2,317,854	\$ (32,484)	\$ 6,063,005

See Notes to Consolidated Financial Statements

Schlumberger Limited (Schlumberger N.V., Incorporated in the Netherlands Antilles) and Subsidiary Companies

## Notes to Consolidated Financial Statements

### ● *Summary of Accounting Policies*

The Consolidated Financial Statements of Schlumberger Limited and its subsidiaries have been prepared in accordance with accounting principles generally accepted in the United States.

### *Principles of Consolidation*

The Consolidated Financial Statements include the accounts of majority-owned subsidiaries. Significant 20%-50% owned companies are carried in investments in affiliated companies on the equity method. The pro rata share of revenue and expenses of 50% owned companies is included in the individual captions in the Consolidated Statement of Income. The Company's pro rata share of after-tax earnings of other equity companies is included in interest and other income.

### *Translation of Non-U.S. Currencies*

All assets and liabilities recorded in functional currencies other than U.S. dollars are translated at current exchange rates. The resulting adjustments are charged or credited directly to the Stockholders' Equity section of the Balance Sheet. Accordingly, the Translation Adjustment in 1992 decreased \$78 million, in 1991 decreased \$3 million, and in 1990 increased \$89 million. Revenue and expenses are translated at the weighted average exchange rates for the period. All realized and unrealized transaction gains and losses are included in income in the period in which they occur. Transaction losses included in the results amounted to \$22 million, \$2 million and \$19 million in 1992, 1991, and 1990, respectively.

Currency exchange contracts are entered into as a hedge against the effect of future settlement of assets and liabilities denominated in other than the functional currency of the individual businesses. Gains or losses on the contracts are recognized when the currency exchange rates fluctuate, and the resulting charge or credit offsets the unrealized currency gains or losses on those assets and liabilities. At December 31, 1992, outstanding contracts were to purchase 7 million Australian dollars, 9 million Singapore dollars, 8 billion Italian lire, 35 million French francs, 77 million Norwegian kroner, and 36 million German marks, and to sell 25 million Canadian dollars, 24 million Dutch guilders, and 100 million Belgian francs, at the forward rates on the dates the contracts were entered. These contracts mature on various dates in 1993.

### *Short-Term Investments*

Short-term investments are stated at cost plus accrued interest, which approximates market, and comprise primarily Eurodollar certificates of deposit, Eurodollar commercial paper and Euronotes, denominated in U.S. dollars.

For purposes of the Consolidated Statement of Cash Flows, the Company does not consider short-term investments to be cash equivalents as they generally have original maturities in excess of three months.

### *Inventories*

Inventories are stated principally at average or standard cost, which approximates average cost, or at market, if lower.

### *Excess of Investment Over Net Assets of Companies Purchased*

Cost in excess of net assets of purchased companies is amortized on a straight-line basis over periods ranging from 10 to 40 years. Accumulated amortization was \$114 million and \$88 million at December 31, 1992 and 1991, respectively.

### *Fixed Assets and Depreciation*

Fixed assets are stated at cost less accumulated depreciation, which is provided for by charges to income over the estimated useful lives of the assets by the straight-line method. Fixed assets include the cost of oilfield technical equipment manufactured by subsidiaries of the Company. Expenditures for renewals, replacements, and betterments are capitalized. Maintenance and repairs are charged to operating expenses as incurred. Upon sale or other disposition, the applicable amounts of asset cost and accumulated depreciation are removed from the accounts and the net amount, less proceeds from disposal, is charged or credited to income.

### *Taxes on Income*

The Company and its subsidiaries compute taxes on income in accordance with the tax rules and regulations of the many taxing authorities where the income is earned. The income tax rates imposed by these taxing authorities vary substantially. Taxable income may differ from pretax income for financial accounting purposes. To the extent that differences are due to revenue or expense items reported in one period for tax purposes and in another period for financial accounting purposes, an appropriate provision for deferred income taxes is made. The provisions were not significant in 1992, 1991 or 1990.

Approximately \$2.3 billion of consolidated income retained for use in the business at December 31, 1992 represented undistributed earnings of consolidated subsidiaries and the Company's pro rata share of 20%-50% owned companies. No provision is made for deferred income taxes on those earnings considered to be indefinitely reinvested or earnings which would not be taxed when remitted.

Tax credits and other allowances are credited to current income tax expense on the flow-through method of accounting.

In February 1992, Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes," was issued by the Financial Accounting Standards Board. As permitted by FAS No. 109, the Company will implement this Standard in 1993. The Company's principal U.S. subsidiary



is in an operating loss carryforward position and, as a result, has no deferred tax balances. The adoption of this Standard will not have a material effect on the Company's results of operations or financial position.

#### *Net Income per Share*

Net income per share is computed by dividing net income by the average number of common shares outstanding during the year. The effect of stock options, which are common stock equivalents, on the computation of earnings per share was not significant.

#### *Research & Engineering*

All research & engineering expenditures are expensed as incurred, including costs relating to patents or rights which may result from such expenditures.

#### ● *Acquisitions*

In December 1992, the Company announced a definitive agreement whereby Schlumberger will acquire the remaining 50% interest in the Dowell Schlumberger group of companies. The purchase price will be \$675 million in cash and a warrant, valued at \$100 million, to purchase 7.5 million shares of Schlumberger common stock at an exercise price of \$59.95 per share. The warrant is fully-vested, non-transferable and expires in 7.5 years. In January 1993, following receipt of regulatory approvals, the acquisition was completed. The acquisition will be accounted for as a purchase; cost in excess of net assets acquired, estimated at \$525 million, will be amortized on a straight-line basis over 40 years. If the acquisition had taken place on January 1, 1992, consolidated operating revenue for 1992 would have increased by 8% with an immaterial effect on consolidated net income after taking into account goodwill amortization and financing costs.

In July 1992, the Company announced a definitive agreement to acquire two oilfield service businesses from the Raytheon Company for \$160 million. Upon receipt of regulatory approvals, the acquisition was completed in November 1992. The acquisition was accounted for as a purchase, and the cost in excess of net assets acquired of \$139 million will be amortized on a straight-line basis over 20 years.

In January 1991, a subsidiary of the Company acquired 51% of the shares of Prakla-Seismos AG, a German seismic company, for \$24 million. Under the agreement, Schlumberger immediately obtained 100% management control and committed to purchase the remaining interest on, or before, January 1, 1993 for \$23 million plus interest. Accordingly, the acquisition was accounted for as a purchase and the accounts were fully consolidated with those of the Company. Net assets acquired included \$107 million of debt. Cost in excess of net assets acquired was \$48 million, which is being amortized on a straight-line basis over 20 years. In December 1992, the remaining 49% interest was acquired.

#### ● *Fixed Assets*

A summary of fixed assets follows:

December 31,	<i>(Stated in millions)</i>	
	1992	1991
Land	\$ 68	\$ 71
Buildings & improvements	763	751
Machinery and equipment	6,075	5,840
Total cost	6,906	6,662
Less accumulated depreciation	4,409	4,297
	<b>\$ 2,497</b>	<b>\$ 2,365</b>

Estimated useful lives of buildings & improvements range from 8 to 50 years and of machinery and equipment from 2 to 18 years.

#### ● *Investments in Affiliated Companies*

Investments in affiliated companies at December 31, 1992 comprised mainly the Company's 50% investments in the Dowell Schlumberger business (\$337 million) and joint ventures of Sedco Forex.

Equity in undistributed earnings of all 50% owned companies at December 31, 1992 and 1991 amounted to \$112 million and \$83 million, respectively.

#### ● *Long-Term Debt*

Long-term debt of \$374 million is primarily denominated in U.S. dollars, Italian lire, U.K. pounds and German marks, at money market based rates varying up to 15%.

Long-term debt at December 31, 1992 is due \$91 million in 1994, \$107 million in 1995, \$25 million in 1996, \$120 million in 1997 and \$31 million thereafter.

Interest rate swap arrangements are entered into to adjust non-U.S. dollar denominated debt and interest rates into U.S. dollars. At December 31, 1992, interest rate swap arrangements were outstanding with commercial banks having a total principal amount of \$158 million. These arrangements mature at various dates through 1997 and the interest rates are adjusted semiannually. During 1992, interest rate swap arrangements reduced consolidated interest expense by \$6 million. The exposure in the event of nonperformance by the other parties to the arrangements is not significant.

#### ● *Lines of Credit*

At December 31, 1992, the Company's principal U.S. subsidiary had an available unused Revolving Credit Agreement with a group of banks. The Agreement provided that the subsidiary may borrow up to \$600 million until December 31, 1994 at money market based rates. This line of credit was subsequently reduced to \$100 million. In January 1993, the Company entered into a \$500 million Revolving Credit Agreement with a group of banks and utilized \$475 million to complete the acquisition of the remaining 50% of Dowell Schlumberger. In addition, at December 31, 1992, the Company and its subsidiaries had available unused short-term lines of credit of approximately \$543 million.



● *Capital Stock*

The Company is authorized to issue 500,000,000 shares of Common Stock, par value \$0.01 per share, of which 241,834,391 and 239,961,718 shares were outstanding on December 31, 1992 and 1991, respectively. The Company is also authorized to issue 200,000,000 shares of cumulative Preferred Stock, par value \$0.01 per share, which may be issued in series with terms and conditions determined by the Board of Directors. No shares of Preferred Stock have been issued. Holders of Common Stock and Preferred Stock are entitled to one vote for each share of stock held.

The Company has a non-compensatory Employee Discounted Stock Purchase Plan. Under the Plan, employees may purchase Common Stock at the end of the Plan year through payroll deductions of up to 10% of compensation. The price per share is equal to 85% of the lower of the beginning or end of Plan year market price. With stockholder approval, the Company in 1992 amended the Plan to increase the aggregate number of shares available for purchase to 8,000,000 shares. During 1992, 715,388 shares were purchased under the Plan.

Options to purchase shares of the Company's Common Stock have been granted under various incentive plans to officers and key employees at prices equal to 100% of the fair market value at the date of grant.

Transactions under stock incentive plans were as follows:

	Number Of Shares	Option Price Per Share
Outstanding Jan. 1, 1991	8,865,200	\$ 29.25-64.50
Granted	597,800	\$ 62.62-67.00
Exercised	(1,222,146)	\$ 29.25-64.50
Lapsed or cancelled	(142,451)	\$ 29.25-67.00
Outstanding Dec. 31, 1991	8,098,403	\$ 29.25-67.00
Granted	3,216,000	\$ 62.38-63.06
Exercised	(985,700)	\$ 29.25-64.50
Lapsed or cancelled	(230,875)	\$ 29.25-67.00
Outstanding Dec. 31, 1992	10,097,828	\$ 29.25-67.00
Exercisable at Dec. 31, 1992	4,262,966	\$ 29.25-67.00
Available for grant		
Dec. 31, 1991	6,092,025	
Dec. 31, 1992	3,057,920	

● *Income Tax Expense*

The Company and its subsidiaries operate in over 100 taxing jurisdictions with statutory rates ranging up to about 50%.

The Company's principal U.S. subsidiary is in an operating loss carryforward position. At December 31, 1992, the subsidiary had an unused operating loss carryforward for consolidated financial statement purposes of \$1.1 billion. The operating loss carryforward on a tax return basis is approximately \$900 million. Most of the carryforward will expire in the years 2001-2002. The tax benefit of this carryforward is available to reduce future U.S. federal income tax expense.

● *Leases and Lease Commitments*

Total rental expense was \$166 million in 1992, \$167 million in 1991 and \$147 million in 1990. Future minimum rental commitments under noncancelable leases for years ending December 31 are: 1993 - \$88 million; 1994 - \$70 million; 1995 - \$54 million; 1996 - \$40 million; and 1997 - \$31 million. For the ensuing three five-year periods, these commitments decrease from \$55 million to \$4 million. The minimum rentals over the remaining terms of the leases aggregate \$13 million.

● *Contingencies*

The Company and its subsidiaries comply with government laws and regulations and responsible management practices for the protection of the environment. The Consolidated Balance Sheet includes accruals for the estimated future costs associated with certain environmental remediation activities related to the past use or disposal of hazardous materials. Substantially all such costs relate to divested operations and to facilities or locations which are no longer in operation. Due to a number of uncertainties, including uncertainty of timing, the scope of remediation, future technology, regulatory changes and other factors, it is possible that the ultimate remediation costs may exceed the amounts accrued. However, in the opinion of management, such additional costs are not expected to be material relative to consolidated liquidity, financial position or future results of operations.

In addition, the Company and its subsidiaries are party to various legal proceedings. Although the ultimate disposition of these proceedings is not presently determinable, in the opinion of the Company any liability that might ensue would not be material in relation to the consolidated financial statements.



● *Segment Information*

The Company's business comprises two segments: (1) Oilfield Services and (2) Measurement & Systems. Services and products are described in more detail on page 48 in this report.

Financial information for the years ended December 31, 1992, 1991, and 1990 by industry segment and by geographic area is as follows:

	<i>(Stated in millions)</i>			
	<i>Oilfield Services</i>	<i>Measurement &amp; Systems</i>	<i>Adjust. &amp; Elim.</i>	<i>Consolidated</i>
<i>Industry Segment 1992</i>				
Operating revenue				
Customers	\$ 3,849	\$ 2,483	\$ –	\$ 6,332
Intersegment transfers	–	1	(1)	–
	\$ 3,849	\$ 2,484	\$ (1)	\$ 6,332
Operating income	\$ 546	\$ 178	\$ (28)	\$ 696
Interest expense				(77)
Interest and other income plus other credits – \$6				129
Income before taxes				\$ 748
Depreciation expense	\$ 570	\$ 99	\$ 2	\$ 671
Fixed asset additions	\$ 693	\$ 111	\$ 5	\$ 809
At December 31				
Identifiable assets	\$ 3,865	\$ 1,719	\$ (11)	\$ 5,573
Corporate assets				1,434
Total assets				\$ 7,007
<i>Industry Segment 1991</i>				
Operating revenue				
Customers	\$ 3,847	\$ 2,298	\$ –	\$ 6,145
Intersegment transfers	–	2	(2)	–
	\$ 3,847	\$ 2,300	\$ (2)	\$ 6,145
Operating income	\$ 602	\$ 170	\$ (38) <sup>1</sup>	\$ 734
Interest expense				(102)
Interest and other income less other charges – \$3				114
Gain on sale of investment				236
Income before taxes				\$ 982
Depreciation expense	\$ 532	\$ 93	\$ 2	\$ 627
Fixed asset additions	\$ 815	\$ 101	\$ 5	\$ 921
At December 31				
Identifiable assets	\$ 3,533	\$ 1,789	\$ (11)	\$ 5,311
Corporate assets				1,543
Total assets				\$ 6,854
<i>Industry Segment 1990</i>				
Operating revenue				
Customers	\$ 3,240	\$ 2,066	\$ –	\$ 5,306
Intersegment transfers	1	10	(11)	–
	\$ 3,241	\$ 2,076	\$ (11)	\$ 5,306
Operating income	\$ 542	\$ 153	\$ (17)	\$ 678
Interest expense				(87)
Interest and other income less other charges – \$20				107
Income before taxes				\$ 698
Depreciation expense	\$ 430	\$ 88	\$ 2	\$ 520
Fixed asset additions	\$ 560	\$ 113	\$ 2	\$ 675
At December 31				
Identifiable assets	\$ 2,829	\$ 1,825	\$ (22)	\$ 4,632
Corporate assets				1,544
Total assets				\$ 6,176

<sup>1</sup>Includes third quarter charge of \$25 million for downsizing the North American oilfield operations.



Transfers between segments and geographic areas are for the most part made at regular prices available to unaffiliated customers. Certain Oilfield Services segment fixed assets are manufactured within that segment.

During the years ended December 31, 1992, 1991, and 1990, neither sales to any government nor sales to any single customer exceeded 10% of consolidated operating revenue. Corporate assets largely comprise short-term investments.

	<i>Western Hemisphere</i>		<i>Eastern Hemisphere</i>			<i>Adjust. &amp; Elim.</i>	<i>Consolidated</i>
	<i>U.S.</i>	<i>Other</i>	<i>France</i>	<i>Other European</i>	<i>Other</i>		
<i>(Stated in millions)</i>							
<i>Geographic Area 1992</i>							
Operating revenue							
Customers	\$ 1,014	\$ 554	\$ 850	\$ 2,110	\$ 1,804	\$ -	\$ 6,332
Interarea transfers	242	7	158	29	39	(475)	-
	\$ 1,256	\$ 561	\$ 1,008	\$ 2,139	\$ 1,843	\$ (475)	\$ 6,332
Operating income (loss)	\$ (13)	\$ 78	\$ 61	\$ 210	\$ 388	\$ (28)	\$ 696
Interest expense							(77)
Interest and other income plus other credits - \$6							129
Income before taxes							\$ 748
At December 31							
Identifiable assets	\$ 1,011	\$ 438	\$ 656	\$ 2,006	\$ 1,528	\$ (66)	\$ 5,573
Corporate assets							1,434
Total assets							\$ 7,007
<i>Geographic Area 1991</i>							
Operating revenue							
Customers	\$ 1,162	\$ 544	\$ 767	\$ 2,009	\$ 1,663	\$ -	\$ 6,145
Interarea transfers	289	18	203	27	7	(544)	-
	\$ 1,451	\$ 562	\$ 970	\$ 2,036	\$ 1,670	\$ (544)	\$ 6,145
Operating income (loss)	\$ 55	\$ 78	\$ 85	\$ 217	\$ 348	\$ (49) <sup>1</sup>	\$ 734
Interest expense							(102)
Interest and other income less other charges - \$3							114
Gain on sale of investment							236
Income before taxes							\$ 982
At December 31							
Identifiable assets	\$ 1,037	\$ 388	\$ 730	\$ 1,837	\$ 1,403	\$ (84)	\$ 5,311
Corporate assets							1,543
Total assets							\$ 6,854
<i>Geographic Area 1990</i>							
Operating revenue							
Customers	\$ 1,278	\$ 482	\$ 672	\$ 1,466	\$ 1,408	\$ -	\$ 5,306
Interarea transfers	265	9	201	32	24	(531)	-
	\$ 1,543	\$ 491	\$ 873	\$ 1,498	\$ 1,432	\$ (531)	\$ 5,306
Operating income (loss)	\$ 66	\$ 79	\$ 68	\$ 161	\$ 340	\$ (36)	\$ 678
Interest expense							(87)
Interest and other income less other charges - \$20							107
Income before taxes							\$ 698
At December 31							
Identifiable assets	\$ 1,048	\$ 323	\$ 721	\$ 1,472	\$ 1,194	\$ (126)	\$ 4,632
Corporate assets							1,544
Total assets							\$ 6,176

<sup>1</sup>Includes third quarter charge of \$25 million for downsizing the North American oilfield operations.



● *Pension and Other Deferred Benefit Plans*

*U.S. Pension Plans*

The Company and its principal U.S. subsidiary sponsor several defined benefit pension plans that cover substantially all employees. The benefits are based on years of service and compensation on a career-average pay basis. These plans are substantially fully funded with trustees in respect to past and current service. Charges to expense are based upon costs computed by independent actuaries. The funding policy is to contribute annually amounts that can be deducted for federal income tax purposes. These contributions are intended to provide for benefits earned to date and those expected to be earned in the future.

Net pension cost in the U.S. for 1992, 1991, and 1990 included the following components:

	<i>(Stated in millions)</i>		
	1992	1991	1990
Service cost – benefits earned during the period	\$ 16	\$ 16	\$ 15
Interest cost on projected benefit obligation	38	36	33
Expected return on plan assets (actual return: 1992 – \$44; 1991 – \$88; 1990 – \$3)	(41)	(38)	(36)
Amortization of transition asset	(2)	(2)	(2)
Amortization of prior service cost/other	5	5	4
<b>Net pension cost</b>	<b>\$ 16</b>	<b>\$ 17</b>	<b>\$ 14</b>

Effective January 1, 1993, the Company and its subsidiaries amended their pension plans to improve retirement benefits for current employees. The funded status of the plans at December 31, 1992 reflects the amendment.

The funded status of the plans at December 31, 1992 and 1991 was as follows:

	<i>(Stated in millions)</i>	
	1992	1991
Actuarial present value of obligations:		
Vested benefit obligation	\$ 435	\$ 400
Accumulated benefit obligation	\$ 438	\$ 402
Projected benefit obligation	\$ 495	\$ 462
Plan assets at market value	524	504
Excess of assets over projected benefit obligation	29	42
Unrecognized net gain	(86)	(88)
Unrecognized prior service cost	37	30
Unrecognized net asset at transition date	(13)	(14)
<b>Pension liability</b>	<b>\$ (33)</b>	<b>\$ (30)</b>

In each year, assumed discount rate and rate of compensation increases used to determine the projected benefit obligation were 8.5% and 6%, respectively; the expected long-term rate of return on plan assets was 9%. Plan assets at December 31, 1992 consist of common stocks (\$336 million), cash or cash

equivalents (\$46 million), fixed income investments (\$119 million) and other investments (\$23 million). Less than 1% of the plan assets at December 31, 1992 represents Schlumberger Limited Common Stock.

*Non-U.S. Pension Plans*

Outside of the U.S., subsidiaries of the Company sponsor several defined benefit and defined contribution plans that cover substantially all employees who are not covered by statutory plans. For defined benefit plans, charges to expense are based upon costs computed by independent actuaries. These plans are substantially fully funded with trustees in respect to past and current service. For all defined benefit plans, pension expense was \$20 million, \$23 million, and \$14 million in 1992, 1991, and 1990, respectively. The only significant defined benefit plan is in the U.K.

Net pension cost in the U.K. plan for 1992, 1991, and 1990 (translated into U.S. dollars at the average exchange rate for the periods) included the following components:

	<i>(Stated in millions)</i>		
	1992	1991	1990
Service cost – benefits earned during the period	\$ 14	\$ 14	\$ 11
Interest cost on projected benefit obligation	10	7	6
Expected return on plan assets [actual return (loss): 1992 – \$30; 1991 – \$37; 1990 – \$(10)]	(12)	(9)	(9)
Amortization of transition asset and other	(1)	(1)	(1)
<b>Net pension cost</b>	<b>\$ 11</b>	<b>\$ 11</b>	<b>\$ 7</b>

During 1992, the U.K. pension plan was amended to improve retirement benefits for retirees. The improvement is reflected as prior service cost.

The funded status of the plan (translated into U.S. dollars at year-end exchange rates) was as follows:

	<i>(Stated in millions)</i>	
	1992	1991
Actuarial present value of obligations:		
Vested benefit obligation	\$ 105	\$ 87
Accumulated benefit obligation	\$ 105	\$ 87
Projected benefit obligation	\$ 125	\$ 114
Plan assets at market value	154	141
Excess of assets over projected benefit obligation	29	27
Unrecognized net gain	(34)	(25)
Unrecognized net asset at transition date	(7)	(9)
Unrecognized prior service cost	6	–
<b>Pension liability</b>	<b>\$ (6)</b>	<b>\$ (7)</b>



The assumed discount rate and rate of compensation increases used to determine the projected benefit obligation were 8.5% and 6%, respectively; the expected long-term rate of return on plan assets was 9%. Plan assets consist of common stocks (\$136 million), cash or cash equivalents (\$4 million) and fixed income investments (\$14 million). None of the plan assets represents Schlumberger Limited Common Stock.

For defined contribution plans, funding and cost are generally based upon a predetermined percentage of employee compensation. Charges to expense in 1992, 1991, and 1990 were \$14 million, \$16 million, and \$15 million, respectively.

#### *Other Deferred Benefits*

In addition to providing pension benefits, the Company and its subsidiaries have other deferred benefit programs. Expense for these programs was \$57 million, \$70 million, and \$74 million in 1992, 1991, and 1990, respectively.

#### *Health Care Benefits*

The Company and its U.S. subsidiary provide certain health care benefits for certain active and retired employees. The cost of providing these benefits is recognized as expense when incurred and aggregated \$43 million, \$46 million, and \$43 million in 1992, 1991, and 1990, respectively. Outside of the United States, such benefits are mostly provided through government sponsored programs.

#### ● *Supplementary Information*

Operating revenue and related cost of goods sold and services comprised the following:

Year ended December 31,	<i>(Stated in millions)</i>		
	1992	1991	1990
Operating revenue			
Sales	\$ 2,379	\$ 2,245	\$ 2,037
Services	3,953	3,900	3,269
	<b>\$ 6,332</b>	<b>\$ 6,145</b>	<b>\$ 5,306</b>
Direct operating costs			
Goods sold	\$ 1,533	\$ 1,428	\$ 1,274
Services	3,047	2,997	2,457
	<b>\$ 4,580</b>	<b>\$ 4,425</b>	<b>\$ 3,731</b>

Cash paid for interest and income taxes was as follows:

Year ended December 31,	<i>(Stated in millions)</i>		
	1992	1991	1990
Interest	\$ 81	\$ 106	\$ 86
Income taxes	\$ 206	\$ 155	\$ 150

Accounts payable and accrued liabilities are summarized as follows:

December 31,	<i>(Stated in millions)</i>	
	1992	1991
Payroll, vacation, and employee benefits	\$ 339	\$ 371
Trade	394	406
Other	666	661
	<b>\$ 1,399</b>	<b>\$ 1,438</b>

The caption "Interest and other income" includes interest income, principally from short-term investments, of \$102 million, \$98 million, and \$118 million for 1992, 1991, and 1990, respectively.

## Report of Independent Accountants

To the Board of Directors and Stockholders  
of Schlumberger Limited:

In our opinion, the accompanying consolidated balance sheet and the related consolidated statements of income, of stockholders' equity and of cash flows present fairly, in all material respects, the financial position of Schlumberger Limited and its subsidiaries at December 31, 1992 and 1991, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1992, in conformity with generally accepted accounting principles. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards which require

that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

*Price Waterhouse*

New York, New York

January 26, 1993

### Quarterly Results (Unaudited)

The following table summarizes results for each of the four quarters for the years ended December 31, 1992 and 1991. Gross profit equals operating revenue less cost of goods sold and services.

	<i>(Stated in millions except per share amounts)</i>			
	<i>Operating</i>		<i>Net Income</i>	
	<i>Revenue</i>	<i>Gross Profit</i>	<i>Amount</i>	<i>Per Share</i>
<b>Quarters-1992</b>				
First	\$ 1,552	\$ 425	\$ 156	\$ 0.65
Second	1,553	447	178	0.74
Third	1,594	451	173	0.72
Fourth	1,633	429	155	0.64
	<b>\$ 6,332</b>	<b>\$ 1,752</b>	<b>\$ 662</b>	<b>\$ 2.75</b>
<b>Quarters-1991</b>				
First	\$ 1,511	\$ 410	\$ 133	\$ 0.56
Second	1,553	457	181	0.76
Third	1,470	410	196 <sup>1</sup>	0.82 <sup>1</sup>
Fourth	1,611	443	306 <sup>2</sup>	1.28 <sup>2</sup>
	<b>\$ 6,145</b>	<b>\$ 1,720</b>	<b>\$ 816</b>	<b>\$ 3.42</b>

<sup>1</sup>Includes a \$46 million (\$0.19 per share) gain on the sale of an investment and a \$25 million (\$0.10 per share) charge for restructuring the North American oilfield operations.

<sup>2</sup>Includes a \$131 million (\$0.55 per share) gain on the sale of an investment.



## Five Year Summary

Year Ended December 31,	1992	1991	1990	1989	1988
	<i>(Stated in millions except per share amounts)</i>				
<i>Summary of Operations</i>					
Operating revenue:					
Oilfield Services	\$ 3,849	\$ 3,847	\$ 3,240	\$ 2,696	\$ 2,721
Measurement & Systems	2,483	2,298	2,066	1,990	2,204
	<b>\$ 6,332</b>	<b>\$ 6,145</b>	<b>\$ 5,306</b>	<b>\$ 4,686</b>	<b>\$ 4,925</b>
% Increase (decrease) over prior year	3%	16%	13%	(5%)	12%
Operating income:					
Oilfield Services	\$ 546	\$ 602	\$ 542	\$ 340	\$ 320
Measurement & Systems	178	170	153	154	174
Eliminations	(28)	(38)	(17)	1	(30)
	<b>\$ 696</b>	<b>\$ 734</b>	<b>\$ 678</b>	<b>\$ 495</b>	<b>\$ 464</b>
% (Decrease) increase over prior year	(5%)	8%	37%	7%	85%
Interest expense	\$ 77	\$ 102	\$ 87	\$ 96	\$ 129
Taxes on income	\$ 86	\$ 166	\$ 128	\$ 111	\$ 135
Income, continuing operations	\$ 662	\$ 816 <sup>A</sup>	\$ 570	\$ 420 <sup>B</sup>	\$ 454
% (Decrease) increase from prior year	(19%)	43%	36%	(7%)	(10%)
Extraordinary item	\$ -	\$ -	\$ -	\$ 21	\$ 22
Net income	<b>\$ 662</b>	<b>\$ 816<sup>A</sup></b>	<b>\$ 570</b>	<b>\$ 441<sup>B</sup></b>	<b>\$ 476</b>
Income per share					
Continuing operations	\$ 2.75	\$ 3.42 <sup>A</sup>	\$ 2.40	\$ 1.77 <sup>B</sup>	\$ 1.72
Extraordinary item	-	-	-	0.09	0.08
Net income	<b>\$ 2.75</b>	<b>\$ 3.42<sup>A</sup></b>	<b>\$ 2.40</b>	<b>\$ 1.86<sup>B</sup></b>	<b>\$ 1.80</b>
Cash dividends declared	<b>\$ 1.20</b>	<b>\$ 1.20</b>	<b>\$ 1.20</b>	<b>\$ 1.20</b>	<b>\$ 1.20</b>
<i>Summary of Financial Data</i>					
Income as % of revenue, continuing operations	10%	13%	11%	9%	9%
Return on average stockholders' equity, continuing operations	16%	24%	19%	15%	13%
Fixed asset additions	\$ 809	\$ 921	\$ 675	\$ 549	\$ 455
Depreciation expense	\$ 671	\$ 627	\$ 520	\$ 493	\$ 531
Average number of shares outstanding	241	239	238	238	264
<i>At December 31,</i>					
Liquidity	\$ 663	\$ 724	\$ 527	\$ 708	\$ 555
Working capital	\$ 1,242	\$ 1,094	\$ 812	\$ 884	\$ 718
Total assets	\$ 7,007	\$ 6,854	\$ 6,176	\$ 5,482	\$ 5,600
Long-term debt	\$ 374	\$ 341	\$ 332	\$ 292	\$ 191
Stockholders' equity	\$ 4,231	\$ 3,853	\$ 3,255	\$ 2,898	\$ 2,755
Number of employees	51,000	53,000	50,000	46,000	48,000

<sup>A</sup>Includes a gain of \$177 million (\$0.74 per share) on the sale of an investment and a \$25 million (\$0.10 per share) charge for restructuring the North American oilfield operations.

<sup>B</sup>Includes a gain of \$13 million (\$0.05 per share) on the sale of the Defense Systems division of Schlumberger Industries.



## Strategies for Growth

The fuel for Schlumberger's growth and leadership has been, and will be, its people and its technology. With a dedication to generating superior profits, Schlumberger strives for global technical leadership in its businesses. Yet, to meet swiftly changing market demands and to engage evolving technologies, it must remain responsive. Its technical proficiency must grow more diverse without compromising excellence in its core businesses. Products must be brought to market faster, while achieving high quality at low cost. The company must strive for leadership in preservation of health, safety, and the environment.

Since 1988, these goals have been addressed with the following five-point strategy:

●  
Refocus efforts on businesses where Schlumberger can have worldwide leadership.

●  
Accelerate the product cycle from conception to commercial introduction.

●  
Improve quality, both in products and services, recognizing that quality and cost-effectiveness go hand-in-hand.

●  
Intensify communications with customers in order to anticipate their needs and react faster to them.

●  
Develop a multicultural work force to deliver to customers a high level of services that the new technologies demand.

In spite of the lackluster business environment of the last five years, Schlumberger has achieved significant growth and is repositioned to thrive in the future.

This report looks at how people throughout the company have implemented the five-point strategy and tracks their success in applying state-of-the-art technology.









## "Refocus efforts on businesses where Schlumberger can have worldwide leadership."

Growth for Schlumberger lies in pursuing leadership in areas where we excel. Since 1987, we have continued to invest in additions to the Sedco Forex drilling rig fleet. In 1992, Schlumberger established a Data Services group to provide geoscience software, workstations, and computer services, and acquired GeoQuest Systems, Inc., a provider of geoscience workstation software. In January 1993, Schlumberger became the full owner of Dowell Schlumberger, our cementing and stimulation operation, by purchasing Dow Chemical's 50% interest for total consideration of \$775 million. These operations are long-established within Schlumberger. On the other hand, the company's recent entry into seismic services complements our existing interests. With a multinational work force, new data acquisition technology, and a new generation of marine vessels, GECO-PRAKLA is the technical leader in seismic services. Profiled here is the work of three GECO-PRAKLA engineers.



### Julian Ceha, Dokkum, The Netherlands

*3D land seismic party chief*

Julian Ceha exudes a confidence that belies his boyish looks. At age 30, with five years experience in the seismic business, he manages GECO-PRAKLA's 180-strong 3D land seismic team operating along the northwest coast of The Netherlands.

A seismic survey uses sound energy to map the subsurface of the earth, like ultrasound is used to probe the human body. Sound is emitted into the earth and, as it is reflected back to the surface, is recorded by a geophone. The recordings provide an image of the subsurface, showing likely locations of hydrocarbons.

Success in a 3D land seismic survey, says Ceha, calls for precise coordination of the field team. With thousands of geophones spread over eight square kilometers and explosive charges fired every minute, this is a logistical Everest of oilfield exploration. Scaling it requires plain old team work, ceaseless training, and scrupulous attention to safety and impact on the environment.

"We want to increase field productivity without sacrificing data quality," says Ceha,

a Dutch-Canadian, educated in Calgary. "It's both a human and technical challenge. You've got to be as interested in people and spare tires as in geophysics."

Just visible in the distance is the recording truck, with its large antenna for radio communication with the field crews. Inside, an engineer coordinates the firing of explosives and recording of seismic reflections.

It's noon by the time Ceha returns to field base. Next to his office, three seismologists check seismic data shot the previous day. They use a new geometry-check display, in which the expected data are superposed on actual data. Any errors become immediately obvious. "This is our only chance," Ceha says. "Catch a mistake now, and we can reshoot. Leave it a week, and we've moved to a new area."

Another innovation that improves both quality and efficiency is use of the high-precision global positioning system, a satellite navigation technique that should cut in half the time spent surveying.



LEFT, CABLES AND PREAMPLIFIERS FOR A SEISMIC SURVEY. ABOVE, JULIAN CEHA AT THE BASE, AND IN DOKKUM MAKING MOBILE PHONE CONTACT WITH THE SEISMIC SURVEY CREW.





● THE *GECO DIAMOND*, ONE OF THREE NEW SEISMIC VESSELS TO BE DELIVERED BY 1993, UNDER CONSTRUCTION NEAR FLEKKEFJORD, NORWAY, AND, INSET, EINAR GJESTRUM, ON THE *GECO EMERALD*. THESE COST-EFFECTIVE VESSELS INCORPORATE DESIGN INNOVATIONS FOR MORE EFFICIENT AND SAFER SURVEYING, ADVANCED NAVIGATION TECHNOLOGY, AND AN ERGONOMICALLY DESIGNED INSTRUMENT ROOM THAT STREAMLINES DATA MANAGEMENT.





## Einar Gjestrum, Oslo

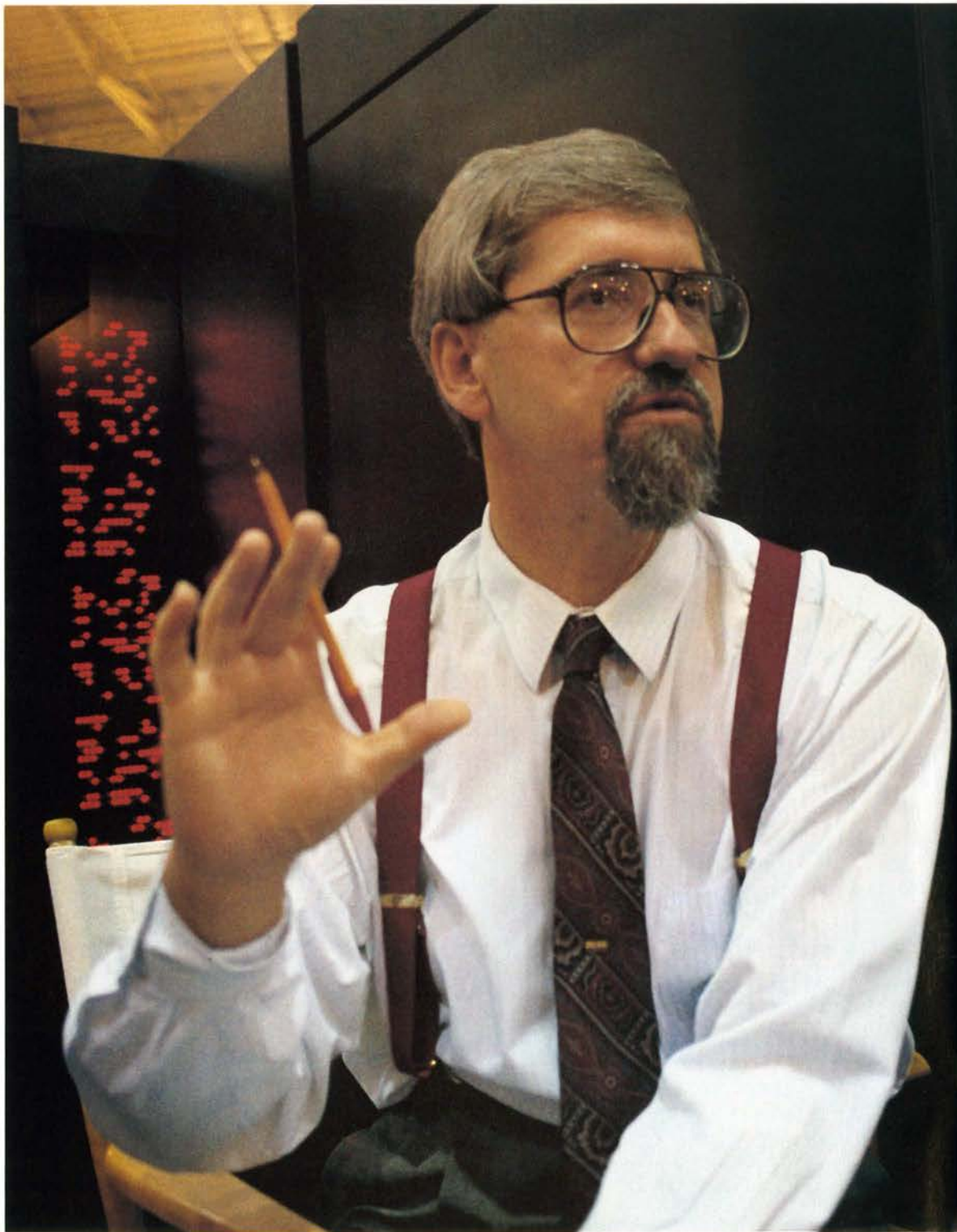
*vessel designer*

At the other end of the GECO-PRAKLA spectrum is the marine seismic business. Global leadership in the marine sector includes a fresh approach to seismic vessel design. A GECO-PRAKLA marine architecture team, led by Einar Gjestrum, has rethought seismic vessels from keel to mast, and built four in less than three years. Each vessel incorporates the latest seismic acquisition and quality control instrumentation required for today's 3D marine surveys. The design allows crews to work quicker, safer, and more accurately.

At the dry dock of Kvina Verft south of Stavanger, Norway, Gjestrum walks around the gray hull of the new *GECO Diamond* and explains the benefits of the design. "The first thing you notice is the helicopter deck at the bow of the vessel, not the stern. This frees the aft deck for deployment of seismic equipment. Now look at the stern. There are two decks, one on top of the other. This gives the crews more room, which makes for safer working conditions."

Inside, an innovative craneway solves a space problem that usually complicates maintenance of seismic equipment. Here, it's straightforward. The nerve center is the instrument room, where seismic data are received, checked for quality, and recorded on computer tape. Previously a mess of terminals, computers, and humans, it's been given an ergonomic rethink.

RIGHT, ANDY PIEPRZAK HEADS A SEISMIC TEAM THAT EXPLOITS THE VERY HIGH-SPEED CAPABILITIES OF SCHLUMBERGER'S MOST ADVANCED SUPERCOMPUTER, THE CM-5, SHOWN BEHIND HIM. THE CM-5, WITH ITS MASSIVELY PARALLEL ARCHITECTURE, ALLOWS MORE ACCURATE LOCATION OF HYDROCARBONS IN GEOLOGICALLY COMPLEX REGIONS. PIEPRZAK, WHO HAS WORKED IN LONDON AND HOUSTON, HEADS ONE OF FIVE GROUPS WORLD-WIDE THAT DOES DATA PROCESSING RESEARCH AND ENGINEERING. FAR RIGHT, A SEISMIC IMAGE OF THE EARTH PRODUCED BY MASSIVELY PARALLEL PROCESSING. THIS HORIZONTAL SLICE AT A DEPTH OF 11,150 FEET SHOWS TWO CIRCULAR FEATURES, DOMES OF SALT, OFTEN ASSOCIATED WITH HYDROCARBON DEPOSITS. STATE-OF-THE-ART PROCESSING, USING ALGORITHMS DEVELOPED BY PIEPRZAK'S TEAM, PROVIDES THE REMARKABLY CRISP DELINEATION OF THE SALT MARGIN, NEEDED TO DECIDE WHETHER, AND WHERE, TO DRILL.







## Andy Pieprzak, Houston

*seismic processing geophysicist*

Once data leave the sleek computer room aboard the *GECO Diamond*—or the data recording truck in The Netherlands—another chapter unfolds. A long chain of computer processing is required before the oil company can use the seismic data to decide whether, and where, to drill.

With most of the large, simple oilfields already discovered, exploration today focuses on complex reservoirs. Characterizing these structures in three dimensions, rather than in two, means data volume may be increased up to 1000-fold, demanding greater computer speed and efficiency. To practically and cost-effectively provide such techniques, GECO-PRAKLA has invested in supercomputers and networking. Behind this effort is a team led by Polish-born geophysicist, Andy Pieprzak.

“Think of it as a speed and quality machine,” Pieprzak says, gesturing toward the blinking lights of a CM-5, a supercomputer at Schlumberger’s Austin Systems Center in Texas. The CM-5 is a massively parallel computer, functioning like 100 mini-computers linked by high-speed communication. It breaks problems into small pieces and solves them in parallel rather than in sequence. “This helps reduce to three months what used to take nine,” Pieprzak says. “It means our clients can move four times faster, from data acquisition to the decision whether to drill.”



NEAR BROOKS, ALBERTA, CANADA, LWD FIELD ENGINEERS BRIAN JOHNSON, LEFT, AND GARETT NICOLS PREPARE THE CDN TOOL FOR LOGGING A HORIZONTAL WELL, DRILLED FROM A SLANTED DERRICK. RAPID DEVELOPMENT OF LWD TECHNOLOGY POSITIONED SCHLUMBERGER TO TAKE ADVANTAGE OF WORLDWIDE GROWTH IN THE HORIZONTAL WELL MARKET.

## “Accelerate the product cycle from conception to commercial introduction.”

Maintaining Schlumberger’s competitive advantage requires faster development of new products and services. A decade ago, development of a downhole instrument took 7 to 10 years. Today, this time is being cut by more than half. Examples of the new short cycle are development of logging while drilling (LWD) technology, which took 36 months, and of the DSI\* Dipole Shear Sonic Imager tool, which took 30 months. The DSI tool was the first of eight proprietary tools for the MAXIS 500\* Multitask Acquisition and Imaging System, the state-of-the-art wireline surface instrumentation that collects and processes data recorded in oil and gas wells. The DSI tool indicates how much hydrocarbon may be present, and characterizes the type and strength of rock surrounding the borehole. The LWD technology can save clients precious time—and expense—because drilling and basic evaluation of rock surrounding the well are done in one step rather than two.



AT THE LWD CENTER IN SUGAR LAND, TEXAS, INTEGRATION OF ENGINEERING AND MANUFACTURING ACCELERATED BOTH TIME TO MARKET AND RESPONSE TO THE CHANGING NEEDS OF CLIENTS. WITH ASSEMBLY DRAWINGS ARE FROM LEFT, BOB SLOAN, SENIOR PROJECT ENGINEER FOR CDN\* COMPENSATED DENSITY NEUTRON SENSORS, MARTIN ALLEN, LEAD ASSEMBLER, AND CHARLIE McANDREW, MANAGER OF LWD ELECTRICAL SYSTEMS.

### LWD and DSI teams

“How do we cut development time in half?” asks Brian Clark, head of LWD engineering. “This is what made this project different,” he says waving a 13-page summary of the LWD plan. “In fact, we did almost nothing in the traditional way.” Ask Allen Harrison, head of the DSI project, and he tips his head, as if suddenly weighted by a ton of ideas. “We had a remarkable task force—the savvy of experienced engineers, the drive of young ones,” he says. “During planning,

we made sure the tool met client needs, then we froze specifications so we didn’t have a moving target. Computer aided design let us accelerate design by a factor of three.”

For both projects speed also came from creation of a work environment for a multidisciplinary team, where good ideas are allowed to come to a boil without distraction. Here, ownership and pride in ideas flourish, and goals previously thought impossible become achievable.

At LWD, the team worked in a campus-like setting near Houston, where the lights burned for long days and every weekend. The DSI team occupied a cluster of offices and labs in a corner of the Houston engineering center, where 30 engineers from many disciplines were moved.

“Proximity was everything,” says Al Wignall of his work on mechanical design of the DSI tool. “In previous projects, Jeff Aron, the acoustic physicist, and I wouldn’t work next to each other. I’d send over a design and get Jeff’s response in a day or two. But with DSI, we worked side by side and had immediate give-and-take.”

Both projects evolved other ways of accelerating product development. Each step—marketing, design, safety, testing, and manufacturing—tended to take place simultaneously rather than sequentially. Marketing studies were used earlier to define the objective for each developmental stage. Experts from across the company were joined in a multidisciplinary task force, where they were allowed to focus on a single challenge. Continuity of the task force staffing helped ensure the fastest possible conversion of ideas to prototypes.

Success also came from engineers focusing on the ultimate objective—profitability.







● WALLACE GEORGE, AN ELECTRICAL ENGINEER, LEFT, AND YASURO NIIHARA, AN ELECTRONICS TECHNICIAN, TEST A DSI TOOL BEFORE FINAL ASSEMBLY AT SCHLUMBERGER'S ENGINEERING AND MANUFACTURING CENTER IN FUCHINOBE, JAPAN.



● PREPARING THE DSI TOOL FOR LOGGING A WELL IN ABU DHABI ARE GENERAL FIELD ENGINEERS TAMER FAWZY, LEFT, AND RAMIRO APONTE.





"Take Paul Thompson, for example," Harrison says of the DSI manufacturing engineer. "You could never get Paul on the phone because he would be in the shop, up in engineering, or meeting with vendors. He was never in his office—he was out making it go. We all concentrated on getting the tool system out. We calculated that each day of development cost Schlumberger \$10,000 in potential sonic revenue alone."

In January 1991, an international group began working on DSI engineering and manufacturing at the engineering center in Fuchinobe, Japan. The team is the most international at the facility, including five acoustic engineers from Houston, one from France, and a recruit from China.

"We often hear about the contrast between Western and Japanese work styles," said Akio Obuchi, sonic and seismic department head. "But here we work in the Schlumberger style, in which people learn from, and cooperate with, each other."

This approach has produced new technology that has found quick client acceptance. In Abu Dhabi, for example, DSI tools are in almost constant service, both offshore and on land. They are aiding in the identification of oil-bearing rock structures, in evaluation of the strength of rock around the borehole, and in determination of how easily hydrocarbon will flow through the rock to the well. MAXIS technology, including the ARI\* Azimuthal Resistivity Imager, the USI\* UltraSonic Imager, and the FMI\* Fullbore Formation MicroImager tools are examples of recently commercialized services that benefit from this strategy of improved product development.



## “Improve quality, both in products and services...”

Achieving both quality and cost-effectiveness requires a global vision with three major axes. First, a deep understanding of the worldwide market must be attained. Second, technology must be sought wherever it can be found and then harnessed to make a reliable product or sustainable service. Third, the product or service must be simplified for efficient manufacture or delivery anywhere, but remain adaptable to capture local markets. An example of this global vision is the Pole of Excellence (PoE) strategy, pioneered by Schlumberger Industries to rationalize its 67 manufacturing plants in more than 20 countries. Schlumberger Industries produces diverse products for management of electricity, gas, water, and heat, such as meters, regulators, and remote reading devices. Many plants were originally geared to local markets and national energy regulations. Now, interdisciplinary, multinational PoE teams seek commonality between different markets and develop core products that can be customized to local needs. Here are three examples.

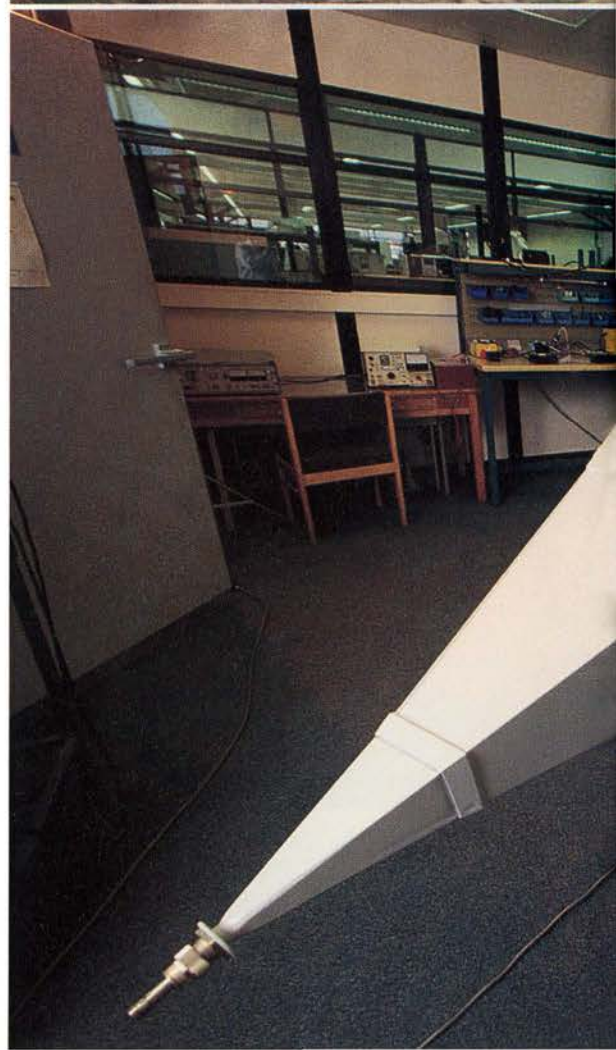
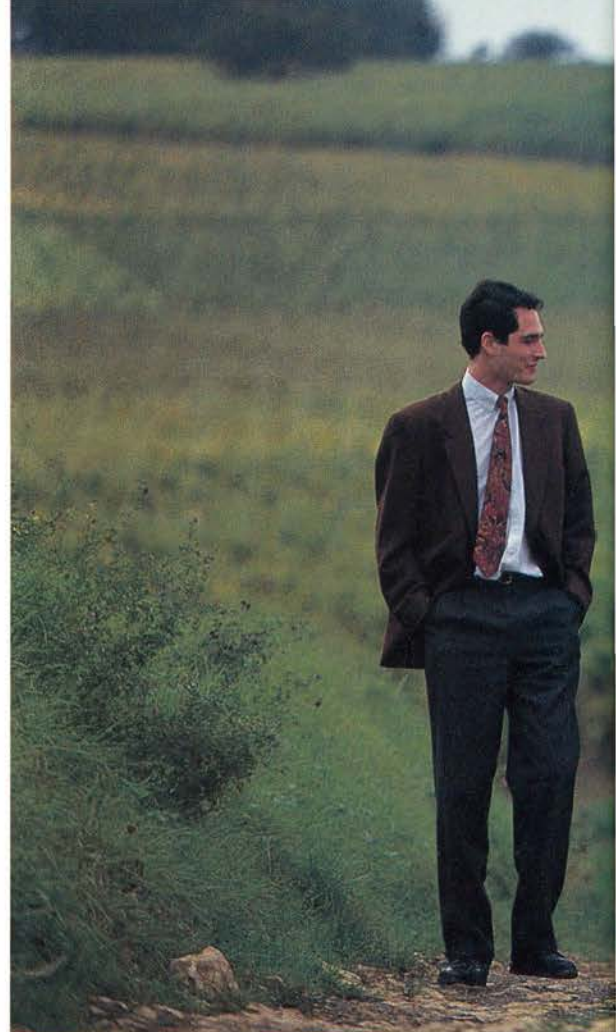


● ANDREA KUHLMANN, LEFT, AND JAN HERING ON THE HEAT METER PRODUCTION LINE AT THE SCHLUMBERGER INDUSTRIES PLANT IN OLDENBURG, GERMANY. HERING, A PRODUCTION ENGINEER FOR THERMAL ENERGY METERS, PROVIDES TRAINING FOR ASSEMBLY OF METERS AS NEW MODELS ENTER PRODUCTION.

### Heat metering team

Rationalization of heat meter design and manufacture is managed by a PoE team from Brussels. Heat meters are produced by Schlumberger Industries plants in Oldenburg, Germany and Mâcon, France. The two plants address different markets. The German plant produces domestic heat meters for heat allocation. A meter is put into every apartment so an apartment block's total energy bill can be properly allocated to the occupants. The German government created a market for the meter overnight when it passed legislation requiring domestic heat monitoring.

The French market is mainly district heat meters, larger devices for measuring heat distribution in municipal heating schemes. Since the measurement principle is the same, the PoE challenge is to ensure maximum commonality in manufacturing of the two types of meters. Dominique Richelet, based at Mâcon and head of heat metering R&D, summarizes the state of the business: “The mechanical parts of both meters are made in Germany, while here in France we





● THE MÂCON, FRANCE ENGINEERING TEAM THAT DESIGNS AND BUILDS HEAT METERS, AT THE NEARBY VINEYARDS OF FUISSE. FROM LEFT ARE OLIVIER GENELOT, HEAD OF HEAT METER PRODUCTION, DOMINIQUE RICHELET, HEAD OF R&D, AND JEAN-CLAUDE DUBOIS, WHO MANAGES HEAT METERING FOR FRANCE.



design and manufacture the electronics that integrates the volume and temperature values to measure energy consumed." The most promising market for both meters is Eastern Europe and Russia.

## Prepayment metering team

David Clarke, who draws on 17 years of experience with Schlumberger, heads the PoE team in prepayment metering at the Felixstowe plant in England. Production of prepayment electricity meters for the U.K. market started in 1987 and has reached 1500 units a day.

Clarke explains: "Prepayment used to be a U.K. phenomenon, but many customers around the world now demand a 'pay-as-you-go' system instead of receiving large bills." Along a production line, he picks up a 10-cm long plastic key with some electrical contact strips on it. "This key has replaced the coin. You go to a local sales point and get it recharged with a certain cash value of electricity. Back home, the user puts the key into the meter, transferring the credit."

The challenge for Clarke's team is to adapt this prepayment technology to gas meters; production has already started on prepayment water meters. They also plan to sell the prepayment concept in other countries such as France and the U.S.



● DAVID CLARKE IN A TEST LABORATORY AT SCHLUMBERGER INDUSTRIES IN FELIXSTOWE, ENGLAND. THE DEVICE IS AN EXPERIMENTAL SETUP THAT PROMISES TO PROVIDE A BETTER WAY TO TEST THE EFFECT OF ELECTROMAGNETIC INTERFERENCE ON METERS.







JEAN-LUC BOULANGER, AN R&D PROJECT LEADER FOR SCHLUMBERGER INDUSTRIES GAS REGULATION IN ITALY, BRINGS WATER TO COLLEAGUES HAVING LUNCH IN PIAZZA DEI SIGNORI, VICENZA. BOULANGER LEADS A MULTINATIONAL TEAM FROM IRELAND, ITALY, AND FRANCE.

## Gas regulation team

In Vicenza, Italy, a group of five young marketing and development engineers at the Schlumberger Industries gas regulation plant may herald the PoE of the future. Regulators reduce gas pressure, as the gas travels from the producing well to the kitchen stove. The reduction is made in three or four steps, and at each step, the regulator lowers pressure to a fixed amount regardless of flow.

Gas,” says Gilles Bourguignat, the team’s marketing head. “This opens a whole new market for an existing product.”

The second challenge is development of worldwide technical leadership. Jean-Luc Boulanger, the team’s technical leader, and two colleagues have developed a computer-controlled test station. This is helping them find ways to improve regulator performance



BEFORE GAS REGULATORS ENTER PRODUCTION IN VICENZA, ITALY, PROTOTYPES MUST PASS RIGOROUS EVALUATION ON THIS AUTOMATED TEST RIG. CLOCKWISE FROM THE BOTTOM ARE JEAN-LUC BOULANGER, ROBERT FOGARTY, R&D PROJECT ENGINEER, GILLES BOURGUIGNAT, MARKETING AND DEVELOPMENT MANAGER, ANTONIO NODARI, R&D PROJECT ENGINEER, AND UWE BAX, R&D PROJECT ENGINEER, WORKING FOR ONE MONTH IN VICENZA ON EXCHANGE FROM A SCHLUMBERGER AFFILIATE IN KARLSRUHE, GERMANY.

The world market in gas regulation is fragmented, with specific products designed for home markets. Schlumberger currently sells throughout Europe as well as the U.S. and Asia. The Vicenza PoE team’s first challenge is to understand the requirements of each country, so existing regulators can be adapted to new markets. “By modifying an Italian-specified regulator to larger flow rates, we obtained certification from British

and make them less noisy.

Efforts like these are making Vicenza a technical center of excellence, one of the PoE goals. “In the last six months, 50 people from 15 countries visited us—a mixture of customers, our own sales and technical people,” says Boulanger. The team of five knows that its contribution is beginning to count.



## “Intensify communications with customers in order to anticipate their needs...”

Anticipating client needs—not reacting to them after the fact—is possible only through the trust and cooperation forged by partnerships with clients. This is a growing trend throughout Schlumberger. The Smart Card division of Schlumberger Technologies, for example, owes much of its success, in 30 countries on five continents, to its alliance with each customer at the inception of a project and its commitment to the relationship as the project matures. Smart cards, which contain a memory chip or more complex microprocessor chip, are transforming the way the public performs an increasing number of routine transactions—telephone calls, bank transactions, health benefits...the list of possible applications is almost endless. The main challenge is to determine which projects deserve priority. Described here are three applications for telecommunications and one for banking.



● EVA BENGTSSON OF TELEFINANS AB IN STOCKHOLM WITH A SELECTION OF SCHLUMBERGER PAY PHONE SMART CARDS. THE TELECOMMUNICATIONS COMPANY SELLS SPACE ON ITS CARDS FOR PROMOTIONAL CAMPAIGNS.

### Pay phone systems

In early 1992, the Czech telephone company began installing smart card public telephones in Prague, reaching 3000 installations by year end. Schlumberger provides the phones, the cards, and the management system. Revenue generated by the first 1200 already exceeds twice that of Prague's existing 5000 coin-operated public phones.

“It's simple,” explains Béatrice Louveau, at age 26, an engineer for Schlumberger Technologies smart card pay phone systems. “Smart cards virtually eliminate vandalism and thereby reduce maintenance by at least







●  
BÉATRICE LOUVEAU, THIRD FROM LEFT, WITH CZECH PHONE COMPANY OFFICIALS. FROM LEFT ARE OLDŘICH TRNOVSKÝ, RESPONSIBLE FOR PAY PHONE INSTALLATION AND MAINTENANCE IN PRAGUE, SIMONA STEFANOVA, HIS ASSISTANT, AND JIŘÍ PADEVĚT, HEAD OF PAY PHONE SYSTEMS FOR MORAVIA AND BOHEMIA. THE CZECH PHONE COMPANY SERVES 1.2 MILLION CUSTOMERS IN PRAGUE.

half. Also, there is no loss of income. In fact, they encourage longer calls—no more searching for coins.”

But why a smart card and not a conventional magnetic-strip card? “They are far more secure,” adds Jiří Padevět, public pay phone specialist for the Czech phone company. “Smart card technology makes duplication or forgery of cards almost impossible. The Schlumberger system also has the advantage of not needing electrical power at the phone booth. That’s a big plus when installing thousands of phones in less than a year.”

Liaison between Schlumberger Technologies and the Czech phone company continues. Louveau and Padevět meet regularly in Prague to ensure the successful launch of smart card phones. A score of engineers like Louveau monitor similar systems in more than 30 countries. To date, 70,000 pay phones have been installed and more than 200 million smart cards sold.

Smart card pay phone systems have already been proven successful in Sweden, where Televerket, the leading telecommunications operator, began replacing coin phones three years ago. Today, 20% of Televerket’s 33,000 public phones are Schlumberger smart card units. Throughout Sweden, 9000 Schlumberger units will be operating by the end of 1993. In addition to the benefits of greater security and coinless operation, Televerket chose smart cards to avoid the growing expense of maintaining coin-operated machines, equipment failures related to the harsh climate, and damage from foreign coins. “The Schlumberger system was the only one that met our requirements—security, simplicity, and cost-effectiveness,” said Eva Bengtsson,





JÉRÔME TRAISNEL, LEFT, PRODUCT MANAGER FOR SMART CARDS AND SYSTEMS, WITH CLIENT JEAN-GABRIEL RÉMY ON THE PONT ALEXANDRE III OVER THE SEINE IN PARIS. SUCCESS OF SFR'S GLOBAL SYSTEM MOBILE PHONE REQUIRES ADVANCED SUBSCRIBER IDENTIFICATION AND BILLING, MADE POSSIBLE BY THE MICROPROCESSOR EMBEDDED IN THE SMART CARD.

senior purchaser at TeleFINANS AB, a part of the Televerket group.

Smart cards are also being adapted to the slightly different needs of mobile phone operation. Société Française du Radiotéléphone (SFR) markets a digital mobile phone network built to new European telecommunications standards and provides phone coverage for most of France. According to SFR Project Director Jean-Gabriel Rémy, SFR and similar companies covering other European countries expect the system will attract more than 20 million users.

There's one catch. Billing requires a way to identify each of the millions of users. The smart card microprocessor has enough computing power to provide individual

password protection. Each user has one and achieves instant recognition by plugging it into any mobile phone in Europe built to the new telecommunications standards.

Jérôme Traisnel, 30 years old and two years with the Smart Card division near Paris, manages the interaction with SFR. "There were three challenges in this project: developing software to put on the chip that satisfies the new standards, providing flexible manufacturing volume of cards so we can follow SFR's needs as they launch the service, and, not least, making the industry's first polycarbonate card." Polycarbonates are environmentally friendly and can operate at up to 185°F, another requirement of the new standards.





## Banking cards

Flexibility of manufacturing volume also attracted France's Crédit Agricole, one of the world's largest banks, to switch from magnetic-strip to smart card credit cards to reduce fraud. Schlumberger's Smart Card division is currently supplying Crédit Agricole with a half million chip-based credit cards. Charlie Garrigues, a senior executive at CEDICAM, Crédit Agricole's payment systems division, explains: "In 1992, French banks agreed to insert on each magnetic-strip card a chip to be used for fraud control. Fraud has already dropped 20%."

Other benefits for the bank are secure and low-cost manufacturing. To meet these needs, Schlumberger has invested in new manufacturing processes at a high-security facility in Pont-Audemer, France.

The banking community presents a potentially huge market for smart card manufacturers, as banks worldwide are beginning to replace magnetic-strip technology with more secure smart cards. The winners will provide a flexible service to banks and customers, producing high-quality cards at competitive prices.

RIGHT, A BANKING SMART CARD WITH A MICROPROCESSOR CHIP. ABOVE LEFT, MAX GHOZLAND, WHO OVERSEES SCHLUMBERGER BANKING SMART CARDS, MEETS AT THE CEDICAM OFFICE IN PARIS WITH CLIENT CHARLIE GARRIGUES, WHO MANAGES PAYMENT SYSTEMS OF THE FRENCH BANK, CRÉDIT AGRICOLE. GREATER SECURITY AGAINST FRAUD IS A CHIEF MOTIVATION FOR BANKS TO SWITCH FROM MAGNETIC-STRIP CREDIT CARDS TO SMART CARDS.





“Develop a multicultural work force to deliver to customers a high level of services...”

People are key to any endeavor. Business success depends on creative management of this human resource—finding new recruits, shaping tomorrow’s leaders, focusing people toward mutual goals. Building the Schlumberger team is a continuous effort applied at all levels of the company. Oilfield Learning Centers give engineers extensive training in the use of high technology and in customer relations. The Software Engineering Training Program instills a computer software culture. Internal management programs, BEST and Forum, communicate overall philosophy and strategy to our employees, nurturing the individual and forging a common culture.

Kitson heads Schlumberger’s North American training program from the Lafayette Learning Center in Louisiana. This center, and seven others like it worldwide, form the backbone of training for the oilfield wireline engineer—180 engineers passed through their doors in 1992. Learning Centers not only teach problem prevention and troubleshooting but also spread the multina-



● ENGINEERS REVIEW SIMULATED QUARTERLY RESULTS DURING A FIVE-DAY COURSE AT THE SCHLUMBERGER LEARNING CENTER IN LAFAYETTE, LOUISIANA. WITH STEVE DIANA OF THE HOUSTON OFFSHORE DISTRICT, SEATED LEFT, AND ROBERTA CARON OF THE FAIRMONT, WEST VIRGINIA DISTRICT, RIGHT, IS THE LEARNING CENTER TEAM. FROM LEFT, BRUCE ADAMS, DAVE KITSON, AND DON KNECHT.

Dave Kitson  
Lafayette, Louisiana

*wireline training*

“Inside this building,” says Dave Kitson, a 50-year-old Englishman who has logged oil wells in 14 countries, “we condense the long, hard road of field experience into a few months.”

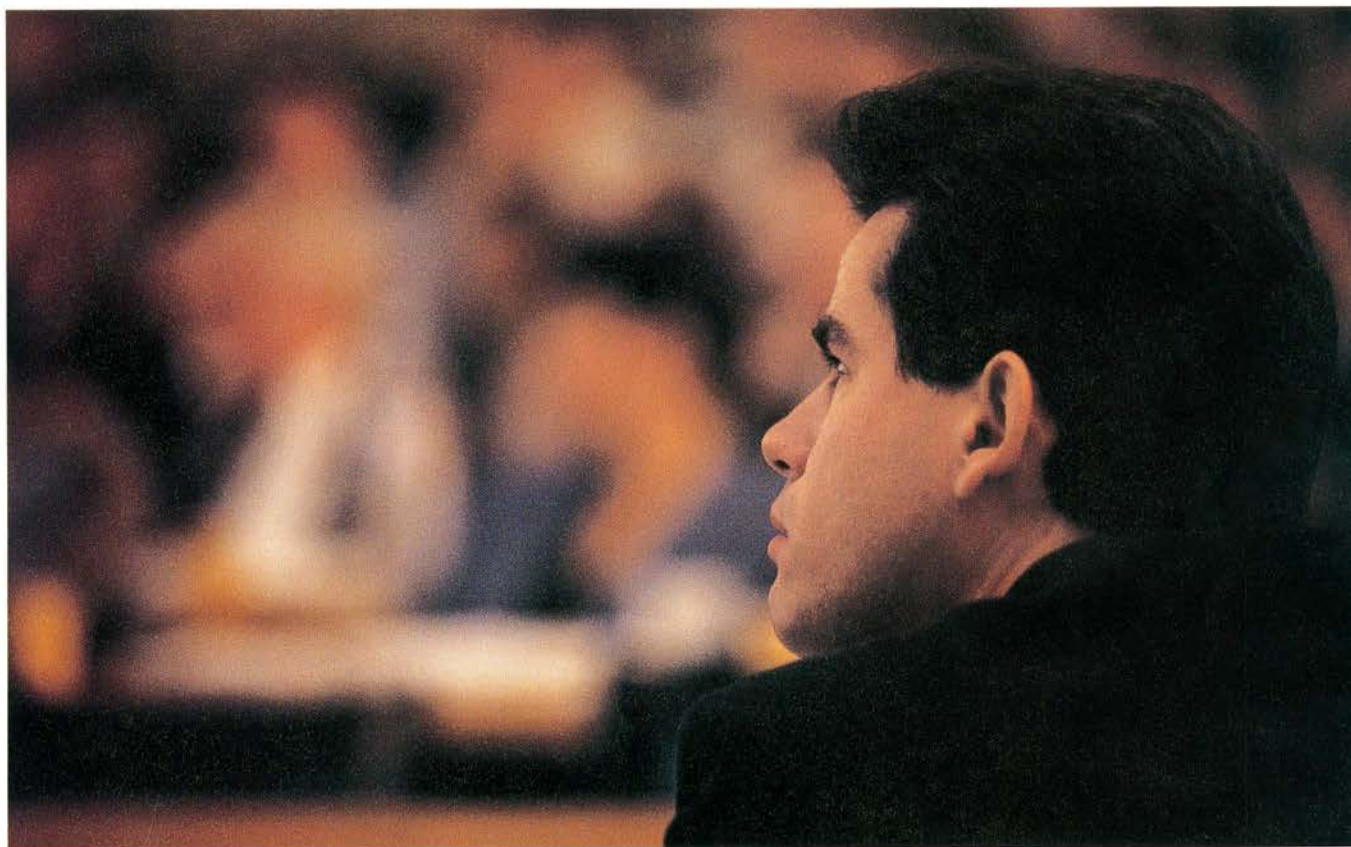
tional corporate culture, where Colombians and Texans, Pakistanis and Norwegians create bonds that last throughout their careers.

Learning Centers have been a Schlumberger fixture since the 1960s, keeping engineers up to speed on the latest technologies. The Learning Center is the focal point for emphasizing service quality. “The



idea," Kitson says, "is to teach engineers how to be more sensitive to the oil company's needs—that's as important as the technical side of the job. We're teaching skills that can make the difference between getting only one job and getting all the jobs." Safety is also a priority—Schlumberger's five-day safety course for oilfield recruits received the Safety in Seas award in

Industries. To date, 640 software engineers from Schlumberger Technologies have taken the five-day course, designed to advance a more efficient, uniform process for software development. The program will be made available to all Schlumberger software engineers in 1993 and builds on existing training programs attended by more than 1300 employees in 1992.



● HUBERT COURTY AT A BEST TRAINING SEMINAR IN MONTROUGE, FRANCE. IN 1993, MORE THAN 1000 SCHLUMBERGER PROFESSIONALS WILL ATTEND 50 BEST SEMINARS IN SEVEN COUNTRIES.

1992 from the National Ocean Industries Association.

The expanding importance of computer software has been recognized with the start up, in 1991, of the Software Engineering Training Program, developed jointly by the Schlumberger Laboratory for Computer Science in Austin, Texas and Schlumberger

## Hubert Courty, Paris

*training and development*

BEST, a training program started in Schlumberger Industries and now company-wide, is coordinated in Montrouge, France by Hubert Courty, a 40-year-old Frenchman with experience in both Oilfield Services and Measurement & Systems divisions. For



● JOHN CHIN DROPS OFF DAUGHTERS TIFFANY, LEFT, AND STEPHANIE AT SCHOOL IN SUGAR LAND, TEXAS. BEFORE WORKING ON ENVIRONMENTAL COMPLIANCE FOR NORTH AMERICA, CHIN WAS WITH WIRELINE IN TEXAS, LOUISIANA, AND CALIFORNIA.

Measurement & Systems, Courty sees almost 600 professionals a year who attend the BEST program. Another 400 get similar training in Atlanta, Georgia. The BEST program comes in three types.

BEST 1, for newcomers, provides two days of information about Schlumberger from the chairman and executive vice presidents. "Basically, they're being told 'we care about you,'" Courty says. BEST 2 provides basic management skills to key people with two to four years experience. BEST 3 gives specialist training for higher management. The BEST programs, Courty notes, "provide the most efficient way to motivate employees, give them tools to handle more responsibility, and develop the Schlumberger culture."



● JOHN CHIN, AT A MANAGEMENT FORUM IN RYE BROOK, NEW YORK, DISCUSSES LEADERSHIP IN A SESSION WITH EXECUTIVE VICE PRESIDENT IAN STRECKER, BACKGROUND. "THE EXCHANGE OF IDEAS IS FORTHRIGHT AND OFTEN CONTROVERSIAL," STRECKER SAYS. "BUT THE RESULTING PARTICIPATION IS ALWAYS REWARDING AND PRODUCTIVE."

## John Chin, Houston

*environmental compliance*

In a hotel 25 miles north of New York City, it is the fourth and final day of a Schlumberger Forum, a training program for experienced managers. John Chin, a 42-year-

old who oversees Schlumberger's compliance with environmental regulations in North America, joins 24 professionals seated at a conference table. Today's session is on leadership: What is leadership? What makes a leader? How do you recruit leaders?

Ian Strecker, executive vice president, and two other executives have been throwing questions at the group all morning. A main message is that leaders must repeatedly communicate a consistent vision. Sounds easy, except it takes time and commitment. At the end of the day, the group is joined by Chairman and CEO Euan Baird. He speaks for an hour then takes questions.

For Chin, an electrical engineer with 18 years seniority in Wireline, it was a chance to learn about other business lines. "Candid interaction with upper management is always stimulating," he says. "It gives you a fresh perspective on how you can contribute value to the company."

Similar ideas emerged at another Forum program near Paris. For Hungarian-born Andras Szoke, hired two years ago to develop opportunities for Schlumberger Industries in Eastern Europe, the Forum gives guidance and develops mutual respect vertically and horizontally. For Lebanese-born Bachir Boustani, 15 years with Schlumberger and currently Wireline & Testing division manager in Abu Dhabi, it's the opportunity to meet people from other parts of the company and feel a sense of community.

Many agree that developing tomorrow's leaders is the most important strategy of all. Schlumberger training managers know there are no short cuts.







## Roland Génin retires

On August 1, 1992, Roland Génin retired at age 65 after 42 years with Schlumberger. He remains a Schlumberger director until April 1993. Hired by Marcel Schlumberger in 1950 as a wireline field engineer, he worked in South America and Indonesia before going to Paris and later New York. From 1987 until his retirement, Roland was vice chairman in charge of Schlumberger Oilfield Services companies.

Throughout his career, Roland Génin played a key role forging the "Spirit of Schlumberger." He worked in various positions with Wireline, Dowell Schlumberger, Schlumberger Industries, and Schlumberger Limited helping to build Schlumberger into a global operation. He always communicated the simple message he learned from Marcel Schlumberger, "We are a service company; the customer is king; we sell technique; and, we are in business to make money."



● ROLAND GÉNIN, RIGHT, WITH EUAN BAIRD, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, AT THE SCHLUMBERGER LIMITED OFFICE IN PARIS.

Said Chairman Euan Baird at Roland's retirement, "Impressive as your achievements are, it is the quality of your leadership that we will remember most vividly. Your steadfast commitment to the best interests of Schlumberger has always been an inspiration to us."



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<sup>1</sup>Member Audit Committee

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<sup>3</sup>Member Finance Committee

<sup>4</sup>Member Nominating Committee



## Schlumberger Organization

### Oilfield Services

- *Wireline, Testing & Anadrill*

*Wireline & Testing:* Measurement of physical properties of underground formations to help locate, define and produce oil and gas reservoirs. Well testing; pressure measurements; perforating, completion and workover services; through-casing reservoir evaluation and production monitoring services.

*Anadrill:* Drilling services that integrate real-time, surface and downhole measurements with geological data to optimize the drilling process; Measurement-While-Drilling; Directional Drilling.

*GeoQuest:* Software and services, on main-frame computers and workstation systems, located in customer offices and Data Services Centers, to process and interpret exploration and production data.

- *Drilling & Pumping Services*

*Sedco Forex:* Operates more than 70 offshore and land drilling rigs.

*Dowell Schlumberger (50% owned):* Well cementing and stimulation; pumping services; coil tubing services; drilling fluids services; industrial pipeline services.

- *Seismic Services*

*GECO-PRAKLA:* Acquisition, processing, and interpretation of seismic data to define subsurface structures where oil or gas may be trapped.

### Measurement & Systems

- *Schlumberger Industries*

*Electricity Management:* Electricity meters, load and rate management and automatic meter reading and billing systems.

*Water & Gas:* Meters for measuring water, gas, thermal energy and industrial fluids consumption; gas regulation systems; automatic meter reading and billing systems.

*Defense Systems (France):* Civil and military mass storage, telemetry and signal processing systems; transducers for aerospace and automotive applications.

*Security & Control:* Non-destructive inspection for security and quality control.

- *Schlumberger Technologies*

*Automatic Test Equipment:* Design and manufacture of ATE systems and software for semiconductor manufacture and design.

*Applicon:* Computer-based solutions for mechanical engineering design and manufacturing processes.

*Retail Petroleum Systems:* Fuel dispensing systems for gasoline stations.

*Test & Transactions:* Test equipment for telecommunications and mechanical vibration analysis; functional and in-circuit testing of printed circuit boards; cards, terminals, systems and service to automate point-of-sale payments; parking management systems; public pay phones and smart cards.

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