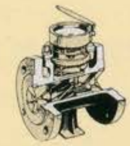

SCHLUMBERGER ANNUAL REPORT 1989

Cover: A member of the crew on the Sedco 602 semi-submersible rig drilling offshore Malaysia in rainy weather. Schlumberger Oilfield Services profited from strong activity in the Far East.






Schlumberger in Brief

	1989	1988	1987
Operating Revenue	**$4,685,995,000**	$4,924,522,000	$4,401,993,000
Income (loss):			
Continuing operations	**$ 419,954,000[1]**	$ 453,864,000[2]	$ 502,560,000[3]
Discontinued operations[4]	**—**	—	(220,000,000)
Before extraordinary item	**419,954,000**	453,864,000	282,560,000
Extraordinary item	**21,500,000**	22,287,000	70,080,000
Net income	**$ 441,454,000**	$ 476,151,000	$ 352,640,000
Income (loss) per share:			
Continuing operations	**$ 1.77[1]**	$ 1.72[2]	$ 1.81[3]
Discontinued operations[4]	**—**	—	(0.79)
Before extraordinary item	**1.77**	1.72	1.02
Extraordinary item	**0.09**	0.08	0.25
Net income	**$ 1.86**	$ 1.80	$ 1.27
Dividends declared per share	**$ 1.20**	$ 1.20	$ 1.20

[1]*Includes a gain of $13 million ($0.05 per share) on the sale of the Defense Systems division of Schlumberger Industries.*
[2]*Includes a gain of $35 million ($0.13 per share) on the sale of the Electricity Control & Transformers division of Schlumberger Industries.*
[3]*Includes nonrecurring credit of $222 million ($0.80 per share) resulting from the settlement of the U.S. offshore tax case and a gain of $69 million ($0.25 per share) on the sale of an investment in Compagnie Luxembourgeoise de Télédiffusion.*
[4]*Represents the loss on sale of Fairchild Semiconductor to National Semiconductor.*

Schlumberger's earnings per share increased by 3%. The decrease in interest income of $63 million resulting from spending $1.2 billion to repurchase approximately 35 million shares in 1988 was more than offset by increased operating income, primarily from Oilfield Services, earned on fewer outstanding shares.

1989 was a year in which we continued to refocus and to build on our internal strengths for the future. We completed the divestiture of Defense Systems and Graphics and several other small businesses not central to our future.

In Oilfield Services, we concentrated on preparing the introduction of the new technologies which our research and development efforts have produced to meet the new challenges of the 1990s. At Wireline & Testing, a prototype series of our new surface system, the MAXIS 500, was extensively tested with our customers around the world. Initial response was extremely favorable and the unit, coupled with a new family of downhole tools, will provide our clients with more quality, detailed and accurate answers than have ever been available in the past. In Seismic, we acquired the outstanding minority interest in GECO at the beginning of 1990 and our ability to produce 3D seismic data has been enhanced with the expansion of our multistreamer, multivessel capabilities. The continuing growth of Anadrill's Measurements While Drilling services coupled with new research programs is enhancing our capabilities in servicing the horizontal drilling market.

During 1989 our metering businesses acquired a substantial position in the United Kingdom's gas meter market through the acquisition of the Thorn-EMI Flow Measurement division. Our unique position in the residential metering markets for electricity, water and gas is stimulating more and more interest in the solutions we have developed in remote meter reading and other smart uses of the information recorded by meters. We are seeing a growing sophistication in our clients' requirements for both new metering technology and its applications.

The Schlumberger Technologies businesses have shown considerable progress in their ability to answer our clients' needs through their increased proficiency in customizing software. This has been particularly apparent in the success of our Automatic Test Equipment division in entering into agreements with customers to provide software expertise in the development of new products. During the year we entered into an agreement with Nippon Telegraph & Telephone Company of Japan to jointly develop commercial verification systems for application specific integrated circuits.

1989 was a year of dramatic political change which unraveled, in the space of a few months, the Russian empire. Expectations of democratic freedom and improved living standards cannot be fulfilled with the same speed, which will result in frustration and uncertainty. As we saw in China, the process of liberalization is not always straightforward.

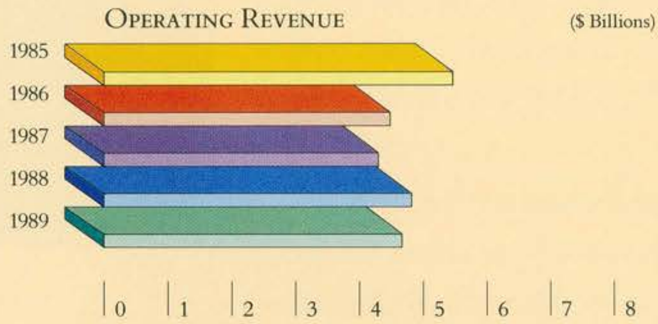
Nevertheless, in the longer term the growing ascendancy of the free market system over the centrally planned economies will have a major effect on the world's future and the globalization of the world economy. The new-found freedom of large educated populations who seek higher living standards will place a premium on the value and efficient use of the world's natural resources. The evolution is not without danger. The desire to go too fast could create inflationary pressure on a worldwide basis. The heightened competitiveness in the world economic system could breed national resentment and friction and encourage protectionist policies. The economic gap between the developed and undeveloped nations could widen, bringing its own instability. Finally, the increasing world population and the growing demand for energy, which higher living standards will entail, will keep pressure on the fragile environment of our planet.

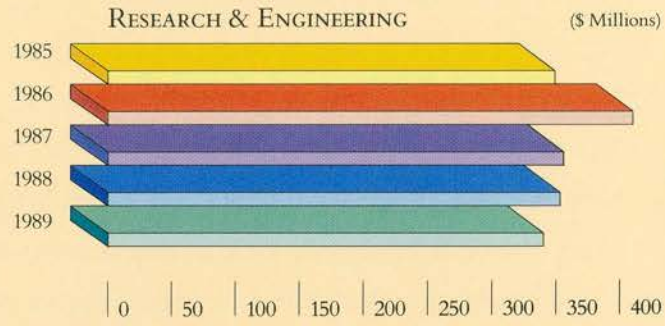
For Schlumberger, these events foretell an era of tremendous promise. Our truly international, service-minded people are ideally placed to profit from this globalization. Our main business is concerned with improving the efficiency of finding and developing oil and gas and the efficient use of energy in the form of electricity or gas. In addition, we are heavily involved in the management of one of the planet's most precious resources, water. At some stage, the U.S.S.R., the world's largest oil producer, will need to improve the efficiency of their oilfields. We view this as a substantial future opportunity and look forward to the renewal of an historic business relationship which existed in the 1930s.

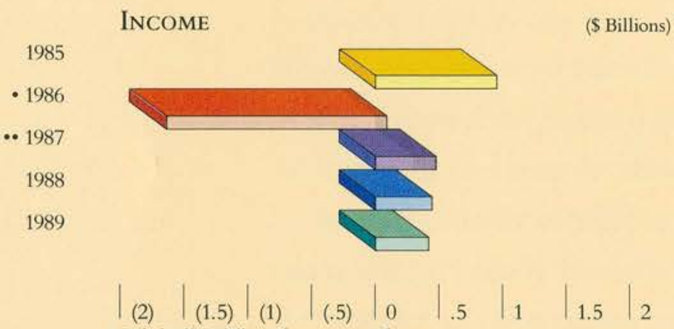
1989 was also the last year of service for two outstanding directors, Paul Lepercq and George Jewell. Paul Lepercq leaves a truly remarkable record, having been a director of Schlumberger for 32 years without ever missing a Board Meeting. His knowledge and imagination were always a source of inspiration. George Jewell's wisdom and wit enhanced and influenced the Board for 13 years.

Euan Baird
Chairman & Chief Executive Officer
February 5, 1990

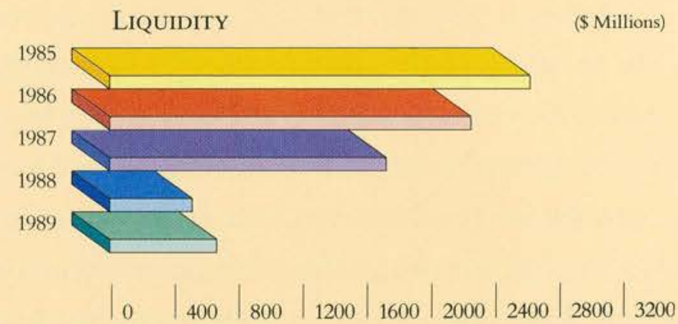
All Charts Refer to Continuing Operations

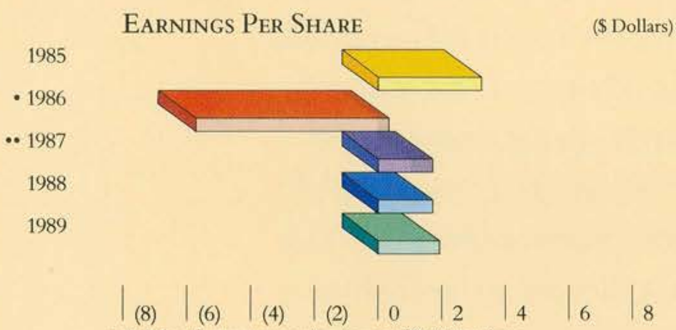




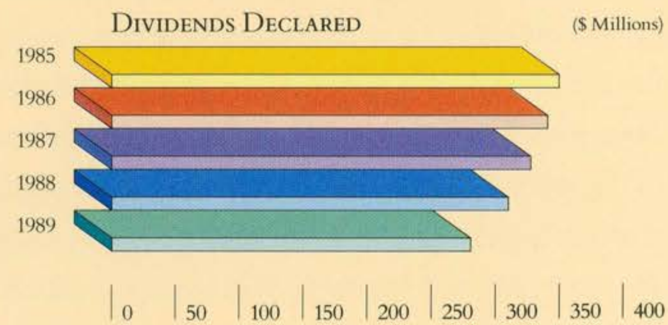


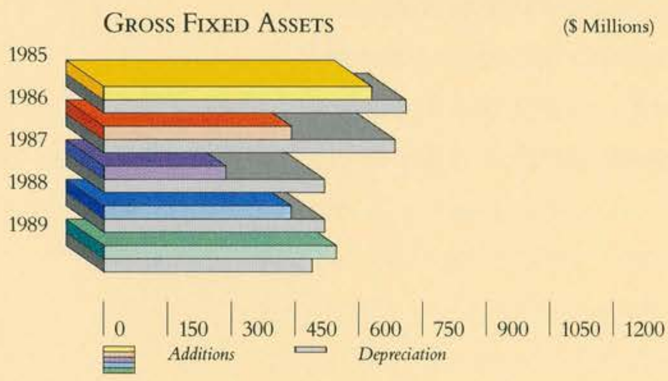
• Includes $1.74 billion of nonrecurring charges.
•• Includes $222 million nonrecurring credit.

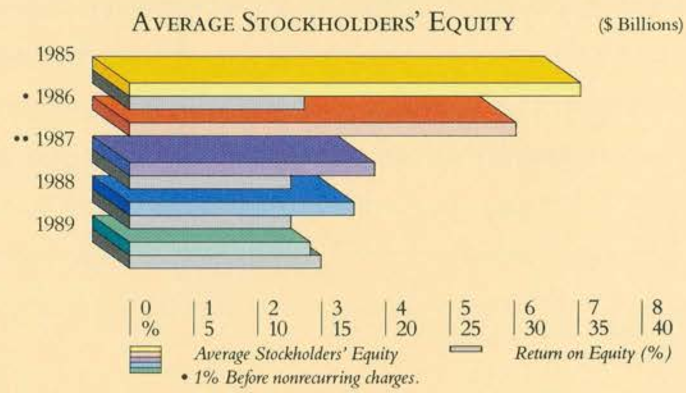




• Includes after tax nonrecurring charges of $6.05 per share.
•• Includes after tax nonrecurring credit of $0.80 per share.







• 1% Before nonrecurring charges.
•• 7% Before nonrecurring credit.

Financial Review

Management's Discussion and Analysis of Results of Operations

Operating Revenue	**1989**	1988	1987
			(Stated in millions)
Oilfield Services	**$2,696**	$2,721	$2,306
Measurement & Systems	**$1,990**	$2,204	$2,096

Oilfield Services

Worldwide oilfield activity declined in 1989 as the average number of active drilling rigs fell 8% influenced by slackening North American drilling. The beginning of 1989 carried over a familiar sequence that started at the end of 1988: decreasing oilfield activity in response to weakening and unstable oil prices triggered by overproduction. During 1989, increased oil demand and enforced production discipline helped stabilize oil prices, and this affected oilfield activity which slowly recovered, particularly in North America. This contrasted with a modest recovery in 1988 when active rigs worldwide increased 5% and active marine seismic vessels were 13% higher although the year ended on a downtrend. All Schlumberger oilfield units benefited from the industry trend in recent years to concentrate activities in areas outside of North America where production economies are favorable. In addition, results have been improved by customer acceptance of new Schlumberger technology introduced by the Wireline & Testing, Dowell Schlumberger and Anadrill units.

Wireline, Testing & Seismic Services

Revenue in 1989 was slightly below the prior year as activity improvements in the Eastern Hemisphere and Latin America were offset by a decline in North America. A significant contribution to revenue was made by new services introduced recently, the Array Sonic, Formation Microscanner, Oil Based Mud Dipmeter, Dual-Burst Thermal Decay, and Downhole Seismic Array services. A new generation of drillpipe-conveyed Logging While Drilling formation-analysis tools was introduced.

In 1988, on a comparable basis (including 100% of GECO in 1987), revenue was 15% ahead.

North America

Revenue in 1989 was down 18% as the average number of active rigs declined 7% in the United States and fell 35% in Canada for an overall loss of 12%. Strong downward pressures on service prices accompanied the weaker rig activity. However, activity began to pick up strongly in the second half of the year when the average rig count in the fourth quarter exceeded that of the previous year by 10%. At year end, the active rigs stood 13% higher. These factors played a part in a modest recovery in service prices that took effect in late 1989.

In 1988, revenue was 20% above 1987 on a 1% overall improvement in average active rigs as stronger U.S. offshore rig activity was offset by lower drilling activity on land. Average active rigs in Canada were up 9%.

Eastern Hemisphere and Latin America

(Australasia, Africa, Far East, Middle East, Europe, Latin America)

Revenue in 1989 grew 3%, despite a 4% drop in the average number of active drilling rigs. All areas, except Europe, contributed to this improvement with the strongest gains in the Far East. Prices for services continued to firm. Significant growth was experienced in the market for Exclusive Data Services, where Schlumberger installs specialized workstations for log processing and interpretation and provides associated services on the clients' premises.

In 1988, revenue was up 12% on a 6% increase in average active rigs as all regions except Latin America reported stronger activity.

Seismic Services — GECO

GECO revenue increased 8% in 1989 reflecting stronger marine seismic activity, mainly in the Gulf of Mexico and the Far East. Prices for seismic services remained depressed due to industry overcapacity. GECO operates 16 seismic vessels worldwide. In November, a subsidiary of GECO acquired SONICS Ltd., a leading Canadian land seismic company. There was excellent customer acceptance for a new seismic interpretation workstation, CHARISMA VME, which was introduced in mid-1989.

In 1988, revenue was up 18% with significant improvements in the North Sea and the Gulf of Mexico.

Drilling & Pumping Services

Drilling & Pumping Services revenue was level with 1988 but profitability improved significantly. This compared to a 15% revenue increase in 1988 over a severely depressed 1987. The 4% increase in pumping revenue, mainly as a result of continued growth in activity outside North America, offset lower drilling revenue principally due to reduced activity in the United States by Sedco Forex. Measurements While Drilling (MWD) services again helped Anadrill which gained 13%.

Sedco Forex

The drilling industry average utilization rate of offshore mobile rigs rose slightly from 66% during 1988 to 68% in 1989. Average offshore day rates were up in all areas in 1989 compared to 1988, except the Gulf of Mexico where jack-up rates were unchanged, and depressed rates for semisubmersibles moved even lower.

Sedco Forex revenue was down 7%, reflecting lower activity in Africa and Europe, and cessation, late in 1988, of unprofitable land drilling operations in North America. The average Sedco Forex offshore rig utilization rate during 1989 was unchanged from the prior year at 77%. In 1988, revenue was up 11% over 1987 due to higher rig activity and revenue from the Sydney Ocean Outfalls Project.

At year-end 1989, the Sedco Forex fleet consisted of 73 drilling rigs (39 offshore and 34 land); eight rigs were retired and four purchased during the year.

Anadrill
Worldwide revenue increased a further 13% in 1989 following the 37% increase of 1988. Measurements While Drilling revenue grew 28% as activity and prices continued to strengthen; the Far East, where revenue nearly doubled, was particularly active. In support of integrated drilling services, several research programs were initiated in horizontal drilling technology. Horizontal drilling is gaining acceptance as an important new technique to increase oil and gas industry productivity.

Dowell Schlumberger (50% owned)
Dowell Schlumberger worldwide revenue increased 4%, following a 13% increase in 1988.

In North America, revenue was 2% higher as prices improved slightly and activity grew steadily after a very weak first quarter that was 13% below the same period in 1988. South and West Texas stimulation activity was particularly strong showing revenue growth of 16% over 1988; the Industrial Services division had similar growth. Revenue in Canada dropped 33% as the rig count fell 35%. Outside North America, revenue was ahead 5% with continuing significant growth in stimulation.

New technology field tested in 1989 included the VIP™ cement mixer for improved cement slurry density and quality control, a new generation of tools for gravel packing, and new downhole tools for coiled tubing. A method of Coiled Tubing Logging (CTL™), primarily with application to horizontal wells, was developed jointly with Wireline & Testing Services.

Measurement & Systems
Revenue decreased 10% compared to the previous year, but increased 5% in 1988. On a comparable basis, adjusted for businesses acquired or discontinued, revenue was up 1% in 1989 and up 8% in 1988.

Schlumberger Industries
As measured in U.S. dollars and on a comparable basis, revenue was level in 1989 and rose by 16% in 1988; orders were 3% lower in 1989 but up 20% in 1988. Results improved at all units except in Electricity Management, North America.

Electricity Management
Revenue was level while orders were down 1% in 1989 compared to 1988 increases of 22% and 23%, respectively.

Early in the year, worldwide growth in low-voltage distribution networks helped boost residential metering and load management sales, but a subsequent downturn led to a general decline in these markets. In the U.S., new electronic metering products, mostly for industrial applications, met increased competition, and low housing starts eroded residential meter prices. Demand increased in the U.K. for new solid-state prepayment meters which improve efficiency of both metering and collections. Elsewhere, demand in Italy for the new combined meter resulted in doubling production capacity, while new products for load management and for industrial markets were launched in France. The first order was received from the French civil aviation authority for the new enhanced x-ray system for scanning shipping containers.

The strategy to grow by geographical expansion led to the acquisition of a meter reading company in Canada in mid-1989 and joint-venture majority ownership of a domestic meter manufacturer in Hungary early in 1990.

Water & Gas
In 1989, revenue increased 2% while orders decreased 3% compared to 1988 increases of 15% and 16%, respectively.

Outside North America, market share and geographical distribution have increased as a result of acquisitions in the U.K. and Italy: the Thorn Gas Metering activity in the U.K., a major supplier of residential gas meters on the British market, and Bosco SpA located in Turin, Italy, a manufacturer of water meters.

In North America, water meter revenue grew substantially, but Measurement division revenue declined slightly after growing approximately 10% in 1988. The Information Systems division has grown substantially in conjunction with the growth of automatic meter reading in the U.S. The gas business declined in 1989 but at a slower pace than in 1988 in a price-competitive market.

Process Control & Transducers
Revenue in 1989 was level while orders decreased 8%. In 1988, revenue and orders rose 6% and 23%, respectively.

Sales of process control products were up due to demand for the new Modumat 8000 system and economic recovery in the important petrochemical, chemical, glass and food industries. Industrial transducer sales were lower in the U.K. for density products.

Schlumberger Technologies
Revenue on a comparable basis, as adjusted for business sold, increased 2% in 1989 and 4% in 1988. Electronic Transactions registered the best performance with excellent growth in parking and mass transit ticketing systems, as well as retail petroleum systems. Automatic Test Equipment faced low demand in principal markets for board and component testers, while sales of integrated circuit diagnostic systems climbed.

Automatic Test Equipment
Revenue was down 3% and orders declined 12% compared to 1988. Demand from U.S. semiconductor manufacturers continued to decline relative to Asian markets. Sales of both board testers and component testers were down in Europe. Sales of the IDS 5000, an integrated circuit diagnostic system, more than doubled. Initial orders have been received for the S790, a new board tester, which was introduced in Europe in November. Revenue was down 11% in 1988; lower sales in North America were only partially offset by higher sales in Asia.

Two joint ventures were created: with Nippon Telegraph & Telephone (NTT) to develop verification systems for application specific integrated circuits and with Motorola to develop a scan-based component tester.

Computer Aided Design and Manufacturing
Revenue was 2% higher and up 8% in 1988. The software content of revenue grew, following the decision to move out of the hardware business. MacBravo!, CAD software for the Apple MacIntosh computer, was released in March and additional applications were introduced later in the year. In September, a joint marketing and sales agreement was signed with Digital Equipment Corporation under which they will sell Schlumberger CAD/CAM software directly to end users.

Electronic Transactions
Revenue gained 10% in 1989 and 16% in 1988, while orders were up 9% and 15%, respectively.

Sales of Urban Terminals & Systems increased significantly in Western Europe, in particular integrated parking systems. New card-operated mass transit ticketing systems were developed and automatic ticket dispensers were introduced.

Smart Cards & Systems produced 28 million cards in 1989 and card manufacturing was started in the U.S. using a new packaging technology. Export sales of public telephones to Norway and Sweden developed, while sales of electronic payment terminals leveled off in a depressed market.

Retail Petroleum Systems revenue increased. The Micromax gasoline station control system had continued success in the U.S. New product developments included a multiproduct dispenser for the Dutch market and a PC-based gas station control and point-of-sale terminal.

Instruments
Revenue declined 2% in 1989 but increased 2% in 1988 after allowing for divestiture. Radio Frequency Test products recorded good growth, particularly the 4031 designed for testing mobile communication systems. Telecommunications instruments also made progress. An overall decline in the general instrumentation business more than offset these successes.

Net Income

(Stated in millions except per share amounts)

	1989		1988		1987	
	Amount	**Per Share**	Amount	Per Share	Amount	Per Share
Continuing operations	**$420**	**$1.77**	$454	$1.72	$503	$1.81
Discontinued operations	**—**	**—**	—	—	(220)	(0.79)
Extraordinary item	**21**	**0.09**	22	0.08	70	0.25
Net Income	**$441**	**$1.86**	$476	$1.80	$353	$1.27

Income from continuing operations in 1989 included a $13 million ($0.05 per share) after tax gain on the sale of Defense Systems; 1988 included a $35 million ($0.13 per share) after tax gain on the sale of Electricity Control & Transformers; 1987 included the after tax gain of $69 million ($0.25 per share) on the sale of the Company's investment in Compagnie Luxembourgeoise de Télédiffusion and a nonrecurring credit of $222 million ($0.80 per share) resulting from the settlement of the litigation with the U.S. Government regarding taxation of Wireline operations on the outer continental shelf area.

Excluding the unusual items described above, income from continuing operations was down $12 million in 1989. The decline in interest income ($63 million), resulting from the $1.2 billion spending on the repurchase of 34.5 million shares in 1988, was partially offset by higher earnings in the business groups. In Oilfield Services, the Drilling & Pumping Services group showed a substantial improvement; Schlumberger Technologies losses were significantly reduced from 1988.

Included in 1987 net income are losses relating to the discontinued operations of Fairchild Semiconductor. The 1987 loss of $220 million ($0.79 per share) represented the loss on the sale to National Semiconductor.

Net income in 1989, 1988 and 1987 also included extraordinary gains of $21 million ($0.09 per share), $22 million ($0.08 per share) and $70 million ($0.25 per share), respectively. These gains resulted from awards from the Iran-U.S. Claims Tribunal related to Iran's seizure of SEDCO, Inc. assets in 1979 prior to its acquisition by the Company.

Interest and Other Income

Interest and other income included a 1989 gain of $13 million on the sale of Defense Systems; a 1988 gain of $35 million on the sale of Electricity Control & Transformers; and a 1987 gain of $76 million on the sale of the Company's investment in Compagnie Luxembourgeoise de Télédiffusion. Excluding these items, interest and other income declined $71 million in 1989 of which $63 million reflects the decline in short-term investments resulting from Treasury Stock purchases in 1988.

Interest Expense

Interest expense declined $33 million in 1989 and $12 million in 1988. These reductions were primarily due to lower average outstanding debt as proceeds from the sale of businesses were used to repay debt.

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 liquidity for each of the past three years:

(Stated in millions)	1989	1988	1987
Income, continuing operations	**$ 420**	$ 454	$ 503
Depreciation & amortization	**520**	552	535
Nonrecurring items	**—**	—	(222)
Other	**(53)**	(89)	(54)
	887	917	762
Increase in working capital requirements	**(112)**	(95)	(270)
Fixed asset additions	**(549)**	(455)	(276)
Dividends paid	**(285)**	(325)	(335)
Other	**23**	59	39
Increase (decrease) from ongoing operations	**(36)**	101	(80)
Purchase of Treasury shares	**(59)**	(1,207)	(364)
Discontinued operations	**(1)**	2	(122)
Proceeds from employee stock plans	**40**	—	5
Extraordinary item	**50**	—	116
Other	**159**	(100)	(59)
Net increase (decrease) in liquidity	**$ 153**	$(1,204)	$ (504)
Liquidity — end of period	**$ 708**	$ 555	$1,759

The increase in liquidity in 1989 resulted primarily from the sales of the Defense Systems and Graphics businesses, partially offset by the acquisition of the Thorn U.K. Gas business: net effect $180 million. The declines in liquidity in 1988 and 1987 reflected the purchase of Treasury shares, including the "Dutch Auction" completed in 1988 under which the Company purchased 30.5 million common shares at a total cost of $1.07 billion.

Current liquidity levels, combined with liquidity provided by ongoing operations, are expected to fully satisfy future business requirements.

Research & Engineering

Expenditures by business sector were as follows:

(Stated in millions)	1989	1988*	1987*
Oilfield Services			
Wireline, Testing & Seismic Services	**$163**	$159	$153
Drilling & Pumping Services	**35**	33	34
	198	192	187
Measurement & Systems			
Schlumberger Industries	**70**	80	77
Schlumberger Technologies	**71**	81	91
	141	161	168
	$339	$353	$355

**Reclassified, in part, for comparative purposes.*

Fixed Assets

Additions by business sector were as follows:

(Stated in millions)	1989	1988*	1987*
Oilfield Services			
Wireline, Testing & Seismic Services	**$325**	$264	$122
Drilling & Pumping Services	**126**	86	50
	451	350	172
Measurement & Systems			
Schlumberger Industries	**65**	67	69
Schlumberger Technologies	**32**	37	35
	97	104	104
Other	**1**	1	—
	$549	$455	$276

**Reclassified, in part, for comparative purposes.*

It is anticipated that expenditures for fixed assets in 1990 will exceed 1989 levels and will be financed internally.

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 1989 and 1988 were:

	Price Range		Dividends
	High	Low	Declared
1989 Quarters			
First	$39⅛	$32	$0.30
Second	41¼	36¾	0.30
Third	45⅜	39¼	0.30
Fourth	50½	40⅛	0.30
1988 Quarters			
First	$37⅞	$28½	$0.30
Second	38¾	33⅜	0.30
Third	35¾	30⅞	0.30
Fourth	35⅜	31¼	0.30

The number of holders of record of the Common Stock of the Company at December 18, 1989 was approximately 36,000. 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.

Consolidated Statement of Income

Year Ended December 31,	1989	1988	1987
	(Stated in thousands except per share amounts)		
Revenue			
Operating	**$4,685,995**	$4,924,522	$4,401,993
Interest and other income	**157,711**	250,850	325,026
	4,843,706	5,175,372	4,727,019
Expenses			
Cost of goods sold and services	**3,342,102**	3,528,114	3,258,242
Research & engineering	**339,073**	352,568	354,965
Marketing	**268,343**	302,918	282,760
General	**267,759**	274,658	269,060
Interest	**95,741**	128,602	165,654
Nonrecurring items	**—**	—	(222,200)
Taxes on income	**110,734**	134,648	115,978
	4,423,752	4,721,508	4,224,459
Income from Continuing Operations	**419,954**	453,864	502,560
Loss from Discontinued Operations of Fairchild Semiconductor	**—**	—	(220,000)
Income before Extraordinary Item	**419,954**	453,864	282,560
Extraordinary Item	**21,500**	22,287	70,080
Net Income	**$ 441,454**	$ 476,151	$ 352,640
Income (loss) per share			
Continuing operations	**$ 1.77**	$ 1.72	$ 1.81
Discontinued operations	**—**	—	(0.79)
Before extraordinary item	**1.77**	1.72	1.02
Extraordinary item	**0.09**	0.08	0.25
Net income	**$ 1.86**	$ 1.80	$ 1.27
Average shares outstanding (thousands)	**237,859**	264,199	277,065

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

Consolidated Balance Sheet

Assets December 31,	1989	(Stated in thousands) 1988
Current Assets		
Cash	**$ 53,913**	$ 41,670
Short-term investments	**1,299,560**	1,407,446
Receivables less allowance for doubtful accounts (1989 — $52,137; 1988 — $65,873)	**1,103,609**	1,129,553
Inventories	**509,919**	583,282
Other current assets	**63,781**	60,614
	3,030,782	3,222,565
Investments in Affiliated Companies	**296,036**	299,642
Long-Term Investments and Receivables	**169,709**	149,592
Fixed Assets less accumulated depreciation	**1,647,833**	1,616,683
Excess of Investment Over Net Assets of Companies Purchased less amortization	**274,401**	243,242
Other Assets	**63,025**	68,439
	$5,481,786	$5,600,163

Liabilities and Stockholders' Equity		
Current Liabilities		
Accounts payable and accrued liabilities	**$1,137,986**	$1,137,408
Estimated liability for taxes on income	**583,930**	592,784
Bank loans	**296,128**	633,004
Dividend payable	**71,600**	71,614
Long-term debt due within one year	**57,029**	69,426
	2,146,673	2,504,236
Long-Term Debt	**292,487**	191,454
Other Liabilities	**144,714**	149,455
	2,583,874	2,845,145
Stockholders' Equity		
Common stock	**410,343**	432,899
Income retained for use in the business	**4,877,367**	4,721,322
Treasury stock at cost	**(2,349,633)**	(2,352,563)
Translation adjustment	**(40,165)**	(46,640)
	2,897,912	2,755,018
	$5,481,786	$5,600,163

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,	1989	1988	1987
		(Stated in thousands)	
Cash flows from operating activities:			
Net income	**$ 441,454**	$ 476,151	$ 352,640
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	**519,727**	552,162	534,530
Loss from disposal of discontinued operations	**—**	—	220,000
Nonrecurring items	**—**	—	(222,200)
Earnings of companies carried at equity, less dividends received (1989 — $49,023; 1988 — $20,660; 1987 — $10,063)	**11,479**	(514)	73,542
Gain on sale of subsidiary/investments	**(12,783)**	(34,871)	(75,834)
Extraordinary gain	**(21,500)**	(22,287)	(70,080)
Provision for losses on accounts receivable	**9,813**	17,355	26,574
Other adjustments	**(60,661)**	(51,613)	(73,732)
Change in operating assets and liabilities:			
(Increase) decrease in receivables	**(96,981)**	96,340	(74,032)
(Increase) decrease in inventory	**(1,281)**	(4,672)	38,398
Increase (decrease) in accounts payable and accrued liabilities	**11,214**	(65,118)	(187,360)
Decrease in estimated liability for taxes on income	**(8,147)**	(64,665)	(151,497)
Other — net	**(21,408)**	1,789	23,667
Net cash provided by operating activities	**770,926**	900,057	414,616
Cash flows from investing activities:			
Purchases of fixed assets	**(548,554)**	(455,353)	(276,373)
Sales of fixed assets	**42,153**	76,804	111,100
Proceeds from sale of subsidiary/investments	**236,000**	62,900	83,994
Investment in affiliated company	**—**	(25,000)	—
Proceeds from extraordinary item	**50,151**	—	115,635
Payment for purchase of Neptune International, net of cash acquired	**—**	—	(134,838)
Payment for purchase of GECO A.S. common stock	**—**	(100,164)	—
Payment for purchase of Thorn Gas Metering (U.K.)	**(93,383)**	—	—
Decrease in short-term investments	**108,397**	1,244,627	1,377,944
(Increase) decrease in long-term investments and receivables	**1,188**	(67,988)	(1,979)
Investment in Compagnie Générale des Eaux shares (1989), debentures (1988)	**(20,332)**	(13,336)	—
Net cash provided by (used in) investing activities	**(224,380)**	722,490	1,275,483
Cash flows from financing activities:			
Dividends paid	**(285,423)**	(325,415)	(334,662)
Purchase of shares for Treasury	**(59,415)**	(1,206,578)	(363,616)
Proceeds from employee stock purchase plan	**26,276**	—	—
Proceeds from exercise of stock options	**13,513**	318	4,567
Proceeds from issuance of long-term debt	**124,115**	106,863	7,524
Payments of principal on long-term debt	**(135,527)**	(179,516)	(415,840)
Net decrease in short-term debt	**(311,446)**	(33,622)	(576,246)
Proceeds from issuance of long-term debt relating to Thorn Gas Metering (U.K.)	**93,604**	—	—
Net cash used in financing activities	**(534,303)**	(1,637,950)	(1,678,273)
Net increase (decrease) in cash	**12,243**	(15,403)	11,826
Cash, beginning of year	**41,670**	57,073	45,247
Cash, end of year	**$ 53,913**	$ 41,670	$ 57,073

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)

	Common Stock					Income Retained for Use in
	Issued		In Treasury		Translation	
	Shares	Amount	Shares	Amount	Adjustment	the Business
Balance, January 1, 1987	303,379,562	$421,113	22,220,733	$ 784,768	$(52,495)	$4,539,421
Translation adjustment, 1987					50,915	
Purchases for Treasury			9,079,720	363,616		
Sales to optionees less shares exchanged	94,118	2,703	(37,106)	(1,864)		
Net income						352,640
Dividends declared ($1.20 per share)						(331,893)
Balance, December 31, 1987	303,473,680	423,816	31,263,347	1,146,520	(1,580)	4,560,168
Translation adjustment, 1988					(45,060)	
Purchases for Treasury			34,498,650	1,206,578		
Tax benefit on stock options		9,300				
Sales to optionees less shares exchanged	1,100	(217)	(10,634)	(535)		
Net income						476,151
Dividends declared ($1.20 per share)						(314,997)
Balance, December 31, 1988	303,474,780	432,899	65,751,363	2,352,563	(46,640)	4,721,322
Translation adjustment, 1989					6,475	
Purchases for Treasury			1,373,000	59,415		
Sales to optionees less shares exchanged		(5,385)	(395,788)	(18,898)		
Employee Stock Purchase Plan		(17,171)	(909,316)	(43,447)		
Net income						441,454
Dividends declared ($1.20 per share)						(285,409)
Balance, December 31, 1989	303,474,780	$410,343	65,819,259	$2,349,633	$(40,165)	$4,877,367

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. Stockholders' Equity was increased $6 million in 1989, decreased $45 million in 1988 and increased $51 million in 1987. Revenue and expenses are translated at the weighted average exchange rates for the period.

All transaction gains and losses are included in income in the period in which they occur. Transaction losses included in the results amounted to $19 million, $15 million and $4 million in 1989, 1988 and 1987, respectively.

Short-Term Investments

Short-term investments are stated at cost plus accrued interest, which approximates market, and comprised mainly certificates of deposit and time deposits 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

Costs in excess of net assets of purchased companies are amortized on a straight-line basis over the estimated life, but not in excess of 40 years. Accumulated amortization was $47 million and $46 million at December 31, 1989 and 1988, 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 1989, 1988 or 1987.

Approximately $1.3 billion of consolidated income retained for use in the business at December 31, 1989 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 December 1987, Financial Accounting Standard No. 96 – Accounting for Income Taxes was issued by the Financial Accounting Standards Board. As permitted by FAS No. 96, the Company implemented this Standard on January 1, 1989. The Company's U.S. subsidiary is in an operating loss carryforward position and, as a result, has no deferred tax balances. The adoption of this Standard did 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 is 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.

Discontinued Operations

The Fairchild Semiconductor operations were sold effective September 30, 1987 to National Semiconductor Corporation in exchange for National Semiconductor common stock and warrants with a guaranteed minimum cash value of $122 million. In 1988, the Company received $127 million from National Semiconductor which repurchased its common stock and warrants and settled in cash the balance of the guaranteed purchase price plus interest.

The results of the Fairchild Semiconductor business, including losses on disposal, have been reported as discontinued operations in the Consolidated Statement of Income. The 1987 loss of $220 million represents the loss on the sale to National Semiconductor and arose primarily from the reassumption of Fairchild debt.

Nonrecurring Items

On December 23, 1987 the Company announced that it reached a settlement with the U.S. Government concerning whether Wireline oilfield operations on the outer continental shelf area during the years 1970 through 1986 were subject to U.S. taxation. As a result of the settlement, the Company recorded in 1987 a fourth quarter after tax credit to income of $222 million ($0.80 per share). After 1986, income from Wireline oilfield operations on the outer continental shelf area is subject to U.S. tax.

Extraordinary Item

In June 1989 and December 1988, Sedco Forex, the Company's drilling services operation, received awards from the Iran-U.S. Claims Tribunal of $21 million (net of expenses) and $22 million, respectively, relating to Iran's seizure of SEDCO, Inc.'s civil and mechanical engineering and construction businesses prior to its acquisition by the Company.

In July 1987, Sedco Forex received an award from the Iran-U.S. Claims Tribunal of $116 million. This award arose from Iran's seizure of a SEDCO, Inc. drilling business in 1979 prior to its acquisition by the Company. After provisions for taxes and other expenses of $46 million, the award resulted in a net gain of $70 million.

Acquisitions

In June 1989, the Company announced the acquisition of the U.K. gas meter business of Thorn-EMI, at a cost of $93 million. The acquisition was accounted for as a purchase and the accounts have been consolidated with those of the Company. Cost in excess of net assets acquired was $78 million which is being amortized on a straight-line basis over 25 years.

In November 1986, the Company acquired, primarily through the subscription of common stock, 50% of GECO A.S. at a cost of $77 million. GECO provides offshore geophysical services, chiefly in the North Sea and the United States. The acquisition was accounted for as a purchase and in 1987 and 1986 the related investment was included in investments in affiliated companies; the pro rata share of GECO's results, from the date of acquisition, was included in the Consolidated Statement of Income. In February 1988, the Company acquired an additional 25% ownership interest at a cost of $100 million through the subscription of newly issued GECO common stock. In February 1990, the Company acquired substantially all of the remaining interest in GECO for $51 million.

Fixed Assets

A summary of fixed assets follows:

	(Stated in millions)	
December 31,	**1989**	1988
Land	**$ 60**	$ 60
Buildings & improvements	**612**	634
Machinery and equipment	**4,901**	4,830
Total cost	**5,573**	5,524
Less accumulated depreciation	**3,925**	3,907
	$1,648	$1,617

Estimated useful lives of buildings & improvements range from 8 to 50 years and of machinery and equipment from 2 to 15 years.

Investments in Affiliated Companies

Investments in affiliated companies at December 31, 1989 comprised mainly the Company's 50% investments in the worldwide Dowell Schlumberger business ($219 million) and 50% owned companies of Sedco Forex.

Equity in undistributed earnings of all 50% owned companies at December 31, 1989 and 1988, amounted to $49 million and $75 million, respectively.

Long-Term Debt

Long-term debt of $292 million is at money market based rates varying up to 15.7% and is primarily denominated in U.S. dollars, Norwegian kroner, Italian lire and U.K. pounds.

Long-term debt at December 31, 1989 is due $109 million in 1991, $74 million in 1992, $46 million in 1993, $30 million in 1994 and $33 million thereafter.

Lines of Credit

The Company's principal U.S. subsidiary has an available unused Revolving Credit Agreement with a group of banks. The Agreement provides that the subsidiary may borrow up to $600 million until December 31, 1994 at money market based rates of which $35 million was outstanding as of December 31, 1989. In addition, at December 31, 1989, the Company and its subsidiaries had available unused short-term lines of credit of approximately $695 million.

Capital Stock

The Company is authorized to issue 500,000,000 shares of Common Stock, par value $0.01 per share, of which 237,655,521 and 237,723,417 shares were outstanding on

December 31, 1989 and 1988, 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.

In 1988, the Company completed a "Dutch Auction" tender offer under which it purchased 30.5 million shares of Common Stock at $35 per share. Including related expenses, the total cost amounted to $1.07 billion.

Also in 1988, the Company adopted a noncompensatory 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. The aggregate number of shares which may be purchased cannot exceed 3,000,000 shares. During 1989, 909,316 shares were purchased under the plan.

In 1989, the Company adopted the Schlumberger 1989 Stock Incentive Plan, under which stock incentives may be granted until January 25, 1999. The number of shares which may be issued under the 1989 Plan cannot exceed 10,000,000 shares. No shares were granted after May 7, 1989 under the 1979 Plans.

With shareholder approval, in 1989 the Company cancelled outstanding options ranging in price from $42.75 to $74.72 and regranted options at a price of $40.063 per share. In the table below, options granted and lapsed/cancelled include 1,349,733 of such shares.

Options to officers and key employees to purchase shares of the Company's Common Stock were granted at prices equal to 100% of fair market value at date of grant.

Transactions under stock option plans were as follows:

	Number Of Shares	Option Price Per Share
Outstanding Jan. 1, 1988	5,757,253	$ 4.76–74.72
Granted	2,366,100	$32.44–34.00
Exercised	(10,604)	$12.00–35.06
Lapsed or cancelled	(631,134)	$29.25–69.42
Outstanding Dec. 31, 1988	7,481,615	$ 4.76–74.72
Granted	1,732,933	$40.06–41.88
Exercised	(422,408)	$ 4.76–40.06
Lapsed or cancelled	(1,850,376)	$29.25–74.72
Outstanding Dec. 31, 1989	6,941,764	$29.25–41.88
Exercisable at Dec. 31, 1989	3,704,207	$29.25–40.06
Available for grant		
Dec. 31, 1988	5,837,917	
Dec. 31, 1989	9,739,250	

■ *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 U.S. subsidiary is in an operating loss carryforward position. At December 31, 1989, the subsidiary had unused operating loss carryforwards for consolidated financial statement purposes of $1.2 billion of which $1 billion will expire in the years 2000–2001. The tax benefit of these carryforwards is available to reduce future U.S. federal income tax expense.

■ *Leases and Lease Commitments*

Total rental expense was $125 million in 1989, $134 million in 1988 and $126 million in 1987. Future minimum rental commitments under noncancelable leases for years ending December 31 are: 1990 — $50 million; 1991 — $37 million; 1992 — $29 million; 1993 — $13 million; and 1994 — $8 million. For the ensuing three five-year periods, these commitments decrease from $24 million to $5 million. The minimum rentals over the remaining terms of the leases aggregate $26 million.

■ *Contingencies*

During 1980, a floating hotel, the Alexander Kielland, functioning as a dormitory for offshore work crews in the North Sea, capsized in a storm. The substructure of the floating hotel originally had been built as a drilling rig by an independent shipyard from a design licensed by a subsidiary of the Company. The Company's subsidiary was not involved in the ownership or operation of the drilling rig or in its conversion or use as a floating hotel. The accident has been investigated by a Commission appointed by the Norwegian Government, which has published its report. In October of 1981 and in February of 1982, the Company's subsidiary, the independent shipyard and one of its subcontractors were sued in France by Phillips Petroleum Company Norway and eight others operating as a group in the Ekofisk Field in the North Sea and by the Norwegian insurers of the Alexander Kielland seeking recovery for losses resulting from the accident of approximately $115 million (at December 31, 1989 currency exchange rates).

While the Company does not believe it, or its subsidiary, has liability in this matter, the litigation will involve complex international issues which could take several years to resolve and involve substantial legal and other costs. In the opinion of the Company, any liability that might ensue would not be material in relation to its financial position or results of operations.

The Company and its subsidiaries are party to various other legal proceedings, including environmental matters. 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 position or results of operations of the Company.

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 40 in this report.

Financial information for the years ended December 31, 1989, 1988 and 1987 by industry segment and by geographic area is as follows:

(Stated in millions)

	Oilfield Services	*Measurement & Systems*[1]	*Adjust. & Elim.*	*Consolidated*
Industry Segment 1989				
Operating revenue				
Customers	$2,696	$1,990	$ —	$4,686
Intersegment transfers	2	14	(16)	—
	$2,698	$2,004	$ (16)	$4,686
Operating income	$ 340	$ 154	$ 1	$ 495
Interest expense				(96)
Interest and other income less other charges — $(26)				132
Income before taxes				$ 531
Depreciation expense	$ 402	$ 90	$ 1	$ 493
Fixed asset additions	$ 451	$ 97	$ 1	$ 549
At December 31				
Identifiable assets	$2,516	$1,516	$ (20)	$4,012
Corporate assets				1,470
Total assets				$5,482
Industry Segment 1988				
Operating revenue				
Customers	$2,721	$2,204	$ —	$4,925
Intersegment transfers	1	13	(14)	—
	$2,722	$2,217	$ (14)	$4,925
Operating income	$ 320	$ 174	$ (30)	$ 464
Interest expense				(129)
Interest and other income less other charges — $(3)				254
Income before taxes				$ 589
Depreciation expense	$ 421	$ 108	$ 2	$ 531
Fixed asset additions	$ 350	$ 104	$ 1	$ 455
At December 31				
Identifiable assets	$2,398	$1,647	$ (22)	$4,023
Corporate assets				1,577
Total assets				$5,600
Industry Segment 1987				
Operating revenue				
Customers	$2,306	$2,096	$ —	$4,402
Intersegment transfers	—	9	(9)	—
	$2,306	$2,105	$ (9)	$4,402
Operating income	$ 147	$ 107	$ (2)	$ 252
Interest expense				(166)
Interest and other income less other charges — $14				311
Nonrecurring item				222
Income before taxes				$ 619
Depreciation expense	$ 421	$ 104	$ 2	$ 527
Fixed asset additions	$ 172	$ 104	$ —	$ 276
At December 31				
Identifiable assets	$2,133	$1,868	$ (19)	$3,982
Corporate assets				2,759
Total assets				$6,741

[1] *Includes revenue of the Defense Systems and Graphics businesses which were sold in mid-year 1989.*

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 and some are supplied by Measurement & Systems.

Corporate assets largely comprise short-term investments.

During the years ended December 31, 1989, 1988 and 1987, neither sales to any government nor sales to any single customer exceeded 10% of consolidated operating revenue.

(Stated in millions)

	Western Hemisphere		*Eastern Hemisphere*				
	U.S.	*Other*	*France*	*Other European*	*Other*	*Adjust. & Elim.*	*Consolidated*
Geographic Area 1989							
Operating revenue							
Customers	$1,276	$444	$638	$1,136	$1,192	$ —	$ 4,686
Interarea transfers	214	3	184	43	32	(476)	—
	$1,490	$447	$822	$1,179	$1,224	$ (476)	$ 4,686
Operating income (loss)	$ 11	$ 67	$ 77	$ 102	$ 264	$ (26)	$ 495
Interest expense							(96)
Interest and other income less other charges — $(26)							132
Income before taxes							$ 531
At December 31							
Identifiable assets	$1,125	$305	$629	$1,130	$1,027	$ (204)	$ 4,012
Corporate assets							1,470
Total assets							$ 5,482
Geographic Area 1988							
Operating revenue							
Customers	$1,472	$481	$731	$1,159	$1,082	$ —	$ 4,925
Interarea transfers	222	6	189	35	7	(459)	—
	$1,694	$487	$920	$1,194	$1,089	$ (459)	$ 4,925
Operating income (loss)	$ (6)	$ 89	$ 95	$ 95	$ 228	$ (37)	$ 464
Interest expense							(129)
Interest and other income less other charges — $(3)							254
Income before taxes							$ 589
At December 31							
Identifiable assets	$1,407	$285	$698	$ 955	$ 892	$ (214)	$ 4,023
Corporate assets							1,577
Total assets							$ 5,600
Geographic Area 1987							
Operating revenue							
Customers	$1,183	$549	$763	$ 964	$ 943	$ —	$ 4,402
Interarea transfers	150	32	169	21	5	(377)	—
	$1,333	$581	$932	$ 985	$ 948	$ (377)	$ 4,402
Operating income (loss)	$ (93)	$ 97	$ 58	$ 71	$ 147	$ (28)	$ 252
Interest expense							(166)
Interest and other income less other charges — $14							311
Nonrecurring item							222
Income before taxes							$ 619
At December 31							
Identifiable assets	$1,246	$393	$815	$ 808	$ 769	$ (49)	$ 3,982
Corporate assets							2,759
Total assets							$ 6,741

Pension Plans and Deferred Benefit Plans

Effective January 1, 1987, the Company adopted Financial Accounting Standard No. 87 – Employers' Accounting for Pensions for U.S. defined benefit pension plans. As required, effective January 1, 1989, the Company adopted this Standard for non-U.S. defined benefit pension plans. As permitted, pension cost and related disclosures for such Plans for 1988 and 1987 were determined under provisions of the previous accounting principle.

U.S. Pension Plans:

The Company and its U.S. subsidiary sponsor several defined benefit pension plans which cover substantially all employees. The benefits are based on years of service and compensation on a career-average or final 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 1989, 1988 and 1987 included the following components:

	(Stated in millions)		
	1989	1988	1987
Service cost – benefits earned during the period	**$ 15**	$ 14	$ 11
Interest cost on projected benefit obligation	**33**	32	30
Expected return on plan assets (actual returns: 1989 – $84; 1988 – $58; 1987 – $18)	**(36)**	(38)	(38)
Amortization of transition asset	**(3)**	(4)	(4)
Amortization of prior service cost/other	**5**	3	2
Net pension cost	**$ 14**	$ 7	$ 1

Effective January 1, 1989 the Company amended its pension plans to improve retirement benefits for employees.

The components of the funded status of the plans were affected in 1989 by the sale of the Defense Systems businesses as the pension obligations were transferred to the buyer. The funded status of the plans at December 31, 1989 and 1988 was as follows:

	(Stated in millions)	
	1989	1988
Actuarial present value of obligations:		
Vested benefit obligation	**$344**	$412
Accumulated benefit obligation	**$346**	$416
Projected benefit obligation	**$399**	$483
Plan assets at market value	**460**	496
Excess of assets over projected benefit obligation	**61**	13
Unrecognized net gain	**(85)**	(15)
Unrecognized prior service cost	**21**	33
Unrecognized net asset at transition date	**(18)**	(41)
Pension liability	**$(21)**	$(10)

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, 1989 consist of common stocks ($252 million), cash or cash equivalents ($94 million), fixed income investments ($112 million) and other investments ($2 million). Approximately 3% of the Plan assets at December 31, 1989 represents Schlumberger Limited Common Stock.

Non-U.S. Pension Plans:

Outside of the United States, subsidiaries of the Company sponsor several defined benefit and defined contribution plans which 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 $13 million, $10 million and $9 million in 1989, 1988 and 1987, respectively. The only significant defined benefit plan is in the United Kingdom.

Net pension cost in the U.K. plan for 1989 included the following components:

	(Stated in millions)
	1989
Service cost — benefits earned during the period	**$ 9**
Interest cost on projected benefit obligation	**5**
Expected return on plan assets (actual return: $23)	**(6)**
Amortization of transition asset	**(1)**
Net pension cost	**$ 7**

The funded status of the plan was as follows:

	(Stated in millions) 1989
Actuarial present value of obligations:	
Vested benefit obligation	**$ 53**
Accumulated benefit obligation	**$ 53**
Projected benefit obligation	**$ 73**
Plan assets at market value	**97**
Excess of assets over projected benefit obligation	**24**
Unrecognized net gain	**(17)**
Unrecognized net asset at transition date	**(9)**
Pension liability	**$ (2)**

The assumed discount rate and rate of compensation increases used to determine the projected benefit obligation were 8.5% and 7%, respectively; the expected long-term rate of return on plan assets was 9%. Plan assets consist of common stocks ($78 million), cash or cash equivalents ($10 million) and fixed income investments ($9 million). For defined contribution plans, funding and cost are generally based upon a predetermined percentage of employee compensation. Charges to expense in 1989, 1988 and 1987 were $11 million, $10 million and $9 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 $51 million, $50 million and $39 million in 1989, 1988 and 1987, respectively.

In addition, 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, $47 million and $39 million in 1989, 1988 and 1987, 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,	1989	1988	1987
			(Stated in millions)
Operating revenue			
Sales	**$1,949**	$2,173	$2,072
Services	**2,737**	2,752	2,330
	$4,686	$4,925	$4,402
Direct operating costs			
Goods sold	**$1,192**	$1,359	$1,325
Services	**2,150**	2,169	1,933
	$3,342	$3,528	$3,258

Cash paid for interest and income taxes was as follows:

Year ended December 31,	1989	1988	1987
			(Stated in millions)
Interest	**$ 95**	$125	$235
Income taxes	**$120**	$172	$234

Accounts payable and accrued liabilities are summarized as follows:

December 31,	1989	1988
		(Stated in millions)
Payroll, vacation and employee benefits	**$ 241**	$ 237
Trade	**338**	329
Other	**559**	571
	$1,138	$1,137

The caption "Interest and other income" includes interest income, principally from short-term investments, of $136 million, $202 million and $235 million for 1989, 1988 and 1987, respectively. This caption also includes:

- In 1989 – a gain of $13 million on the sale of the Defense Systems business;
- In 1988 – a gain of $35 million on the sale of Electricity Control & Transformers business;
- In 1987 – a gain of $76 million on the sale of the investment in Compagnie Luxembourgeoise de Télédiffusion.

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, stockholders' equity and cash flows present fairly, in all material respects, the financial position of Schlumberger Limited and its subsidiaries at December 31, 1989 and 1988 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1989, 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
February 2, 1990

Quarterly Results (Unaudited)

The following table summarizes results for each of the four quarters for the years ended December 31, 1989 and 1988. Gross profit equals operating revenue less cost of goods sold and services. Earnings per share for 1988 does not equal the sum of the four quarters due to the decrease in average shares outstanding resulting from the Company's purchase of Treasury shares.

(Stated in millions except per share amounts)

	Continuing Operations				*Total*	
	Operating		*Income*		*Net Income*	
	Revenue	*Gross Profit*	*Amount*	*Per Share*	*Amount*	*Per Share*
Quarters — 1989*						
First	$1,182	$ 335	$ 83	$0.35	$ 82	$0.35
Second	1,197	340	105	0.44	127	0.53
Third	1,106	332	114	0.48	114	0.48
Fourth	1,201	337	118	0.50	118	0.50
	$4,686	$1,344	$420	$1.77	$441	$1.86
Quarters — 1988**						
First	$1,246	$ 367	$101	$0.37	$101	$0.37
Second	1,257	355	144	0.53	144	0.53
Third	1,181	338	112	0.42	112	0.42
Fourth	1,241	336	97	0.40	119	0.49
	$4,925	$1,396	$454	$1.72	$476	$1.80

For 1989, income from continuing operations and net income include a second quarter gain of $13 million ($0.05 per share) on the sale of the Defense Systems business of Schlumberger Industries. Net income for the second quarter includes an extraordinary gain of $21 million ($0.09 per share).

***For 1988, income from continuing operations and net income include a second quarter gain of $35 million ($0.13 per share) on the sale of the Electricity Control & Transformers division of Schlumberger Industries. Net income for the fourth quarter includes an extraordinary gain of $22 million ($0.09 per share).*

Acquiring data and converting it into a customer benefit is a common denominator of nearly all Schlumberger businesses. There are numerous examples. Schlumberger data helps oil companies explore and develop oil fields more efficiently and gives drillers an extra edge in safe and efficient drilling. Schlumberger electricity, water and gas meters provide data that public utilities need to manage their resources more efficiently. Semiconductor manufacturers rely on data from Schlumberger automatic testers to identify microchip problems, improving design/debug efficiency and cutting time-to-market.

Accelerating computer power is revolutionizing the ability to solve scientific problems, to simulate the physical world, to design and test tools and structures and to create images that clarify complex ideas and hidden processes. This revolution is made for Schlumberger, offering opportunities to provide innovative solutions, enhanced efficiency and better service. These are Schlumberger's goals.

A New Reality

Schlumberger in 1989 introduced major elements of a new generation wireline logging system.

The petroleum industry operating environment changed in 1986 when overproduction caused oil prices to nosedive. At today's oil prices, the oil industry is seeking to improve exploration and development efforts: the success ratio of oil found vs. exploration wells drilled, and how to drain known oil fields more efficiently, with fewer, less costly wells. If one word describes the industry's concern, that word is *productivity.*

Before the downturn, Schlumberger had been exploring ways to apply the dramatic advances in microelectronics and computer power to create a completely new generation of well logging technology for the 90s. Research was sustained and some programs were accelerated in response to changing market conditions.

The Imaging Concept

Oil and gas reservoirs were long thought of as sparse, homogeneous, hydrocarbon saturated formations. Now reservoirs are recognized as truly complex, heterogeneous structures. Models that incorporate this complexity can predict consistently how reservoirs will perform during production.

Ongoing Schlumberger developments and oil industry needs for reservoir characterization have converged with the development of a new generation of "smart" downhole tools which make an array of measurements simultaneously around, along and away from the borehole. When these arrays of data are processed, and displayed in color, the resultant *images* clearly show textural, petrophysical and structural characteristics of rock formations in all their complexity. New imaging services for formation characterization include resistivity mapping, velocity mapping, permeability profiling, and geochemical mapping.

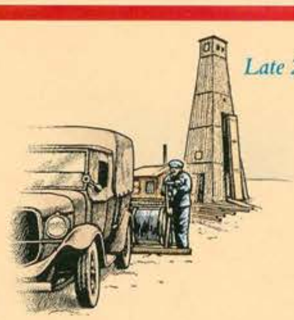
Formation imaging services clearly have arrived at a crucial time in the oilfield business cycle and their success demonstrates that they will make a major contribution to oil industry productivity.

The MAXIS 500™

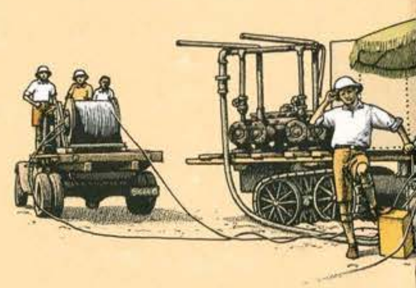
Downhole imaging tools are but one link in a chain that finally delivers a meaningful analysis to the oil company customer. The heart of the new wellsite data management system is the MAXIS 500 unit that employs powerful computer and software systems; it collects, quality controls, displays, processes and prints data received from new downhole arrays.

This surface system acquires data from the downhole tools over a standard wireline cable by means of an innovative, high data rate com-

Conrad Schlumberger field experiments early 1900s



Late 20s logging in France



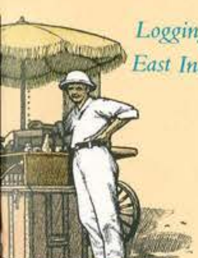
The Path of Oil Well Logging Technology

Discoveries of electricity and magnetism in the late 1800s excited the scientific community who began to apply the new technology in every field. Among them was a French physics professor, Conrad Schlumberger, who believed that electrical measurements could help define the internal structure of the earth. After a decade of laboratory and field experiments, he left the university to spend full time on his geological exploration business based on surface electrical measurements.

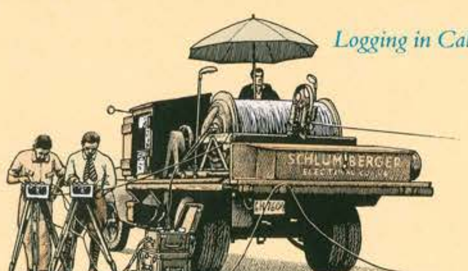
A turning point came in 1927 when the company applied the electrical prospecting techniques for the first time in a drill hole at the request of a French oil company. At that time, the only way that oil companies could identify the geological formations penetrated by the drill

A MAXIS 500 unit logging a well near Laurel, Mississippi.

Logging in the Dutch East Indies 1930



Logging in California 1932



1940s Wireline truck

bit was to watch the drilling rate, to look for bits of rock and traces of oil in the drilling mud returning from the well, and to take core samples with a coring bit. The Schlumberger crew brought a breath of science to this hit-or-miss process. With a crudely rigged logging tool, they took foot-by-foot measurements in the 1500-foot deep borehole over an arduous ten-hour day. When the data were plotted, a resistivity log emerged that would be familiar to any oil industry geologist today. It clearly showed the geological formations surrounding the well. A powerful new exploration tool was born.

The stunning success of this first log was clear to the Schlumberger people who called it "electrical coring." This was too optimistic. The early logs were valuable to the oil industry, but they only could identify formation boundaries and their depth. The ambitious dream of looking deep into the rocks surrounding a well bore and measuring all of the detailed heterogeneities such as the munications link called the Digital Telemetry System (DTS). The DTS multiplies the data transmission capability of the wireline cable as much as eight times, more than enough to accommodate the high data rates of the new logging tools.

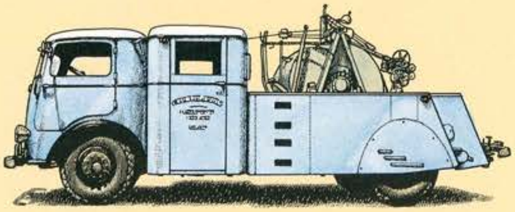
Muriel Miller (left), senior exploration geologist, and Alicia Facchini, senior development geologist with YPF (Argentine National Oil Company), in Rio Gallegos working on an Atlantis-IRD workstation with well log and seismic data.

At the surface, the MAXIS 500 unit allows many wellsite logging tasks to be done simultaneously. For example, a "watchdog" program monitors log data quality and instrument calibrations during logging. MAXIS can acquire efficiently arrays of multidimensional measurements from the new generation of imaging tools and their combinations. Data can be processed and transmitted without interrupting logging, providing customers on the wellsite or in distant offices anywhere in the world with information needed for quick decisions; the MAXIS unit has a separate work area where clients can perform their own interpretations at the wellsite during logging. Complex image processing usually is done at the client office in a specialized workstation or at a Schlumberger computing center.

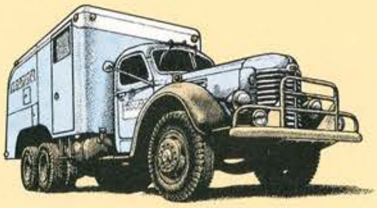
Seismic Images Fill in the Picture

Seismic technology has followed a parallel course to logging, producing three-dimensional subsurface maps that can depict large structural features of a reservoir for kilometers around the well. From the surface, seismic technology maps the subsurface by transmitting sound waves into the earth and recording and plotting the echoes

1950s Wireline truck



Wireline truck 1963



composition of the rocks and fluids, and the boundaries and dynamics of a reservoir would have to wait more than 60 years for the microelectronics revolution and the birth of computer processed images.

Commercialization of this scientific data acquisition service demanded intensive research and engineering efforts in every step of the process: downhole tools which make the measurements, the cable that transmits data to the surface, the winch that raises and lowers the logging tools, the instruments that communicate with the downhole tools, recorders to capture the data graphically and finally the truck which serves as the platform and power source for all operations. Further studies were needed to understand the data and to help the customers interpret it. Research became and remained a cornerstone of Schlumberger.

In only a few decades, paralleling the emergence of electronics, Schlumberger was using electromagnetic, microwave, nuclear and ultrasonic sensors in borehole logging

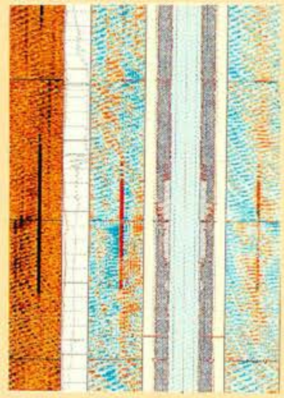
Carter Bolt, field engineer (seated), and Scott Wertanen, senior field engineer, in Laurel, Mississippi, discuss a log presentation on one of the MAXIS *500 system monitors.*

reflected from subsurface rock boundaries. In 1989, GECO introduced multivessel/multi-streamer arrays for marine seismic surveys that can acquire 3D seismic data over a very wide path on a single pass.

WORKSTATIONS FOR RESERVOIR CHARACTERIZATION

These new imaging techniques provide the maximum benefit when the oil companies themselves can manipulate and interpret the massive volumes of data acquired and also integrate other available information such as dynamic formation test results. With the data converted to a standard format in an accessible data base, oil company specialists running compatible applications software on a workstation can build a reservoir characterization model that reliably forecasts reservoir performance for optimal field development and drainage.

Schlumberger makes available a large library of thoroughly tested special applications software modules for reservoir characterization. Geophysicists, geologists, petrophysicists or reservoir engineers can draw on seismic and well data, including results produced by other specialists, and contribute findings to the data base. Schlumberger currently supplies two workstation platforms: the Charisma for seismic processing and the Atlantis for wireline and formation imaging data. They can be networked to share data.



This Ultrasonic Imager survey displays an image of casing condition and cement quality in color.

Wireline truck in Southeast Asia 1960s

MAXIS logging truck 1990s

services. Great strides were made in measuring rock characteristics such as porosity, fluid saturation, lithology and chemistry, geological features like stratigraphy, and fluid dynamic properties of reservoirs. Explosive growth of microcircuit technology and computer power in the 70s and 80s revolutionized well logging. Computers moved to the wellsite, and downhole tools got smarter.

Now, a new generation of logging tools can acquire "images" that describe the subsurface environment in all its complexity. Such images can significantly improve the understanding and management of reservoirs. MAXIS *500, a new wellsite system for handling images, has been introduced. If the 1927 logging job were run by* MAXIS, *that ten-hour labor would breeze by in 15 minutes and would produce two million times more data automatically.*

Drilling & Pumping Services

Smarter and Safer Drilling

A versatile new drilling monitoring and alarm network called The MDS System™ has passed field trials, and now is installed on six Sedco Forex offshore drilling rigs. Designed by the company over four years with the help of their own drillers, The MDS System improves both safety and efficiency of drilling operations.

In today's competitive environment, drilling contractors are differentiated by the quality of their people and equipment. Top-notch drilling equipment is available to anyone who can make the investment. The MDS System adds a unique new dimension to the capabilities of Sedco Forex rig crews.

Critical information from drilling rig operations is available simultaneously to all key decision makers on the rig. This enables them to spot problems earlier and take corrective actions.

Reducing Drilling Costs

At current low rig rates, the surest way to further cut drilling costs is to detect and correct problems earlier. The driller, operating the equipment on the rig floor, is usually the first person to detect a problem. It might be a leak in the drillstring ("washout"), an influx of gas ("kick"), or a sticking drillstring caused by an unexpected section of swelling shale.

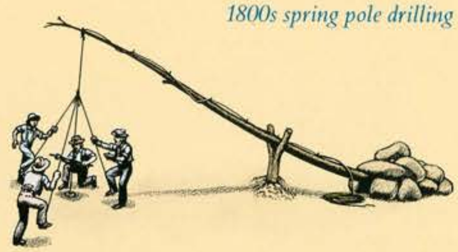
Prior to The MDS System, the driller relied on experience and simple, low-resolution gauges on the drill floor. When he suspected a problem, he usually called for assistance or more information. Sometimes the situation deteriorated because of poor data and delayed response.

The MDS System remedies this situation by collecting measurements from sensors around the rig, turning the data into useful information, and displaying it immediately for those who need it most — the driller, rig superintendent, and oil company representative. With identical information, they can make fast and reliable decisions. Since it is run and maintained by the rig crew, The MDS System also improves communication and teamwork on the rig.

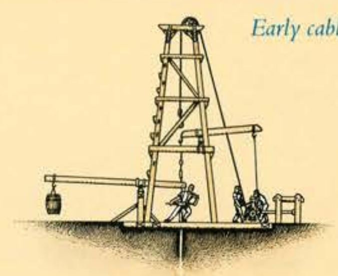
The Drilling Displays

The driller sees a large color display of processed information which he can configure to suit his needs. He learns how to use The MDS System in a few hours, and becomes proficient in a few tours of duty. The display tells him at a glance what's happening:

- A graphical review of the last few minutes or few hours of data, so he can spot trends in performance and note developing problems.
- Simple bar chart alarms that show, by color change, whether key operating parameters such as flow rate are moving out of bounds.
- "Smart" alarms which are triggered as the computer processes interrelated data, and discovers a departure from the norm.



1800s spring pole drilling



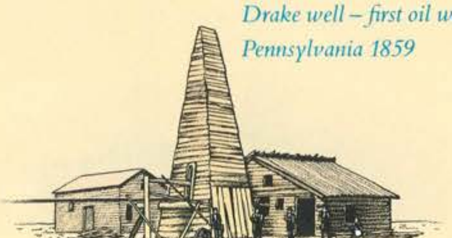
Early cable tool rig 1850

The Path of Drilling Technology

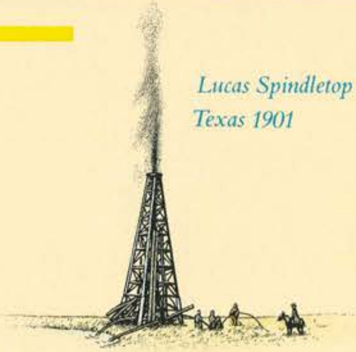
No one knows how long man has sunk wells into the earth. Historical evidence shows that water wells were dug more than 10,000 years ago for drinking and agricultural irrigation. Brine wells too provided valuable salt for preserving food. Some, as deep as 1,500 feet, were dug by hand 3,000 years ago. Over the centuries, drilling techniques evolved along with metalworking and the introduction of the wheel. By the early 1500s, da Vinci had sketched a rotary well boring machine that used an auger bit.

Percussion drilling was the technique of choice up to the 20th century. A chisel-shaped bit efficiently chipped through subsurface rocks by the simple process of repetitive lifting and dropping. Because the weighted bit was attached to a flexible cable, this type of rig was known as a cable-tool

Dennis Burkett, driller, consulting the MDS display on the Trident III jack-up rig offshore Dubai.



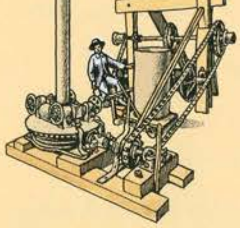
Drake well – first oil well, in Pennsylvania 1859



Lucas Spindletop in Texas 1901

rig. Early "spring pole" rigs relied on the cable suspended from a cantilevered flexible wooden pole that was alternately pulled down manually and allowed to spring back up. When steam engines replaced manpower in the mid-1800s, the spring pole was supplanted by a "walking beam," a sort of seesaw with one end driven up and down by the engine and the other end attached to the cable-suspended drilling tool. This technology was the state of the art in 1859, when such a rig drilled the first well for the sole purpose of finding oil. This well produced 20 to 30 barrels of Pennsylvania crude oil per day, from a depth of about 70 feet. Colonel Drake's now famous discovery sparked a round of oil exploration, including the first "offshore" well drilled in 1898 from a California wharf. But the event that lit a fire under oil drilling worldwide was the Lucas Spindletop well near Beaumont, Texas. In 1901, a rotary rig under a wooden derrick reached 1,100 feet after three

Part of the engineering team which designed The MDS System (from the left): four development engineers, Mulham Bayassi (Syrian), Osamu Kamoshima (Japanese), Dominic McCann (Irish), Noureddine Boustani (Moroccan), engineering vice president Jean Chevallier (French) and computing science manager Michel Riguidel (French).



Rotary drilling rig circa 1900

Large derrick of mid-30s

months of drilling. The well "blew in" and was finally brought under control, producing an astounding 80,000 barrels of oil per day.

In the next six years, 4,000 oil wells were drilled, mostly by rotary rigs, in the soft formations of the U.S. Gulf Coast region alone. Successes spurred improvements in drilling efficiency. Safety became a major concern in the early 1900s which saw the growing use of blowout preventers, drilling mud and cemented casing. However, reliable and useful instruments to measure drilling parameters did not arrive until 1925.

As the 30s began, cable-tool rigs gave way to a new hydraulic rotary rig that combined the best technology then available. Deeper drilling and higher pressures mandated rig floor instruments that showed the driller what was happening downhole. Weight indicators and bottom-hole pressure gauges became indispensable tools.

Drilling control instruments became popular in the

Smart Alarms Improve Safety, Save Money

An important smart alarm is the Circulation Monitor, which searches for evidence of a "washout" in the drillstring. Under normal drilling conditions, the relationship between pump pressure and flow rate is constant. When this relationship changes, the driller is alerted to a possible "washout." He then can take quick preventive action, minimizing the risk of the drillstring breaking off, with the bottom section remaining in the hole. This is proving successful on a jack-up rig in the Middle East drilling directional wells. Since The MDS System has been installed, "fishing" for broken drillstrings caused by "washouts" has been virtually eliminated. Such jobs can cost up to $150,000 per well in lost time and equipment.

Another smart alarm, the Kick Monitor, detects an influx of gas into the borehole, giving an early warning of pressure buildup which could lead to a blowout and fire. The Friction Monitor is another smart alarm which detects abnormal drillstring friction, minimizing the chances of getting stuck in the hole. Both of these features address customer requirements for safe, cost-effective drilling.

A unique labor-saving feature of The MDS System is an automated pipe tally, which keeps track of the length of pipe added to or subtracted from the drillstring. This provides, for the first time in the industry, an accurate bit depth measurement at all times.

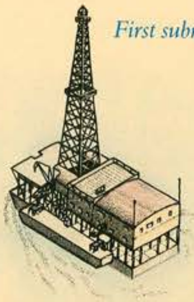
Evaluation and Planning

An Evaluation and Planning Workstation, accessible to the rig superintendent and oil company representative, receives MDS information. At this workstation, the key decision makers can review this information, make performance comparisons, and view well-to-well correlations. One example is LITHOROP,™ a drilling log related to lithology. A patented technique, it is computed from a high-resolution "Rate Of Penetration" log corrected for changes in weight-on-bit. LITHOROP is helping rig superintendents and geologists detect lithology changes, and better plan casing and coring points. The workstation also provides many other offline engineering calculations and rig management functions.

The Future

Initially The MDS System will be installed on offshore rigs where the greatest cost savings can be made. It has already proved its value in the Far East on a semisubmersible rig operating under an incentive contract which provides a bonus for good performance. Performance-based contracts will be a growing market for Sedco Forex in the 1990s.

Ken Bryant (right), CONOCO representative of the Dubai Petroleum Company, and Graham Van Tuyl, MDS engineer, with the MDS workstation in the tool pusher's office aboard Trident III.



First submersible barge 1949

Modern semisubmersible offshore rig

50s, but the driller often had to look at a confusing array of 15 visible dials, itself a hazard. The number soon settled back to 5 dials showing the most critical drilling parameters.

Offshore drilling grew rapidly during the 50s, first on fixed platforms, then on submersible rigs. The first mobile offshore drilling unit appeared in 1949, followed by drillships and mobile jack-ups in the 50s, and semisubmersibles in the early 60s. Computer-controlled dynamic rig positioning in the 70s led to wells in hundreds, then thousands of feet of water. Since the 40s, advances in drilling practice and techniques have been slow. New technology, particularly computers, promises a revolution. The Sedco Forex MDS system for monitoring drilling operations and sounding early alarms is at the leading edge of this process.

Schlumberger Industries

Flexible Metering Technology Opens Doors Worldwide

Technological strength and diversity have helped Schlumberger become the world leader in metering water, gas and electricity.

Around the world, the needs of utility companies supplying water, gas and electricity are governed by factors such as supply and demand economics, consumption patterns, and population shifts and growth. Successful management comes from efficient use of all their resources and an important tool is the meter. How can a meter company address so many distinctive needs, including different technical standards, in a worldwide market? Schlumberger applies advanced technology to solve problems, case by case, whether for an entire nation, a geographic region, a single town or a major industrial consumer.

A perfect example of this strategy is in Italy where Schlumberger has six manufacturing plants and two engineering centers. The electronic engineering center in Barlassina, near Milan, handles special customer problems. This center, which serves the Water, Gas and Electricity groups, solves problems in metering, data communications and processing.

Some examples show how this works.

A Nationwide Electricity Metering System

Three years ago, Enel, Italy's largest electricity distributor and the third largest in the world, decided to update its conventional metering systems. They felt that new technology could help them better manage their networks through application of multitariff metering and also overcome perennial problems like fraud, and inaccessibility of meters for reading.

At the request of Enel, Schlumberger developed two smart meters: the GMY, a single-phase household meter, and the GTY, a three-phase industrial meter. Both meters incorporate identical advanced features. The electricity meter and the circuit breaker, normally supplied by the power company in Italy, are packaged together in a sealed tamper-proof case, greatly simplifying installation.

The brains of the meter is an electronic management module that totalizes and stores power consumed and keeps tabs on several other key parameters like power interruptions. In addition, it permits multitariff energy management by totalizing power usage according to time of day. The meter can be interrogated remotely over the power line itself to acquire data for billing, demand patterns for electricity management and fraud detection. Remote commands can be sent to the meter to disconnect electricity service and to set or change contractual power limits, allowing the company, for example, to reduce power

Gas street light 1810

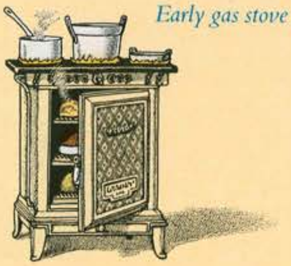
First gas meter 1815

The Path of Metering Technology

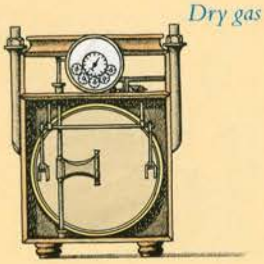
Water, gas and electricity are essential to the wellbeing and even the daily existence of many of the earth's inhabitants. Utility companies around the world supply these commodities to people's doorsteps and it is taken for granted that unlimited supplies are available on demand. In most cases, consumers are billed for the amount consumed, so accurate and dependable meters are the cash registers of utility companies. Schlumberger provides meters for all three utility services.

Gas and electricity began to be used in the 1800s. Electricity, it was thought, would eventually displace gas, as actually did happen for lighting. In other applications, such as heating or driving machinery, they coexisted because electricity, despite its virtues, cannot be stored. Thus, both forms of

In a plaza in Brescia, Italy, the three marketing managers who were involved in the remote meter reading project (from the left): Franco Gumiero (Electronics Gas), Renato Sergi (Electricity) and Valentino Codarin (Electronic Systems).



Early gas stove 1850



Dry gas meter 1844

energy had advantages depending on the application.

Gas metering started early in the last century, when gas lighting replaced the oil lamp. At first, consumption was reckoned by the height of the flame and the burning period, a most inaccurate method. The first serious meter, driven by a clock mechanism, produced erratic flow due to friction. An improved meter relied on alternately filling and emptying a fixed volume chamber sealed under water. But this hydraulic system was plagued by freezing and evaporation. Finally, dry meters were devised that used a flexible gastight membrane that was pushed and pulled to force the gas into and out of a calibrated chamber. This principle survives today. The advent of gas cooking in the 1850s gave a fantastic boost to residential gas metering, where Schlumberger is today the international leader.

The late 1800s saw the invention of the electric motor as well as dynamos that could deliver large amounts of electrical power continuously.

At Barlassina, remote reading development engineers (from the left): Camillo Radaelli, Eleonora Bettenzoli and Anna Nardella.

available to delinquent accounts.

The Frosinone factory near Rome produces GMY and GTY meters at an annual rate of 300,000 and 40,000 units, respectively. They will replace all of the old-style electricity meters.

A Solution to Remote Meter Reading in an Urban Environment

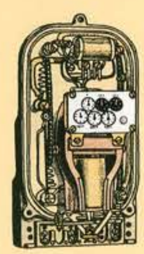
More than 20 years ago, Schlumberger Industries pioneered remote meter reading in Italy, when it designed the world's first system for remote reading of domestic gas meters in Turin and Pisa. Today, many local companies want to automate the entire energy distribution process: electricity, water, gas and heat.

Remote meter reading has numerous benefits: better use of utility personnel, timely and accurate billing, ability to read inaccessible meters, real-time acquisition of demand data and improved customer relations.

Schlumberger installed the first large-scale remote meter reading systems for the town of Brescia in 1987. Two trial systems were designed and implemented with collaboration between the Schlumberger Water and Gas, and Electricity metering groups, and the Barlassina engineering center. Systems were installed in two 200-unit apartment buildings where 1,600 electricity, water, gas and heat meters can be read remotely from the Brescia municipal billing center.

Edison light bulb 1879

Plumb line electricity meter 1892

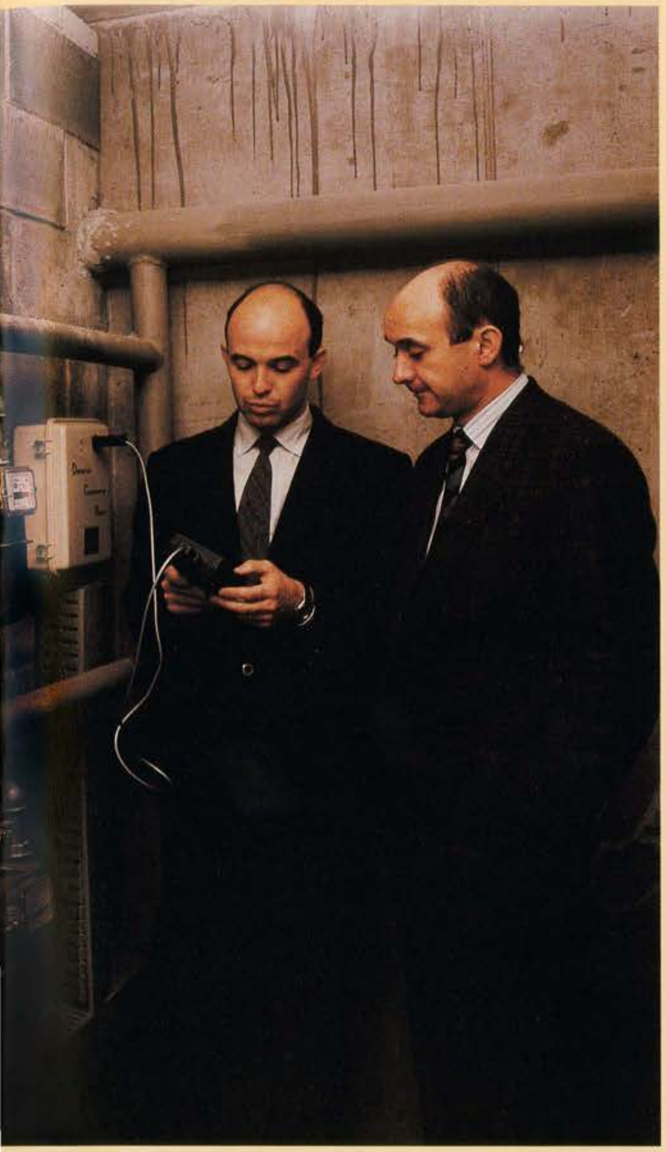


Electricity meter 1900

With Edison's invention of the incandescent light bulb in 1879, electricity use took off. Edison installed his new lights in New York City and built the world's first central power station there in 1882 to run them. At first, customers were charged per lamp, but Edison later devised a simple "meter" that used electrochemical deposition to measure current flow. This method did not measure power used and customers could not read it. A satisfactory solution came in 1889 with the invention of a rotating meter that responded to both voltage and current, thus measuring energy consumed. This principle, with refinements, was the basis for all electricity meters up to the 1980s when electronic metering pioneered by Schlumberger began to take hold.

Water systems for irrigation, washing and drinking predate recorded history. Undoubtedly the earliest water meter was represented by the volume of the delivery container. Later, meters were needed to record consumption

Piersandro Rossi, head of Brescia Utilities Information Systems (right), and Camillo Radaelli of the Barlassina engineering center discuss remote gas meter reading in an apartment complex.



The remote reading system is built around three hierarchical levels:

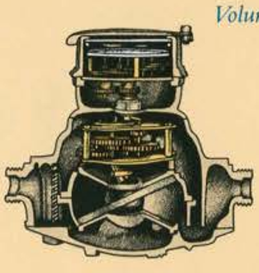
- at the lowest level, an electronic unit within each meter performs calculations and stores consumption data;
- at the second level, data loggers in a nearby substation control groups of meters, both collecting data and sending commands;
- at the highest level, a central unit interrogates data loggers, collecting, processing and storing data for billing, statistical analysis and network load management.

At one Brescia installation, telephone communication connects the lowest and second levels; at the other, data are sent and received over existing low-voltage electrical network wires, a powerful technique which reaches all customers, has very low transmission costs and excellent reliability, and avoids additional wiring, often a problem in old buildings.

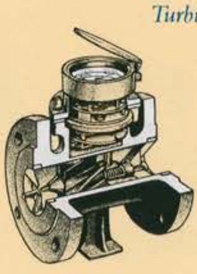
The success in Brescia demonstrated the modularity and flexibility of the system. As a result, Italy has exported data loggers and software for trial systems to Argentina, Spain, Belgium and Holland to check adaptability to national requirements.

Giampiero Anfossi (left), electricity manager, Italy, Pietro Cerami (center), engineering manager, and Enrico Orsenigo, head of remote reading in the Barlassina engineering center.

Early water meter



Volumetric water meter



Turbine water meter

for billing purposes. Two types have come into use: the positive displacement meter that measures the volume of liquid flowing in and out of calibrated chambers, and the turbine meter which measures the velocity of the water flow. Yet, water metering is not accepted everywhere, although there is increasing need for controls, especially in big cities, where delivery costs are rising rapidly. For instance, the United Kingdom and New York City do not yet base charges on actual consumption, encouraging waste. In both cases, water meter installations have begun.

Schlumberger has developed advanced metering which makes feasible complex functions that would be impossible to achieve in conventional units. One function, sought by utilities, is telemetering, i.e. reading meters from a central station without visiting each customer. Schlumberger has installed such systems in France, Italy, England and the United States.

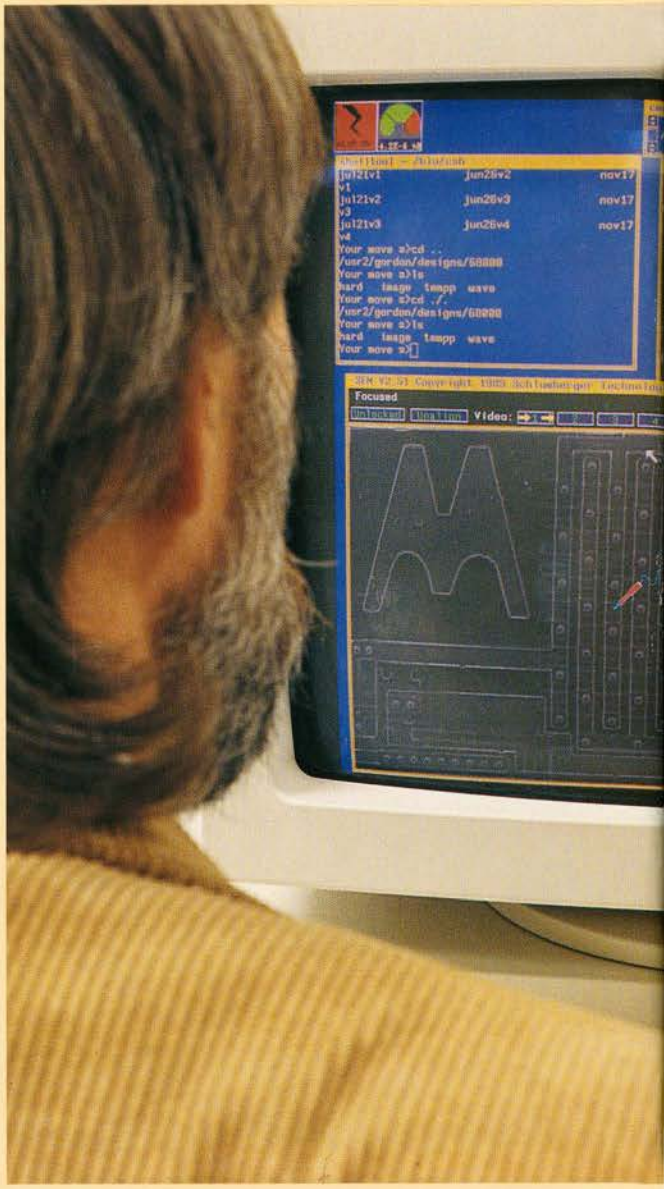
SCHLUMBERGER TECHNOLOGIES

The Microchip Challenge

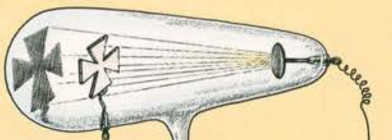
Every year the semiconductor industry manages to squeeze more and more complex circuits onto tiny silicon chips. While this reduces costs, and improves performance and reliability, it poses major challenges for the engineers who must test new designs and diagnose their problems. Today, a microchip can contain more than a million transistors. To visualize the scale, imagine an aerial photograph of the entire New York metropolitan area that shows all the streets, buildings, trees, and even manhole covers. That photograph, reduced to the size of your thumbnail, approximates microchip size and complexity. At this scale, a human hair is 100 times the thickness of transistors or the wires that connect them. Testing problems abound. Finding and probing a test point without damage is like using a finely sharpened telephone pole to spear the olive in a Martini without breaking the glass.

The Schlumberger Solution

These problems, locating the exact spot to test and electrical microprobing, were solved by the Automatic Test Equipment division of Schlumberger Technologies in 1987. They developed the IDS 5000, an Integrated Diagnostic System that marries a noncontacting electron beam probe with a computer which correlates a chip-design "map" stored in a database with the physical position of the beam striking the chip.



Experiment proving relationship of electricity and magnetism 1819

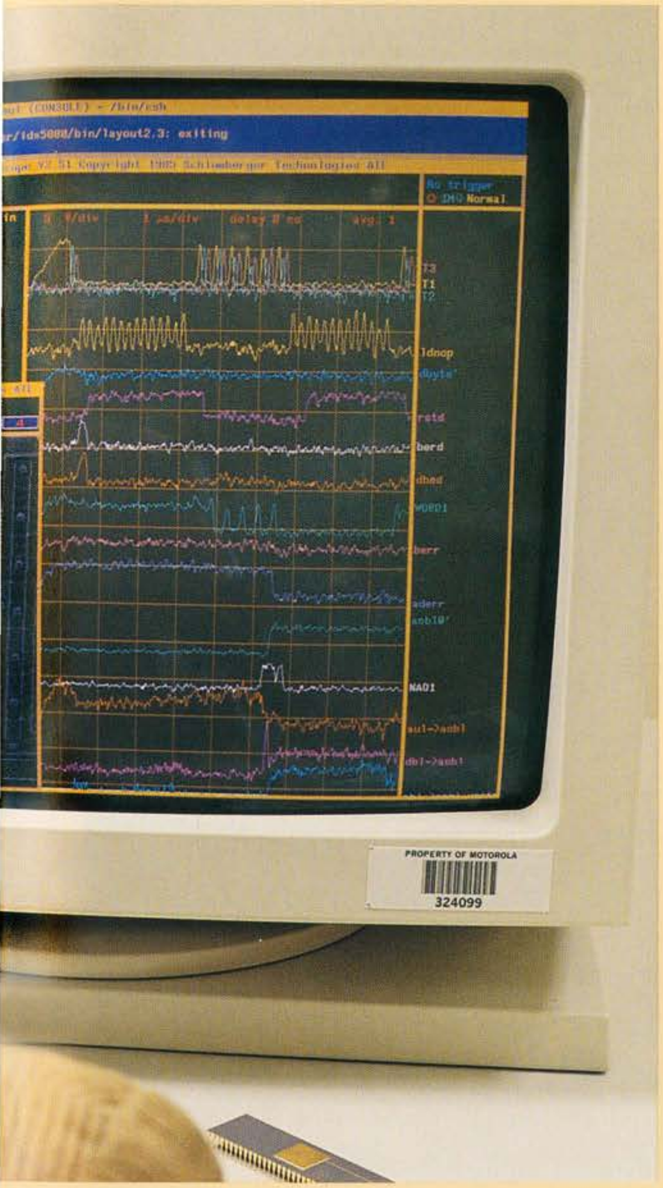


Cathode-ray (Crookes) tube 1878

THE PATH OF TEST & MEASUREMENT TECHNOLOGY

Test and measurement science got its real start in 1819 when the long suspected link between electricity and magnetism was finally discovered. In short order, scientists applied these principles to make instruments that could measure electrical voltage and current. The discovery of the cathode-ray tube in 1878 also profoundly influenced electrical testing. This device was a glass vacuum tube with an electron-beam source that was directed toward a luminescent chemical coating that glowed wherever the beam struck. This tube was the forerunner of the television picture tube and related video displays, but its first application was as a scientific instrument using the electron beam as a weightless "pen" to draw graphs of alternating currents. These developments, before 1900, set the stage for the electronics

A Motorola engineer analyzing chip performance during diagnostic testing of new chip designs at the Motorola plant in Austin, Texas.



How It Works

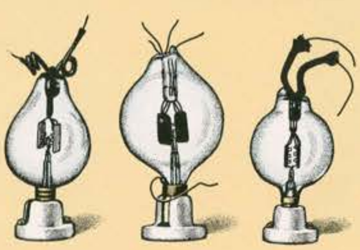
The operation is similar to that of an electron microscope. The electrically powered chip is installed in a vacuum chamber. A finely focused beam of electrons, negatively charged subatomic particles, is swept across the chip like a TV scan. When electrons strike the metallic atoms of components like wires, additional electrons are driven out. These secondary electrons are collected and transformed electronically into a greatly magnified TV image of the chip. In addition, the number of secondary electrons that escape the surface depends on the voltage at the point struck by the beam: reduced numbers of electrons for positive voltage and greater numbers for a negative voltage. This makes possible accurate electrical measurements at every point being scanned. The electron beam thus acts both as a microscope and a contactless electrical measuring probe.

At the IBM plant in Corbeil, France, placing a wafer containing dozens of identical integrated-circuit chips on the wafer stage of an IDS 5000, in preparation for diagnostic tests.

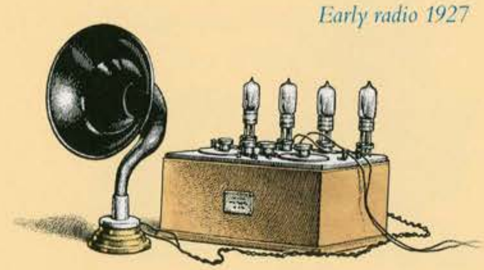
Increased Customer Productivity Through Ease-Of-Use

The real key to success of the IDS 5000 is the integrated software which lets the user navigate effortlessly over the chip's terrain. A chip design engineer can sit down and, with little training, make measurements and diagnose problems rapidly. Problems that literally take months to solve using conventional mechanical systems can be solved in a day with the IDS 5000.

First vacuum tubes 1906



Early radio 1927



revolution that has changed the world.

The invention of the vacuum tube amplifier soon after 1900 stimulated a rapid succession of developments in electronics, aided by increasingly sophisticated measuring instruments. By the early 30s, radio broadcasting was common and the concepts of television, sonar, radar and magnetic recording had been established. The first electron microscope, built in 1931, was able to magnify objects 350 times more than optical microscopes.

The invention of the transistor and its mass production in the 1950s brought new challenges to test technology. Before the transistor, the most complex electronic equipment seldom had more than a few dozen readily accessible vacuum tube circuits. Suddenly, circuits shrank by 20 times and grew even more in complexity. Higher reliability standards forced more intensive testing and also the ability to diagnose design problems. As a result, each specific measurement required

IDS 5000 systems are manufactured in the Simi Valley, California plant of the Automatic Test Equipment division of Schlumberger Technologies. This nearly completed system is undergoing tests.

A typical IDS 5000 screen. This one shows a scanning electron microscope view of an area of the chip (left window) and oscilloscope waveforms at test points (right window).

Electron microscope 1931

Point-contact transistor 1947

its own special instrumentation setup, a long and laborious process.

Conventional test and diagnosis techniques were dealt a blow with the development of the integrated circuit as the 60s began. Now a large number of interconnected transistor circuits could be implanted on a tiny chip of silicon. This forced engineers to diagnose the integrated circuits on the chip by guiding microprobes (needles) to make electrical contacts, aided by a high-powered optical microscope. As chip complexity increased, microprobing strained the ability of an individual to trace and diagnose devices that could be easily damaged by the probe itself.

Fortunately, the integrated circuit had made possible compact, large-scale computers and the first computer-controlled tester appeared in 1967. This greatly improved throughput and measurement quality, allowing complex, repetitive, error-free testing.

But, by the 80s, the density of large-scale integrated

The engineer often starts navigating by referring to the computer aided design databases which completely describe the chip components, placement and interconnections. These tables of data describe a new chip design for the computer that will lay out and build the chip. Navigation software displays the databases and lets him pick out any section of the chip to view, much like automated navigational maps in advanced commercial aircraft.

Then the engineer can call up various "windows" on the computer graphics screen that let him see simultaneously, for example, a selected magnified portion of the actual chip, a circuit layout of the same area, and measurements at key points. He can scan a portion of the chip and zoom in or out to areas of particular interest. Simply by selecting a particular wire in the layout window, with a computer mouse, the engineer causes the system to move automatically to the correct area of the chip and highlight the corresponding area of the layout diagram.

This translates into huge efficiency gains for the engineer who can concentrate on diagnosis, and not on the tedious task of tracing wires through a maze of interconnections. Since engineers are able to correlate design data directly with chip real-estate, troubleshooting time is cut dramatically for new chip designs.

Time-To-Market, the Competitive Edge

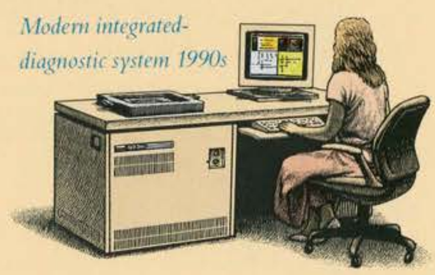
In the fiercely competitive semiconductor and computer industries, time-to-market for new chip designs often makes the difference between life and death for new products. A new chip or computer that misses a market window may not capture sufficient market share to recoup development costs. With these costs often running into tens of millions of dollars, delays literally can be fatal to the company.

The IDS 5000 has proven to be invaluable in this battle. Schlumberger has shipped over 70 IDS 5000 systems worldwide to a blue-chip list of customers in the semiconductor and computer industries. The significant number of repeat orders shows that the IDS 5000 is indeed helping these customers cut their time-to-market. In addition to compressing the troubleshooting or debug phase of chip development, the system also reduces the number of design iterations necessary to produce a fully functional chip. This makes the IDS 5000 a key tool for chip manufacturers.

Key members of the team who developed the IDS 5000 concept in the research laboratory; they completed the hardware and software designs and moved into operations where they helped oversee production and marketing. They are Christopher Talbot, seated, Manager, IDS Projects, Neil Richardson, left, Vice President, Diagnostic Systems, and Stefano Concina, Director of Engineering.

Computer-controlled integrated-circuit tester 1967

Probing integrated circuits under a microscope.



Modern integrated-diagnostic system 1990s

circuits had grown to tens of thousands of transistors, and some chips today contain more than a million. Such infinitesimal scales and enormous complexity are beyond the reach of mechanical micro-probing under optical microscopes. Once again, a reevaluation was necessary and Schlumberger engineers solved the problem by marrying the scanning electron microscope with a computer workstation to locate key test points among the millions of wires and to guide the electron-beam probe to them for diagnosis.

Five Year Summary

(Stated in millions except per share amounts)

Year Ended December 31,	1989	1988	1987	1986	1985
Summary of Operations					
Operating revenue:					
Oilfield Services	**$ 2,696**	$ 2,721	$ 2,306	$ 2,652	$ 3,966
Measurement & Systems	**1,990**	2,204	2,096	1,916	1,619
	$ 4,686	$ 4,925	$ 4,402	$ 4,568	$ 5,585
% (Decrease) increase over prior year	**(5%)**	12%	(4%)	(18%)	6%
Operating income:					
Oilfield Services	**$ 340**	$ 320	$ 147	$ 8	$ 1,039
Measurement & Systems	**154**	174	107	74	69
Eliminations	**1**	(30)	(2)	(1,614)[B]	1
	$ 495	$ 464	$ 252	$ (1,532)[B]	$ 1,109
% Increase (decrease) over prior year	**7%**	85%	N/A	N/A	(16%)
Interest expense	**$ 96**	$ 129	$ 166	$ 410[C]	$ 209
Taxes on income	**$ 111**	$ 135	$ 116	$ 106	$ 324
Income (loss), continuing operations	**$ 420**	$ 454	$ 503[A]	$ (1,655)[C]	$ 978
% Decrease from prior year	**(7%)**	(10%)	N/A	N/A	(17%)
Loss, discontinued operations	**$ —**	$ —	$ (220)	$ (363)	$ (627)[D]
Extraordinary item	**$ 21**	$ 22	$ 70	$ —	$ —
Net income (loss)	**$ 441**	$ 476	$ 353[A]	$ (2,018)[C]	$ 351[D]
Income (loss) per share					
Continuing operations	**$ 1.77**	$ 1.72	$ 1.81[A]	$ (5.76)[C]	$ 3.27
Discontinued operations	**—**	—	(0.79)	(1.26)	(2.10)[D]
Extraordinary item	**0.09**	0.08	0.25	—	—
Net income (loss)	**$ 1.86**	$ 1.80	$ 1.27[A]	$ (7.02)[C]	$ 1.17[D]
Cash dividends declared	**$ 1.20**	$ 1.20	$ 1.20	$ 1.20	$ 1.20
Summary of Financial Data					
Income as % of revenue, continuing operations	**9%**	9%	11%	N/A	16%
Return on average stockholders' equity, continuing operations	**15%**	13%	13%	N/A	14%
Fixed asset additions	**$ 549**	$ 455	$ 276	$ 447	$ 650
Depreciation expense	**$ 493**	$ 531	$ 527	$ 688	$ 700
Average number of shares outstanding	**238**	264	277	287	299
At December 31,					
Liquidity	**$ 708**	$ 555	$ 1,759	$ 2,263	$ 2,511
Working capital	**$ 884**	$ 718	$ 1,761	$ 2,119	$ 3,349
Total assets	**$ 5,482**	$ 5,600	$ 6,741	$ 8,012	$11,282
Long-term debt	**$ 292**	$ 191	$ 125	$ 504	$ 1,014
Stockholders' equity	**$ 2,898**	$ 2,755	$ 3,836	$ 4,123	$ 6,877
Number of employees	**46,000**	48,000	50,000	50,000	61,000

[A]Includes nonrecurring credit relating to continuing operations of $222 million ($0.80 per share).
[B]Includes nonrecurring charges relating to operating income of $1.60 billion.
[C]Includes nonrecurring charges relating to continuing operations of $1.74 billion ($6.05 per share) including pretax interest expense of $228 million.
[D]Includes unusual charges relating to discontinued operations of Fairchild Semiconductor with an after tax effect of $486 million ($1.63 per share).

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New York City

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Chairman and Chief Executive Officer
Schlumberger

Guy Dejouany[3]
Chairman and Chief Executive Officer
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Provost
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Cambridge, Massachusetts

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Vice Chairman of the Board
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President, Primwest Holding N.V.
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Executive Advisor
Nippon Steel Corporation
Tokyo

Arnaud de Vitry[1]
Chairman and Chief Executive Officer
Eureka SICAV, Paris

[1]*Member Audit Committee*
[2]*Member Compensation Committee*
[3]*Member Finance Committee*
[4]*Member Nominating Committee*

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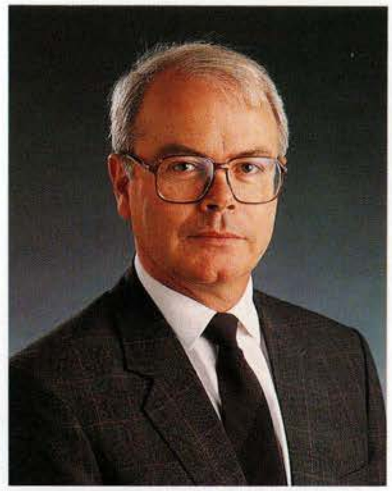

CLERMONT A. MATTON,
Executive Vice President
Schlumberger Technologies

On July 28, Clermont Matton, formerly Vice President and General Manager of the Water and Gas division of Schlumberger Industries, was appointed Executive Vice President for Schlumberger Technologies. At the same time, the Schlumberger Technologies group was expanded and reorganized to include: Automatic Test Equipment–North America, Automatic Test Equipment–Europe & Asia, Computer Aided Design & Manufacturing, Instruments, Electronic Transactions and Schlumberger Japan.

Matton replaced Michel Gouilloud who was appointed to the new position of Executive Vice President of Development Strategy for the EEC, Eastern Europe and the Soviet Union.

Oilfield Services

Wireline, Testing & Seismic Services
Wireline, Testing & Seismic Services provides oilfield services that help locate and define oil and gas reservoirs, and assist in the completion, development and production phases of oil and gas wells. These services are provided to oil companies in nearly 100 countries worldwide.

Wireline & Testing Services
Measurements of the geophysical and geological properties of underground formations to help locate and characterize reservoirs, and services to test and produce oil and gas wells. Most measurements and services are performed by lowering instruments into the well at the end of an electrical cable called the wireline. In addition, logging may be performed while drilling is in progress, and perforating guns conveyed on tubing.

GECO
Acquires, processes and interprets seismic data used to define subsurface structures where prospective oil or gas reservoirs may be trapped.

Drilling & Pumping Services
Drilling & Pumping Services offers oilfield services in the drilling and completion phases of oil exploration and development.

Sedco Forex
Operates 39 offshore and 34 land drilling rigs.

Anadrill
Well-site analysis of surface and downhole drilling and geological data used to aid drilling efficiency and safety, to determine the direction of drilling, and the types of formations being drilled.

Dowell Schlumberger
(50% owned)
Pressure pumping services for cementing casing in the borehole and for stimulating production by acidizing or fracturing treatments.

Measurement & Systems

Schlumberger Industries
Schlumberger Industries designs, manufactures and sells products, systems and service for the acquisition, processing, transmission and analysis of data.

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

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

Process Control and Transducers
Industrial process control equipment and transducers.

Schlumberger Technologies
Schlumberger Technologies provides hardware and software tools to help engineering customers shorten design and production cycles, and supplies products and systems for electronic payments and transactions.

Automatic Test Equipment
Automatic test equipment and software for diagnostic testing of integrated circuits, as well as functional and in-circuit testing of printed-circuit boards and integrated circuits.

Computer Aided Design and Manufacturing
Computer-based solutions for engineering design and manufacturing processes; software for numerically controlled machine tools.

Electronic Transactions
Cards, terminals, systems and service to automate point-of-sale payments; fuel dispensing systems for gas stations, parking and mass transit terminals, public payphones and smart cards.

Instruments
Electronic instruments for mechanical design, telecommunications, process control and electronic service.

Stock Transfer Agent
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Boston, Massachusetts

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Swiss stock exchanges

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Stockholders may receive without charge a copy of Form 10-K filed with the Securities and Exchange Commission on request to the Secretary, Schlumberger Limited, 277 Park Avenue, New York, New York 10172.

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Illustration: Mirko Ilić
Photography: Philippe Charliat, Bruno Le Hir de Fallois, Cheryl Klauss, Sepp Seitz, Laurence Vidal

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