Den norske stats oljeselskap a.s/Annual report and accounts 1978



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Statoil's new offices at Forus in Stavanger can accommodate about 500. The staff began to move in at the end of 1978 and the beginning of 1979.

Den norske stats oljeselskap a.s

The Board of Directors

Director Finn Lied, chairman Professor Ole Myrvoll, vice-chairman Trade Union Treasurer Thor Andreassen District Governor Einar H. Moxnes Manager of the Secretariat Ottar Vollan Engineer Trond Bolstad Engineer Erling Haug

Alternate members

Professor H. J. A. Kreyberg Housewife Gerd Schanche Geophysicist Tore Sund Secretary Åse Gjerdsjø Economist Magne Hovda M.Sc. Øystein Mundheim

Auditor

Certified Public Accountant Karl-Johan Endresen, Stavanger

Company Assembly

Editor Egil Aarvik, chairman Managing Director Ronald Bye, vice-chairman Trade Union Secretary Odd Bakkejord Advisor Bodil Bjartnes Director Egil Flaatin Lord Mayor Arne Rettedal Construction Worker Harald Schjetne Teacher Grethe Westergaard-Bjørlo Engineer Knut Helle Engineer Amund Sommerfeldt Dr. ing. Atle A. Thunes Engineer Egil Tveit

Alternate members

Trade Union Secretary Evy Buverud Pedersen Director of Finance Johannes Andreassen District Governor Alv Jakob Fostervoll Geologist Arne Lervik Geologist Klaus Lien Comptroller Håvard Berge Advisor Njål Gjedrem Personnel Training Worker Arnlaug Standal Geologist Stig Bergseth





Statoil investments



Assets



Liabilities and Shareholder's equity



Highlights

Amounts in millions of N.kr.	1978	1977	1976	1975	1974
Sales	2001,3	1685,9	1298,3	382,3	98,2
Salaries and social costs	76,8	55,3	36,5	20,1	8,0
Depreciation	132,8	47,0	32,8	1,1	0,3
Financial expenditures	88,0	35,6	—4,8	7,9	7,0
Financial result	—193,9	—112,1	—134,2	-62,2	—29,0
Investments	2046,1	1718,6	1889,8	933,1	64,5
Total assets	7794,5	5554,8	3660,9	1491,6	502,9
Share capital issued as of 31 Dec.	2733,5	1851,5	1551,5	755,0	305,0
Number of employees as of 31 Dec.	607	506	401	244	118



Projects

Activity	Company/license	Operator	Location	Statoil share	Type of activity
Exploration	Prod. license 038	Statoil	Blocks 6/3, 15/11, 15/12	50 %	Drilling
	Prod. license 044	Statoil	Block 1/9	50 %	Drilling
	Prod. license 045	Statoil	Blocks 24/11, 24/12	50 %	Drilling
	Prod. license 046	Statoil	Blocks 15/8, 15/9	50 %	Drilling
	Prod. license 050	Statoil	Block 34/10	85 %	Drilling
Production and	Statfjord Prod. license 037	Mobil	Blocks 33/9, 33/12	50 %	Oil/gas
Transportation	Murchison Prod. license 037	Conoco	Block 33/12	50 %	Oil/gas
	Frigg Prod. license 024	Elf	Block 25/1	5 %	Gas production
	Heimdal Prod. license 036	Elf	Block 25/4	40 %	Gas discovery
	Norpipe a.s	Separate adm.	Stavanger	50 %	Pipelines
	Norpipe Petroleum UK Ltd.	Separate adm.	Teesside	50 %	Oil/NGL terminal
	Statfjord Transport a.s & Co.	Statoil	Stavanger	44.4423 %	Crude oil transportation
Refining and	Rafinor A/S & Co.	Separate adm.	Mongstad	30 %	Refinery
Marketing	Norsk Olje a.s	Separate adm.	Oslo	15 %	Marketing
	I/S Noretyl	Norsk Hydro	Bamble	33 %	Petrochemicals
	I/S Norpolfin	Saga Petrokjemi	Bamble	33 1/3 %	Petrochemicals
Service Company	A/S Coast Center Base Ltd. & Co.	Separate adm.	Sotra	50 %	Supply base

Report of the Board of Directors



Statfjord A with the flotels Polymariner and Nortrym.

Main features of the operations

During 1978 Statoil has expanded its activities on the Norwegian continental shelf. The company commenced drilling of 7 exploration wells as operator and had during the summer season 3 drilling rigs in operation.

A production license for block 34/10 which is located southeast of the Statfjord field, was awarded to Statoil, Norsk Hydro and Saga Petroleum in June. During drilling of the first two wells, hydrocarbons have been found. Statoil is operator.

Development of the Statfjord field continues. Construction of the B platform commenced in February 1978 at Hinnavågen in Stavanger. The concrete structure will be the largest ever built in Norway.

The contract for construction and assembly of the steel deck for Statfjord B was signed in October. The value of the deck contract is estimated at 1.6 billion kroner.

On Statfjord A, drilling of the first production well commenced in November, signalling the start of the last important phase before the platform is ready for production.

The Norwegian pipeline from the Frigg The Ministry of Oil and Energy has field to Scotland came on stream in August. All installations on the Frigg field, where Statoil owns 5% of the Norwegian part, are now in operation.

In the summer of 1978 Noretyl's ethylene plant came into ordinary operation. The development of the petrochemical complex at Bamble is now approaching completion.

Statoil's capital expenditures during 1978 came to 2046 million kroner, of which the development of the Statfjord field accounted for 1503 million kroner. These investments will start to generate income in the years ahead. Statoil's financial result for 1978 was a loss of 194 million kroner.

At the end of the year Statoil had 607 employees.

Exploration

Statoil's operative involvement in connection with exploratory activities on the Norwegian shelf has steadily increased since the company completed the first drilling operation in 1975. (Fig. 1). In 1978 Statoil started drilling of 7 wells on blocks where the company is operator. The drilling rig "Ross Rig", which Statoil has chartered for a five-year period, has been in continuous operation throughout the year.

Statoil is operator for exploration and possible development and regular operation on block 34/10 and has drilled 2 wells in the block during 1978. In both wells hydrocarbons were found, but additional drilling is necessary before an accurate assessment can be made of the reserves and the possibility of development.

In addition to the wells in block 34/10, Statoil as operator has drilled wells in the blocks 1/9, 15/9 and 24/12. In 1/9, hydrocarbons were found in the northern part of the block. The drilling operations on 1/9 have been completed, but further studies of technical and economic data are necessary in order to evaluate a possible development. In 15/9 hydrocarbons were found in a structure where discoveries have also previously been made. A possible decision regarding development cannot be made until additional wells have been drilled.

A total of 11 wells have been drilled during 1978 in blocks where Statoil has ownership interests. In blocks 15/5 and 30/7, where Statoil has a 50% participation, hydrocarbons have been found, but here, too, additional wells will have to be drilled in order to determine the size of the reserves.

offered 15 blocks in the fourth licensing round. The first awards will take place in 1979. In the course of the preparatory work, Statoil has mapped and evaluated all the blocks.

Statoil, Norsk Hydro and Saga Petroleum coordinate their activities north of 62° through Operator Committee North. Statoil has mapped exploration areas of interest and prepared itself for the possibility of starting drilling operations north of 62°N in 1980. The company has proposed to the Government a contingency plan for

Fig. 1 Number of wells spudded on the Norwegian continental shelf in 1978 (Exploration and delineation wells)





1. Geologist Jakob Bleie, Manager of the Exploration Department, familiarizes the Statoil management with exploration activities.

2. Significant parts of the Statfjord A single point mooring buoy have been built by Kværner Brug A/S, in Egersund.

The single point mooring buoy was towed out in August of 1978 and placed on the sea bed, two kilometers from the Statfjord A platform.







these areas and carried out extensive testing of equipment for protection against oil pollution.

Production and transportation Statfjord

Development of the Statfjord field has been in progress since the autumn of 1974. The field straddles the borderline between Norway and the UK. Statoil has 50% of the ownership interests in the Norwegian part of the reservoir. Mobil is the operator.

The Statfjord A production platform was towed out to the field in May 1977. Since then, extensive installation work has been carried out on the platform.

Drilling of the first production well started in November. Initially, four wells will be drilled, including one for reinjection of gas. The oil production is expected to begin around year end 1979.

The Statfjord Group's estimate of the total Statfjord A costs including a loading buoy, is 7.5 billion kroner. Experience with similar projects shows, however, that unforeseen events may occur at the end of the projects and while the facilities are being started up.

The loading buoy which will be used for loading of crude oil from Statfjord A, was towed out to the field in August 1978 and has been placed about 2 kilometers northeast of the platform. It has a loading capacity of around 8000 tons of oil per hour, and tankers of up to 150 000 dwt can be loaded from the buoy.

Building of the concrete structure for the B platform started in February at Hinnavågen in Stavanger. Statfjord B will be a combined drilling, production and quarters platform with a production capacity of 7.5 million tons per year.

The contract for construction and assembly of the steel deck together with installation of equipment and assembly of modules on the deck frame was signed in October 1978.

The concrete structure has been designed to take a deck load of 35,000 tons, sufficient to permit all equipment to be assembled in port before the platform is towed out. The tow out is planned for the summer of 1981.

Completion of the plan is dependent on high efficiency in the subsequent planning, fabrication and construction work. Statoil estimates total expenditures for the Statfjord B platform of around 10 billion kroner.

Development of the Statfjord field will not be completed until the second half of the 1980's. The field is expected 1. The motor tanker "Polytrader" is chartered by Statoil for a five-year period, for the purpose of landing oil from the Statfjord field.

2. Kværner-Myren has been awarded the task of developing a trenching machine which can be used when a trench is to be excavated for laying pipelines along the sea bed.

3. His Majesty King Olav of Norway presided over the official opening of the Frigg field, when the last of the installations built was ready to begin operations in August of 1978.

4. A side section of the steel jacket for the Murchison platform is being lifted by seven cranes at the J. Ray McDermott construction site in Ardersier, Scotland.





5. Evening falls on the Frigg field. Statoil owns five percent of the Norwegian part of the field. Frigg production was very satisfactory in 1978.









to be able to produce petroleum to Norway. The laying of such a pipethroughout several decades. The project has required considerable capital expenditures, but as early as the beginning of the 1980's the flow of income will be considerable. The field is expected to yield a satisfactory return on Statoil's invested capital in addition to considerable tax income to the Norwegian Government.

Statfjord Transport

In August 1978 the companies participating in the Statfjord development concluded an agreement for joint transportation of oil from the field. Under this agreement, oil will initially be transported from the field by ship, whereas later on other transportation systems may be employed.

A separate transportation company has been established. Statoil as operator is in charge of developing and operating the company, which is organized as a limited partnership under the name of K/S Statfjord Transport a.s & Co. with offices in Stavanger. Participation in the partnership is identical to the participation in the Statfjord field. On behalf of the transportation company, Statoil has chartered two special tankers for transportation of the oil from the Statfjord field.

Landing of oil and gas in Norway

In connection with the Statfjord development, the Statoil/Mobil Group was requested to investigate the possibilities of transporting oil and NGL by pipeline to Norway. The objective was to solve the technological problems of laying and operating a pipeline across the Norwegian trench. Moreover, investment estimates and time schedules for the possible laying of a pipeline and construction of related terminal facilities ashore were to be prepared.

Broad theoretical studies of the laying operation were carried out in addition to model tests and evaluation of practical experience from pipeline laying at similar depths in the Mediterranean. It proved necessary to develop new burying equipment, and this assignment was given to Kværner Brug. The equipment was tested at 320 meter depth with good results.

Testing of repair techonology was divided into three projects. In cooperation with Norsk Hydro, experiments with pipeline welding by divers were carried out at the Skånevik Fjord. In addition, equipment for repairs from a manned submarine was developed and tested. Repair equipment that could be operated by a diver in an atmospheric diving suit was also developed.

The pipeline study indicated that it is technically feasible to lay a pipeline

line can be carried out with existing laying vessels. In the course of the study there has also been developed equipment which makes it technically feasible to carry out repairs of such a pipeline. The project has generated considerable spinoff effects for Norwegian research institutes and industry in the form of know-how development, technology and direct work assignments.

The project was carried out within the stipulated time schedule and cost estimates.

Murchison

On 18 July 1978 Statoil exercised its option for a 50 % participation in the Norwegian part of the Murchison field. Most of the field lies in block 211/19 on the British side of the continental shelf. Conoco is the operator. On the Norwegian side the Statoil/Mobil Group is licensee.

The recoverable reserves for the whole field have been estimated by Statoil at 40 million tons of oil and 3 billion m³ of gas. Unitization negotiations are in progress between the British and Norwegian licensees. The Norwegian part has provisionally been estimated by Statoil at 16-17%. Statoil's share of the annual production will be around 0.4 milion tons.

Development has been initiated by the licensees on the British side. Under the present plans, production will commence in the summer of 1980. Statoil's share of the total field development costs is estimated at 400 - 450 million kroner over a five-year period.

Negotiations are under way for transportation of the oil through the pipeline system from the Brent field on the British shelf to the Shetland Islands. No decision has yet been made regarding the ultimate utilization of the Murchison field gas, which in the first years will be reinjected into the reservoir.

Frigg

Development of the second phase of the Frigg field has been completed and all installations on the field are in operation. The Norwegian pipeline to St. Fergus in Scotland was completed around year-end 1977 and came on stream in August 1978 when the platforms on the Norwegian part of the field started production.

Statoil owns 5% of the Norwegian part and the company's share of the capital expenditures so far is 517 million kroner. Only moderate capital expenditures remain for drilling of production wells and installation of compression equipment on the gas treatment platform.

Production from the Frigg field has progressed in a very satisfactory

manner, and the Norwegian share of gas landed in 1978 was around 4.5 billion m³.

The Norpipe companies.

In 1978 the gas pipeline to Emden in West Germany transported about 9 billion m³ of gas.

Operation efficiency has been good. During the year, two companies have been engaged in backfilling the gas pipeline in the Danish sector. The backfill is planned to be completed by the summer of 1980.

Norpipe's pipeline from the Ekofisk area to Teesside in England transported 15,6 million tons of crude oil in 1978. The oil pipeline was shut down for a few weeks in June and July for repair of damage caused in the autumn of 1977 when a large anchor was dragged over the pipeline. During the repair period oil was loaded into tankers on the field through two loading buoys.

The capital expenditure program for Norpipe a.s is now largely completed. According to agreements the share capital will represent 10% of the total capital. Statoil's part of the share capital contributions is 375 million kroner. Norpipe a.s gross revenue in 1978 was approximately 1100 million kroner and Statoil in 1978 received dividends for 1977 of 30 million kroner.

The facilities for receiving, handling and shipping crude oil at Teesside are owned by Norpipe Petroleum UK Ltd., which is 50% owned by Statoil. Phillips Petroleum Company is operator for construction and operation of the facilities. The receiving facilities operated satisfactorily in 1978. The stabilizing facilities for separation of NGL from the crude oil stream are expected to be put into operation during 1979. Norpipe Petroleum UK Ltd.'s gross revenue in 1978 was approximately 160 million kroner, and the company had a financial surplus after taxes of about 17 million kroner.

Refining and marketing The crude oil market

Crude oil supplies were fairly abundant internationally in the first half of 1978, resulting in discount from the official prices, especially on the spot market but also to some extent on more longterm contract sales. The reduction in prices resulted mainly from slower growth in demand in USA and Western Europe. At the same time there was a considerable increase in the production of crude oil from areas outside OPEC, particularly Alaska and the North Sea.

In the second half of 1978 the demand for crude oil picked up again due to normal buildup of stocks for the winter season and an extra buildup in anticipation of increased crude oil prices around year-end. The demand for light,

Iow-sulphur crude oil has been affected by increased demand for lighter refined products both in Europe and USA. Furthermore, Saudi Arabia's decision to limit exports of Arabian Light Crude to 65% of the total export volume led to stronger demand for other similar crude oil grades.

The disturbances in Iran led to heavy cutbacks in the production of Iranian crude oil from the end of October. Several of the major oil companies declared force majeure and only small quantities were sold in the open crude oil market.

The OPEC meeting in December 1978 resolved to increase crude oil prices gradually by a total of 14.5% during 1979. The gradual increases will cause the crude oil price to rise by an average of 10% for 1979 as a whole. For the OECD countries, the rate of inflation is expected to be 6—7% in 1979. The price increase will thus for the first time since 1974 represent a real price increase in terms of dollars. (Fig. 2).

The reduction in supply of crude oil due to the disturbances in Iran, combined with stronger demand, exerted a considerable upward pressure on crude oil prices towards the end of the year. These high price quotations are, however, not caused by changes in the economic development in the main consuming areas which in the long run will have a determining effect on the development of demand.

Refining

Statoil is responsible for supplying Norsk Olie's and Statoil's 70% share of the crude oil requirement of the Mongstad refinery. In 1978 this quantity was 2.5 million tons, of which royalty oil from the Ekofisk area accounted for 1 million tons. Oil from the Ekofisk area is a low-sulphur crude oil which yields a high percentage of the lighter and more valuable refined products. Crude oil was also purchased from the British sector of the North Sea and normal-sulphur, heavier crude oil was supplied from the Middle East (Fig 3 and 4). Different grades of crude oil are employed in order to optimize production in a profitable way to the demand for refined products in Norway.

The Mongstad refinery has been operated at good capacity utilization during 1978. As a part of the efforts to improve the energy utilization at the refinery, Rafinor's Board of Directors has decided to build a LPG plant to recover propane and butane from flare gas.

Marketing.

Since 1974 royalty on oil production in the Ekofisk area has been taken in kind. Statoil has bought the royalty oil from the State at norm price. Statoil's resale of royalty oil has also been effected at norm price. The royalty oil







Fig. 4. Statoil's employment of crude oil





1. The Noretyl ethylene factory in Bamble.

final product at Norpolefin.



has covered the requirement for lowsulphur oil of Statoil's and Norol's shares of the Mongstad refinery, and made possible deliveries of crude oil to other customers.

Statoil's refined products from Mongstad are marketed by Norsk Olje a.s. The financial result of Statoil's refining activities for the year as a whole was not satisfactory. In the second half of the year, however, there was a recovery in the prices of refined products which led to a substantial improvement in the financial result for the year compared to that of 1977.

At the initiative of the Ministry of Oil and Energy, Statoil conducted nego-tiations with Norsk Olje for an assignment to Statoil of Norsk Olje's 40% participation in Rafinor. However, in June the Storting resolved to grant 300 million kroner as subordinated loan capital to Norsk Olje over the 1978 State Budget. The Government was requested to submit to the Storting for its consideration a plan for the final corporate structure of Norsk Olje, with the prime objective to strengthen this company's position as a marketing organization in closer coordination with Statoil.

Petrochemical activities

In addition to the Mongstad refinery, Statoil is involved in downstream activities at the petrochemical complex at Bamble. The partnerships Noretyl and Norpolefin are owned by Norsk Hydro, Saga Petrokjemi and Statoil. The petrochemical plants will utilize NGL produced from the Ekofisk area. The NGL will be landed via Norpipe's pipeline system to Teesside in England and shipped back to Norway.

Work on the Phillips Group's receiving facilities for NGL in Teesside has progressed at an unsatisfactory rate. Phillips, as operator, assumes that the facilities will probably not be completed until the summer of 1979. Noretyl's ethylene plant went into ordinary operation in July 1978, based on propane purchased in the open market. The capacity utilization will be low until the NGL deliveries from Teesside commence. The capital expenditure program is almost completed. Statoil's 33% share of the capital expenditures comes to 576 million kroner.

Norpolefin's plants for polypropylene and low density polyethylene were started up in the second half of 1978. The plant for high density polyethylene is expected to be ready for operation in the spring of 1979. Statoil's 33 1/3% share of the capital expenditures in Norpolefin so far totals 629 million kroner.

Due to overcapacity in the market, the prices for Norpolefin's products have been declining. If this situation continues, there is reason to believe that the financial results for 1979 will be weak.

Cooperation with Norwegian industry

Deliveries for the development of the Statfjord field have resulted in a considerable number of orders for Norwegian industry. 350 Norwegian companies have been suppliers of goods and services to the construction of Statfjord A. In 1978 large orders for the deck and the outfitting of Statfjord B have been placed in Norway. This also provides opportunities for other Norwegian companies to participate as subcontractors.

Norwegian Contractors, a partnership of three of Norway's largest construction companies, was awarded the contract to build the concrete structure for the Statfjord B platform. At peak employment more than 800 people will be engaged in the construction at Hinnavågen in Stavanger.

Moss/Rosenberg Verft A/S won the prime contract for construction and assembly of the steel deck. Part of the deck frame will be built by Kværner Brug in Egersund and the other part at Fredrikstad Mekaniske Verksted A/S. The parts will be joined to form a complete deck by Moss/Rosenberg Verft A/S in Stavanger.

Moss/Rosenberg Verft A/S also won the contract for equipping the utility shafts. Parts of the work will be subcontracted to other companies on competitive terms. The living quarter with helicopter deck will be built by Leirvik Sveis A/S at Stord.

Deliveries to the petroleum industry in Norway face keen international competition. This put special demands on the companies that intend to delier goods and services to the activities on the continental shelf.

Safety and protection

An important objective in the area of safety and protection has been to continue the development of personnel resources and competence which are necessary for the undertaking and performance of operator functions.

The company has been engaged in the follow up of the Statfjord project regarding the safety aspects. In the A project, Statoil was engaged in connection with the preparations to start drilling, and in the B project in connection with the implementation of the safety requirements underlying the Norwegian Petroleum Directorate's approval in December 1977.

Norwegian Offshore Clean Sea Association (NOCSA) was established 27 April 1978 as an association of all operators in the North Sea. The purpose of NOCSA is to further develop and maintain a common contingency system for protection against oil pollution, to carry out excercises and to make joint purchases of equipment.



The concrete structure of the Statfjord B platform, under construction at Hinnavågen, Stavanger, in March of 1979. The Statfjord B platform will be the world's largest oil production platform. It covers a surface area of 18 000 square meters, or the equivalent of 4.446 acres.



The operators' oil spill protection system, with the additions planned for 1979, has been approved by the authorities.

As a part of the preparations to start drilling north of 62°N, Statoil has submitted a plan for protection against oil pollution. The work on consequence analyses and testing of oil spill protection equipment has continued in 1978.

Two accidents occurred in 1978 in connection with the development of the Statfjord field. On 25 February fire broke out in the utility shaft on Statfjord A. Five persons lost their lives. On 26 June a helicopter on its way to Statfjord A crashed into the sea. 18 persons died.

On 8 February a diver lost his life during welding tests at Skånevik Fjord.

Statoil's Board of Directors has expressed its deep symphaty with those who were affected by these tragic accidents.

Personnel and organization

During the year Statoil has continued the systematic buildup of the company's organization and competence. The number of employees increased from 506 to 607 during 1978.

Statoil possesses today considerable know-how in the areas of geology and geophysics, drilling technology, drilling operations and reservoir evaluation. The technical staff has carried out a number of high level engineering assignments both under their own project responsibility (studies of technical and economic aspects of landing oil from the Statfjord field to Norway) and in cooperation with project staffs for the Statfjord field development (Statfjord A and B).

Statoil has strengthened its organization in order to follow up the company's engagement in the Statfjord development. An organizational unit has been established with responsibility for all Statoil activities relating to the Statfjord development.

Statoil is now taking advantage of the options in agreements with other oil companies to place Statoil personnel on platforms in the North Sea and elsewhere for training purposes.

The Internal Working Environment Committee, which the company is legally required to set up, has in 1978 dealt with various environmental and organizational issues. Selection of office layout for Statoil's new administration center at Forus has been considered by the committee. In 1978 a survey of the working environment was undertaken. The conclusions have been dealt with by the committee and proposals for improvement of the working environment have been submitted. Furthermore, the Working Environment Committee has discussed various safety aspects related to transportation of personnel by helicopters.

Statoil intends to develop its head office functions in Stavanger. Operational units are planned in decentralized locations along the coast and thus closer to the oil fields.

The Board of Directors would like to express its great appreciation to all Statoil employees for their dedicated work and loyal co-operation during 1978.

Financing

Statoil's share capital was increased in January 1978 by 400 million kroner. In December 1978 the Storting resolved to increase the company's share capital by 500 million kroner for 1979. This increase was adopted at a General Meeting the same month. As of 31 December, 1978, the company's share capital amounted to 2 733,5 million kroner. After deduction of accumulated losses the net book value of shareholder's equity at the end of the year was 2 188 million kroner representing 28% equity financing.

Statoil covered its loan financing requirement in 1978 by raising Government guaranteed loans abroad under three loan agreements equivalent to about 2290 million kroner. In March 1978 an agreement was signed for the placement of U.S. \$ 60 million 15 year notes. In April the company concluded a U.S. \$ 300 million loan agreement with a syndicate consisting of 11 foreign and five Norwegian banks. In August a DM 150 million bond loan was issued. These two loans have final maturities of ten years.

The Board of Directors considers the present arrangement whereby the Government subscribes new share capital and the company borrows under Government guarantee, as a satisfactory basis to secure adequate financing.

There has been considerable interest in participating in Statoil's financing, and the market contact and banking relations established in 1978 will provide a good basis for the company's future borrowing.

For 1979 the Storting has authorized guarantees for Statoil's borrowing program up to 2 890 million kroner.

1978 has been a year of fluctuating foreign exchange rates and interest rates. Statoil has not incurred any significant foreign exchange losses during the year. Long-term debt is entered at rates resulting in an unrealized gain of about 50 million kroner. Dollar loans, raised at a low rate, may however lead to foreign exchange losses in the future, insofar as the dollar may rise in value.

The Board of Directors wishes to point out that any increase in the dollar rate will also cause Statoil's dollar revenue from petroleum sales to rise in terms of Norwegian currency. Statoil will therefore continue to concentrate its borrowing in currencies where future export revenue is anticipated, primarily U.S. dollar.

The 1978 financial statement

Statoil's sales in 1978 totalled 2001 million kroner. Crude oil and gas sales which account for 61% of the revenue, comprise export sales of royalty oil, resale to Norsk Olje of royalty oil and purchased crude oil supplied to Mongstad together with sales of gas from the Frigg field.

Statoil's total sales of refined products amounted to 696 million kroner in 1978 and represent approximately 35% of the total revenue.

The plants at Bamble have come into operation and in 1978 Statoil sold petrochemical products for the first time.

The 1978 financial statement shows a loss of 194 million kroner. The loss is mainly due to the fact that the company is in a development and investment phase. The accounts are therefore charged with comparatively high depreciation and financial costs. Furthermore the financial results of the company's involvement in refining and petrochemical activities have been weak in 1978, due to low market prices.

Statoil's total investments in 1978 amounted to 2 046 million kroner of which the Statfjord development accounted for 1503 million kroner or 73%.

Adminstrative expenses and cost of sales as well as research and development studies totalled 90 million kroner in 1978. Salaries and other remunerations to the Company Assembly came to 45,000 kroner, to the Board of Directors 99,000 kroner and to the President 330,465 kroner.

The Board of Directors proposes that. the deficit of 193,9 million kroner be transferred to the 1979 accounts. For further details reference is made to the Accounts and the accompanying comments.



1. New developments in architectural design are represented in several ways by the Statoil offices at Forus.

2. Statoil's investments necessitate loans from abroad. Here Statoil President Arve Johnsen (center) and Senior Vice President Jacob Øxnevad (extreme right), together with representatives from the Chase Manhattan Bank, sign a loan agreement in London.

3. The Statoil stand at the "Offshore North Sea '78" trade fair.

4. Assembling the Statfjord A flare boom was a difficult operation which was successfully completed.







Future prospects

In 1978 production of petroleum on the Norwegian continental shelf totalled about 30 million tons of oil equivalents, almost twice the preceding year's figure. In the 1980's the annual production is expected to be around 60 million tons of oil equivalents from fields for which a development decision has been made.

Statoil's share of the petroleum production is still modest, but including royalty oil it will increase steadily to an estimated 14-16 million tons per year at the end of the 1980's. (Fig. 5).

It is estimated that Statoil's crude oil supply from fields now under development will decline around 1990. If the production level is to be maintained after 1990, new finds will have to be made. Statoil's activities during the years ahead will therefore include considerable exploration activities.

Statoil's investments during the years ahead will mainly be associated with completion of the Statfjord development. For the next three or four years, the annual level of capital expenditures will be around 3 billion kroner.

Norwegian industry is providing a substantial part of the goods and services for the development of the Statfjord field. A steady flow of new projects in the North Sea would benefit the level of activity in parts of the Norwegian industry in the years to come.

In the 1980's, petroleum and petroleum products will represent a significant share of Norway's total exports. As early as 1979, the petroleum export is expected to represent approximately 20% of Norway's total export.

The Board of Directors is of the opinion that over time the price of crude oil in real terms will increase towards the cost level of alternative energy sources.

Prices of refined products in the international market fluctuated in 1978. There is still excess capacity in the refining industry in Western Europe and a condition for any permanent improvement in the profitability of refining is an increased utilization of capacity.

The petrochemical industry of Western Europe has also considerable excess capacity, with consequential depressed profitability. Higher prices are necessary to achieve satisfactory profitability.

Statoil's financial results so far reflect the fact that its largest projects have been in the development phase. In the next few years, Statoil will still operate at a loss. This is mainly due to the fact that the accounts will be charged with heavy depreciation. Investments in offshore assets are depreciated over 6 years, whereas the esti-mated production life is 20 to 30 years. The company expects to be able to show a financial surplus in 1982.

During the years ahead the company will be involved in all areas of petroleum activities thus enabling the Norwegian Government to control through Statoil substantial quantities of petroleum which is an essential commodity in the world today. It is the Board of Directors' opinion that the company's operations will gradually return considerable profits to the Norwegian society.

Fig. 5. Norway's expected crude oil production from fields under development



Stavanger, 23 February 1979 The Board of Den norske stats oljeselskap a.s

Finn Lied

Chairman

Ole Myrvoll Vice-Chairman

mormes Offan baccan TrougBoata . TErling Lang Vhor andreass Erling Haug

Thor Andreassen

Trond Bolstad

Einar H. Moxnes

Ottar Vollan

Statement of profit and loss for the year 1978

Pevenue	1 Amo 1000	1978 Amounts in 1000 N.kr.		1977 Amounts in 1000 N.kr.	
Sales		2 001 330 42 023 2 043 353		1 685 860 47 515 1 733 375	
Operating costs Direct costs. Salaries and social costs Other costs Depreciation Operating loss	1 917 111 76 833 13 535 132 785	<u>2 140 264</u> 96 911	1 675 838 55 309 32 226 47 012	<u>1 810 385</u> 77 010	
Financial income and financial costs Dividends received(3) Interest income and other financial income Less interest costs(4)	29 708 20 280 <u>138 005</u>	<u> </u>	8 515 11 737 55 847	<u>35 595</u> 112 605	
Extraordinary income and costs Extraordinary income Cost of share capital increase Loss before taxes Tax refund regarding previous years Net loss	9 000	9 000 193 928 193 928	100 <u>3 000</u>	2 900 115 505 3 419 112 086	

Balance sheet as of 31 December 1978

Assets	1978 Amounts in 1000 N.kr.		19 Amou 1000	77 nts in N.kr.
CURRENT ASSETS Cash and short-term deposits Cash. Deposits in Norwegian kroner	88 51 524 37 930	89 542	123 198 025 24 157	222 305
Short-term receivables Interest earned, not due Subscribed share capital, not paid	192 500 000 408 666	908 858	5 18 000 391 232	409 237
Inventories Crude oil Petroleum products and supplies	28 737 91 182	119 919	64 552 95 821	160 373
INVESTMENT CAPITAL Long-term receivables and investments Shares in Norwegian companies	469 971 82 057 9 071	561 099	449 527 77 003 7 746	534 276
Fixed assets(10)On-shoreFurniture, equipment etc.PlantsReal estate.Plants under construction	35 463 976 279 28-381 732 630		27 163 463 930 27 380 961 446	
Off-shore Participation in fields in production Participation in other fields	446 840 3 895 498	6 115 091 7 794 509	417 500 2 331 186	4 228 605 5 554 796

Stavanger,

Finn Lied Chairman Ole Myrvoll Vice-Chairman Thor Andreassen

Trond Bolstad

Liabilities and shareholder's equity

	19 Amou 1000	978 Ints in N.kr.	1977 Amounts in 1000 N.kr.	
Current liabilities Short-term bank credits Provisions for taxes Interest incurred, not due Accounts payable	238 48 712 33 768 595 529	678 247	240 43 356 12 583 639 768	695 947
Long-term debt(11)Loans from the Norwegian GovernmentBank loansBonds and notes outstandingExport creditsOther long-term debtCurrency risk fund(11)	2 051 832 1 340 264 758 320 270 338 503 286 3 975	4 928 015	2 051 832 641 402 40 000 164 468 456 997 3 975	3 358 674
Shareholder's equity Share capital (27 335 000 shares of N.kr. 100 each)(13) Less: Accumulated loss as of January 1 Net loss of the year	2 733 500 351 325 193 928	2 188 247	1 851 500 239 239 112 986	1 500 175
Joint and several liability 46 558 (14)				

7 794 509

5 554 796

31 December 1978 23 February 1979

Erling Haug

Einar Moxnes

Ottar Vollan

Arve Johnsen President

Accounting policies (general principles)

The following items are charged to profit and loss account

- Expenditures for development and operation of the company.
- Expenditures for purchase, collection and processing of seismic data (except those related to commercial fields).
- Expenditures for exploration (incl. drilling) which have not resulted in commercial discoveries of hydrocarbons.
- Expenditures for development of data systems and other general research and development projects.

The following items are capitalized and subject to later depreciation

- Expenditures related to commercial fields where Statoil has exercised its option to participate in a field development.
- Interest expenditures which can be allocated to fixed assets under construction.
- Expenditures for exploration where hydrocarbons have been proved and where a commercial deposit might be established.

Depreciation

Fixed assets in production on-shore are depreciated according to rates recommended by Norwegian tax authorities. For off-shore installations straight line depreciation over 6 years is used. This is the maximum rate according to the Norwegian Petroleum Revenue Tax Act.

Conversion principles for foreign currency

Items in foreign currency are converted into Norwegian kroner according to the following principles:

- · Expenditures/sales are entered according to the prevailing exchange rate at the time of payment.
- Current assets and current liabilities as recorded on the balance sheet are converted at the rate of exchange prevailing as of December 31.
- Long-term receivables and fixed assets are entered at the exchange rate prevailing at the time of procurement.
 Long-term debts are converted at the exchange rates prevailing when the loans were drawn.

If the value in N.kr. of long-term debt in foreign currencies at year end is exceeding the value as recorded at the time of drawdown, a provision equal to the difference is made to the currency risk fund. Such provisions for unrealized exchange losses are charged to the profit and loss account. Unrealized currency gains are not treated as income. Realized currency-losses are charged to the profit and loss account to the extent not covered by previous provisions to the currency risk fund.

Shares in Norwegian and foreign companies

Shares in Norwegian and foreign companies (not quoted or listed) have been booked at cost.

Partnerships and limited partnerships

Statoil's share of profits or losses as well as assets and liabilities in partnerships and limited partnerships is included in Statoil's statement of profit and loss and in the balance sheet respectively. For 1978, this includes license No. 050 (block 34/10), the fields Statfjord, Frigg and Heimdal, the partnerships I/S Noretyl and I/S Norpolefin and the limited partnerships K/S A/S Coast Center Base Ltd. & Co., Rafinor A/S & Co. and K/S Statfjord Transport A/S & Co.

Inventories

Inventories of crude oil, petroleum products and supplies are valued at the lower of purchase/production cost or current market price.

Notes to financial statements for 1978

 Includes mainly sales of royalty oil from the Ekofisk field, sales to Norsk Olje a.s of other purchased crude oil, sale of Statoil's 30 % share of the products by Rafinor A/S & Co. at the Mongstad refinery (marketed through Norsk Olje a.s), sales of Statoil's share of gas from the Frigg field and sales of petrochemical products from I/S Noretyl.

Sales are distributed as follows:

Amounts in 1000 N.kr.	1978	1977	1976	1975	1974
Norway Crude oil and gas	784 909 695 712 67 099 442 187 11 423	771 990 606 439 3 219 304 212	683 136 531 218 65 262 18 782	126 646 158 454 23 415 73 777	32 000 66 152
	2 001 330	1 685 860	1 298 398	382 292	98 152

2. Other revenue includes sales of seismic data.

3. Dividends received are dividends received in 1978 on the shares in Norpipe a.s for the year 1977.

Total interest incurred are distributed as follows:

Total interest expences in 1978	373.8 million N.kr.
Less capitalized interest related to fixed assets under construction	235.8 million N.kr.
Interest related to operations	138.0 million N.kr.

- 5. Short-term deposits in Norwegian kroner include a total of N.kr. 4.0 million as deposits related to withheld income tax for the employees (payable to tax authorities).
- 6. Deposits in foreign currency are as follows:

Amounts in mill.	Currency value	Exchange rate	Norwegian kroner
U.S. dollars Deutsche Mark Pound sterling	0.7 11.9 0.2	5.0225 275.35 10.225	3.6 32.7 1.6
			37.9

- 7. Accounts receivable include N.kr. 2.5 million of short-term financing related to sales of houses to employees.
- Shares in Norwegian companies have increased in 1978 following a share capital increase in Norpipe a.s of N.kr. 20.0 million (Statoil's part) and subscription of share capital in Statfjord Transport a.s (general partner of K/S Statfjord Transport a.s & Co.).

The shares are distributed as follows:

Amounts in 1000 N.kr.	Book value	Face value (nominal value)	Number of shares	Statoil's ownership interest	Total share capital in the company
Norpipe a.s Norsk Olje a.s Rafinor a.s A/S Coast Center Base Ltd. Statfjord Transport a.s	375 000 91 500 3 000 27 444	375 000 13 500 3 000 27 444	3 750 000 13 500 3 000 110 888 846	50 % 15 % 30 % 50 % 44,4423 %	750 000 90 000 10 000 55 1 000
	469 971	391 971			

All shares are entered at cost. This also applies to shares in Norsk Olje a.s which as of December 31, 1978 in its accounts showed a negative net equity. The negative net equity is considered to be of a temporary nature and consequently, the Board of Directors has not changed the booked value of the shares in this company.

 Shares in foreign companies include Statoil's 50 % share of the equity in Norpipe Petroleum UK Ltd. entered at cost, N.kr. 82.1 million. Paid-in equity capital in this company was increased in 1978 by £1.0 million to £14.4 million (Statoil's 50 % share).

10. Specification of fixed assets:

Amounts in millions of N.kr.	Gross investment as of Jan. 1 1978	Additions in 1978	Disposed of in 1978	Accumulated depreciation as of Dec. 31 1978	Book value as of December 31, 1978
On-shore					
Furniture, equipment etc Plants	32.6 529.7	16.6 576.6	0.1	13.6 130.0	35.5 976.3
Real estate	27.6	-220.9	0.2	0.5	732.5 28.4
Off-shore Participation in fields					
Participation in other fields	427.3 2 331.2	89.5 1 564.4	0.1	70.0	446.8 3 895.5
	4 309.8	2 019.7	0.4	214.1	6 115.0
Gross investment:	Sector 1		Sector Sector	Minasu -	

Amounts in millions of N.kr.	1974 and before	1975	1976	1977	1978	Total gross investments as of December 31 1978
On-shore Furniture, equipment etc Plants Real estate Plants under construction	3.9 6.9 28.4	3.4 15.2 -0.5 195.6	13.0 463.1 23.4 302.0	12.3 51.4 -2.2 435.4	16.6 576.6 1.2 -228.9	49.2 1 106.3 28.8 732.5
Off-shore Participation in fields in production Participation in other fields	32.5	660.7	924.0	427.4 714.1	89.5 1 564.3	516.9 3 895.6
	71.7	874.4	1 725.5	1 638.4	2 019.3	6 329.3

The net book value of the above investment is distributed on partnerships, limited partnerships and wholly owned fixed assets as follows:

Amounts in millions of N.kr.	Ownership interest	Net book value as of Jan. 1, 1978	Additions in 1978	Depreciation in 1978	Net book value as of December 31, 1978
Off-shore activities Statfjord Frigg Heimdal License No. 045 (block 24/11	44.4423 % 3.0410 % 40.0000 %	2 282.1 417.5 49.0	1 502.6 89.5 2.9	60.2	3 784.7 446.8 51.9
and 24/12) License No. 050 (Block 34/10)	50.0000 % 85.0000 %	0.1	-0.1 58.9		58.9
On-shore activities Rafinor Noretyl Norpolefin Coast Center Base Other assets	30 % 33 % 33 1/3 % 50 % 100 %	452.4 533.7 394.1 21.8 77.8	1.8 42.4 235.0 2.0 84.3	34.0 29.6 1.0 8.0	420.2 546.5 629.1 22.8 154.1
		4 228.5	2 019.3	132.8	6 115.0

In the partnerships the participants in accordance with the Accounting Agreement, have the right to audit the operators accounts within 2 years after closing of the accounts. Possible corrections arising from such an auditing will change the registered book value in Statoil's accounts accordingly.

License No 045

Previously capitalized amounts regarding license 045 (Block 24/11 and 24/12) have been charged to the profit and loss account.

License No 050

Statoil has a 85 per cent ownership interest in Production License No 050 (Block 34/10), but according to the State Participation Agreement the company finances 77.5% of the exploration expenditures. Discoveries of hydrocarbons have been made in both wells drilled in the block during 1978. Further exploration is necessary to prove whether these discoveries are commercial. In accordance with the principles mentioned above, the expenditures have been capitalized.

Murchison

On 18 July, 1978, Statoil exercised its option for 50 per cent of the ownership interest in the Norwegian part of the Murchison field. The Norwegian part has been provisionally estimated at 16-17 per cent by Statoil.

The Norwegian and the British groups are currently in the process of negotiating the transfer value. Statoil's share of accrued expenditures as of December 31, 1978 is estimated between 175 million N.kr. and 225 million N.kr.

The investment will be included in the accounts when agreement has been reached and disbursement has been made (expected to take place in 1979).

11. Long-term debt amounting to N.kr. 4 928.0 million is distributed between the various currencies as follows:

Amounts in millions	Currency value	Average rate of exchange	Booked amount in N.kr.
U.S. dollar Deutsche Mark Swiss franc Pound sterling French franc Norwegian kroner	304.3 150.0 11.7 12.3 69.1	5.32 263.95 189.39 9.40 114.10	1 619.1 395.9 22.2 115.6 78.4 2 696.8
			4 928.0

If the debt in foreign currencies had been converted into Norwegian kroner at the exchange rates prevailing at the end of 1978 this debt would amount to N.kr. 2 186.7 million. The company would have realized a profit of N.kr. 48.4 million, including the previous provisions to the currency risk fund amounting to N.kr. 4.0 million, if the total debt had been repaid at the exchange rates as of December 31, 1978. Currency gains will be credited to the profit and loss account only when realized.

12. Other long-term debt comprises financing extended to Statoil by the partners in the Frigg and Heimdal fields.

Specification of this debt.

Amounts in million N.kr.	Debt as of January 1, 1978	Increase during 1978	Repayment in 1978	Debt as of December 31, 1978
Frigg	426.9 30.1	133.7	87.4	473.2 30.1
	457.0	133.7	87.4	503.3

Frigg

Statoil owns 5 per cent of the Norwegian part of the Frigg field and the same share in one of the two pipelines from the field to St. Fergus in Scotland. 60.82 per cent of the total Frigg field is located on the Norwegian side of the median line.

In accordance with the State Participation Agreement, the Petronord Group finances Statoil's share of investments in the Frigg field, inclusive of interest charges. Repayment of the debt is to be made by crediting income from production to the Petronord Group.

If the debt is not repaid by the time the production license expires, the outstanding debt will be cancelled. Statoil has the option to prepay the debt.

Heimdal

Statoil owns 40 per cent of the Heimdal field. Expenditures incurred prior to the option being exercised, (estimated at N.kr. 30.1 million kr.) are financed for Statoil by the other partners in the group in the same way as for the Frigg field (see above).

13. In the approved State Budget for 1978, N.kr. 400 million was appropriated as increase of the share capital in Statoil.

In the final settlement for the aquisition of Statoil's 30 per cent interest in the Mongstad refinery, the value was determined to be N.kr. 18 million less than originally estimated. The share capital increase in 1976 was based on the estimated value, thus the share capital was reduced by N.kr. 18 million in connection with the N.kr. 400 million increase in 1978.

For 1979, the Storting appropriated N.kr. 500 million as share capital increase for the company. This increase was approved in a General Meeting of Statoil on the 20th December 1978.

Total share capital as of December 31, 1978 is as follows:

Share capital as of January 1, 1978	N.kr.	1 851.5	million
Subscribed and paid in during 1978	**	400.0	"
Reduction (Se note above)	~	-18.0	"
Increase approved in 1978 to be paid in during 1979	"	500.0	«
Share capital as of December 31, 1978	N.kr.	2 733.0	million

14. Statoil has, together with the other partners in I/S Noretyl and I/S Norpolefin, a joint and several liability for the debt incurred in the name of the partnerships (mainly related to debt to suppliers).

Liability

In connection with the activities on the continental shelf, including transportation systems, Statoil has, as all other licensees, an unlimited liability for possible claims for compensation exceeding those covered by insurance policies.

Charter agreements

Statoil has entered into an agreement with Ross Drilling Co. A/S for charter of the drilling rig "Ross Rig" for a period up to five years from June 1975.

Source and application of funds

Amounts in 1000 N.kr.	> 1978	1977	1976	Up to 1975	Acc. as of 31 Dec. 1978
Source of funds Increase in share capital Less: net loss Plus: depreciation	882 000 -193 928 132 785	300 000 -112 086 47 012	796 500 -134 247 32 830	755 000 -104 992 1 526	2 733 500 -545 253 214 153
Total internal financing Increase in long-term debt Currency risk fund	820 857 1 569 341	234 926 1 469 112	695 083 1 343 247	651 534 542 340 3 975	2 402 400 4 924 040 3 975
TOTAL SOURCE OF FUNDS	2 390 198	1 704 038	2 038 330	1 197 849	7 330 415
Application of funds Increase in fixed assets Increase in long-term receivables	2 019 271	1 638 404	1 725 472	946 097	6 329 244
and investments	26 823	80 243	164 295	289 738	561 099
Total capital expenditures Change in working capital	2 046 094 344 104	1 718 647 -14 609	1 889 767 148 563	1 235 835 -37 986	6 890 343 440 072
TOTAL APPLICATION OF FUNDS	2 390 198	1 704 038	2 038 330	1 197 849	7 330 415

Recommendation from the Company Assembly

The recommendation of the Company Assembly to the General Meeting regarding the Annual report and accounts for 1978.

At the meeting on 21 March 1979, the Statoil Company Assembly discussed the Annual Report submitted by the Board of Directors and the proposed Accounts for 1978, including the Statement of Profit and Loss, the Balance Sheet, and the settlement of the loss.

The Company Assembly of Statoil recommends that the General Meeting approve the Annual Report submitted and establish the Accounts in accordance with the draft made by the Board of Directors.

Stavanger/Oslo, 21 March 1979

Ein Aarvily

Egil Aarvik Chairman, Company Assembly

Auditor's report for 1978

to the Shareholder of Statoil, Den norske stats oljeselskap a.s

I have audited the Accounts for 1978 according to generally accepted auditing standards.

The Annual Financial Statements are in compliance with the Companies Act and in my opinion present the result of the year and the financial position of the company on the basis of generally accepted accounting principles.

The Board's proposal for settlement of the loss complies with the Companies Act.

The Statement of Profit and Loss and the Balance Sheet submitted may be adopted as the Accounts of Statoil for 1978.

Stavanger, 26 February 1979.

Kail-John Endusm

Karl-Johan Endresen Certified Public Accountant (Norway) (signature)

> Checking drilling equipment on "Ross Rig".



More about exploration activities

Norway's role as a maritime country has changed since the middle of the 1960's. The oil and gas discoveries made in the North Sea constitute the reason for this change. There are strong indications that we are only on the threshold of a development which will be characterized to a great extent by petroleum activity on the Norwegian continental shelf.

Norway's share of the North Sea south of the 62nd parallel amounts to approximately 140,000 square kilometers of acreage, while the Norwegian continental shelf north of the parallel is about six times that size. The formations to be found beneath the sea bed in the Norwegian part of the North Sea continue northward along the coast. The possibility that oil and gas exist farther north seems to be comparable to the possibilities with which we are familiar from the North Sea, as far as we know today.

Since 1965, about five billion Norwegian kroner has been used on exploration activity and 190 wells have been drilled on the Norwegian continental shelf. The result of this effort is that oil and gas have been proven, amounting to a total of approximately 1400 million tons of oil equivalents. One ton of oil equivalents is equal to one ton of oil or 1000 cubic meters of gas.

During the first part of the 1980's, recovery from the Norwegian North Sea fields will reach a level of 60 million tons of oil equivalents annually. Then production will decline relatively quickly in the beginning of the 1990's. Therefore, new fields will have to be discovered and put into production, if exploitation from the Norwegian petroleum deposits is to be maintained at this level or if it is to increase.

The discovery of these new reserves, will require considerable contributions of know-how, work and capital. The exploration of the new areas in the North Sea will be based on further development of the exploration technology which made possible the discoveries made to date. Constant improvements are being made on the geological models utilized. These models are a source of information about the form of the rock-types, their composition and how they were formed.

It will also be necessary to utilize entirely new, pioneering exploration methods in order to find petroleum reserves in structures which are hidden in rock formations more difficult to find than has been the case with the structures discovered so far.

coast from Møre to Trøndelag and from Troms to Vest-Finnmark, one will be dealing with areas which are relatively unfamiliar from a geological point of view.

And in these cases it will be difficult to draw directly on the experience gained in drilling south of the 62nd parallel.

However, seismic surveys have been conducted in these areas since 1975. Thus, when exploration drilling begins, there will be geological models available, based on seismic surveys as well as comparisons with the geology in the North Sea and with the geology of the surrounding areas on land, such as Spitsbergen. Geological models are constantly being improved, with new information accumulated from drilling.

Offshore petroleum activity is a longrange affair. Exploration activity starts with seismic surveys being conducted over large tracts, which give the general structure of various geological layers. On the basis of this, particularly interesting areas are selected for more detailed seismic surveys. Finally, exploration drilling is begun on individual blocks.

Viewed in relation to the total development costs for a field, the cost of seismic surveys and exploration drilling are small. However, the decisions regarding exploration drilling often have to be made despite some uncertain factors. Therefore, one has to be prepared to conduct a number of drilling operations before any of these result in commercial finds. For example, in the Norwegian part of the North Sea south of the 62nd parallel, about thirty wells were drilled before the first commercial discovery was made.

The Norwegian continental shelf is located in one of the world's most hostile waters. In order to be able to develop an oil or a gas discovery in such an area and in order that it be commercial, current conditions require that it be very large and highly productive.

Many of the geologically interesting North Sea blocks not yet explored are located at waterdepths of over 200 meters. The element of greater water depth will heighten the requirements to field size and technological solutions for commercial development. North of the 62nd parallel this condition plays an even more significant role, because the water depths in many areas are greater. In the northern regions water depths average from 200 to 300 meters, as opposed to about 100 meters, which is the average depth in the North Sea farther south.

When drilling starts off the Norwegian Not only is exploration activity being moved to new geographic areas, it is also being conducted in layers farther down in the earth's crust. There are new challenges to be faced in this area, including greater drilling depths and greater pressure in the layers drilled. These conditions call for heavier and more expensive equipment, in the exploration phase as well as in the possible development and operational phases.

> Today, Statoil is operator on five blocks, all of which are in the exploration phase. Discoveries have been made on three of the blocks. The commerciality of the finds is currently being evaluated.

> Statoil has conducted its task as operator with technical assistance from international oil companies with years of experience in this type of activity. Statoil has drawn on these assisting companies, which have functioned as sources of know-how in questions where Statoil has required additional insight. Through its tasks as operator and through this sort of cooperation, Statoil has been in a position to rapidly build up a qualified staff and an efficient organizational apparatus ready to take on new operator tasks.

2. A couple of air guns are located in the foreground to the right, and these are used to generate energy during seismic surveys. Several air guns of this sort are towed behind the vessel. The buoys allow the air guns to be maintained at a specific depth. Air under high pressure is conducted into the guns. Then, a valve is opened, and the sound impulse is generated. In the background, the stabilizors or "fish" can be seen, and these can ensure a constant water depth for a cable which is also towed behind the ship. The cable has hydrophones for the purpose of gathering sound impulses or echoes from below.

3. Core samples are taken from the oil and gasbearing layers of the reservoir. The samples are carefully studied, and the test results give information on pore volume, type and distribution of liquid, and permeability of the rock. These results are essential for the planning of field development.

4. Statoil serves the state interests with petroleum rights on Spitsbergen, and exploration has been initiated there.

5. Core samples from the North Sea are carefully studied at onshore laboratories.



1. Offshore seismic surveys are conducted by releasing a strong sound impulse just below the surface of the water. The sound wave spreads through the layers in the upper part of the earth's crust. An echo of energy in the sound wave is generated at the border zone between the various layers. The echo bounces back up towards the surface of the water. At the surface, the echoes are registered by sensitive hydrophones. A great number of hydrophones are assembled in a 2400-meter-long cable. This is towed by the vessel which also tows the source of energy. Generally, the energy is created by air under high pressure, or less often by dynamite.

A = Energy source B = Streamer L = Ray path









Drilling on the Norwegian Continental Shelf in 1978

Exploration and delineation wells

Operator	Drilling rig	1st quarter	2nd quarter	3rd quarte	er 4th quarter
Blocks with Sta	toil interests				
STATOIL	ROSS RIG 1/	/9-4 24/12-1	15/9-2	34/10-1	34/10-2 15/9-3
STATOIL	DYVI BETA			1/9-3	1/9-5
STATOIL	TREASURE SEEKER			24/12-1	
NORSK HYDRO	TREASURE SEEKER	15/5-1	30/7-6	1	5/5-2 30/7-
АМОСО	DYVI BETA	2/11-3A	2/11-4		
BP	NORSKALD	2/1-2			
BP	SEDCO 707				30/4-1
ELF	PENTAGON 84	25/1-6			
MOBIL	FERNSTAR		33/9-10	33/9-11	
GULF	ODIN DRILL	- 1	3/5-1	3/5-2	
Other blocks:					
AMOCO	NORSKALD		2/5-6		2
ESSO	NORSKALD			25	5/11-6 25/11-7
PHILLIPS	DYVI BETA			÷. *	2/7 <mark>-12</mark>

Articles of Association

Art. 1 The corporate purpose of Statoil is either by itself, or in participation or cooperation with other companies, to carry out exploration, production, transportation, refining and marketing of petroleum and petroleum-derived products, as well as other activities reasonably related thereto.

Art. 2 The registered seat of the Company is in Stavanger.

Art. 3 The share capital of the Company is N.kr. 2 733 500 000 divided into 27 335 000 shares of N.kr. 100 each.

Art. 4 The Board of Directors shall be composed of seven Directors. Five of the directors, including Chairman and Vice-Chairman, are elected by the General Meeting. Two of the Directors are elected by and among the employees in accordance with regulations made under provisions of the Companies Act concerning the rights of employees to be represented on the Board of Directors and in the Company Assembly. Four alternate Directors shall be elected in respect of the two Directors elected by and among the employees, and these alternates shall be summoned in the order in which they are elected. Two alternate Directors shall be elected in respect of the other Directors, one first alternate and one second alternate. The normal term of office for the Directors is two years.

Art. 5 Any two Directors jointly may sign on behalf of the Company. The Board may grant power of procuration.

Art. 6 The Board shall appoint the Company's President and stipulate his salary.

Art. 7 Statoil shall have a Company Assembly consisting of 12 members. Members and alternates shall be elected for two years at a time. The General Meeting shall elect eight members and three alternate members for these eight. Four members and alternates for these four are to be elected by and among the employees of the Company in accordance with regulations made under provisions of the Companies Act concerning the rights of employees to be represented on the Board of Directors and in the Company Assembly.

The Company Assembly elects a chairman and a vice-chairman from among its members.

The Company Assembly shall hold at least two meetings annually.

Art. 8 The ordinary General Meeting shall be held each year before the end of June. General Meetings are held in Stavanger or in Oslo.

Extraordinary General Meetings shall be summoned whenever so demanded by the shareholder, the Board, or two members of the Company Assembly.

Art. 9 The ordinary General Meeting shall consider:

- a) The annual report, annual accounts and the auditor's report.
- b) The question of adopting the annual accounts.
- c) The appropriation of profit.
- d) The election of the Company's officers and alternate officers, and their remuneration.
- e) The election of the auditor and his remuneration.
- f) Any other matters that are specified in the agenda accompanying the notice of meeting or that are taken up pursuant to the Companies Act, Section 18-4, second paragraph.

Art. 10 The Board shall submit to the General Meeting, ordinary or extraordinary, all matters which are presumed to involve significant political questions or questions of principle and/or which may have important effects on the nation and its economy.

Such matters shall be deemed to include, inter alia:

- a) Plans for the next following year with economic surveys, including plans to cooperate with other companies.
- b) Essential changes of such plans as mentioned in a) above.
- c) Plans for future activities, including participation in activities of major importance in other companies or joint ventures in which the Company participates or plans to participate.
- d) Matters which seem to necessitate additional appropriation of Government funds.
- e) Plans for establishing new types of activity and localization of important elements of the Company operations.
- f) Plans to participate in the exploration for petroleum resourses in or outside Norway, including the exercise of state participation option rights.
- g) Semi-annual reports on the Company's activities, including activities of subsidiaries and important joint ventures with other companies.

Matters which the Board submits to the General Meeting pursuant to this Article and, if possible, matters which the Ministry has announced that it wishes to consider at such a General Meeting, shall, if possible, be presented in writing and delivered to the Ministry in good time prior to the General Meeting.

If there has been no opportunity to submit the above mentioned matters in advance to the General Meeting, the General Meeting shall promptly be notified of the Board's resolution.

Whenever possible, matters as mentioned in a) and g) above should be submitted to the Company Assembly for comments.

The General Meeting decides whether to take note of the Board's proposals under this Article, to approve them or to alter them.

Art. 11 The provisions of the Companies Act shall be supplementary to these Articles of Association.

Survey of Statoil interests in licenses allocated as of 1 Jan. 1979

Norwegian Continental Shelf

Production license and year allocated	Blocks	Operator	The S share type of agree	tatoil and of ment*	Maximal Statoil parti- cipation	Туре	Fields	Wells drilled in 1978
005 -1965	7/3	Union	10	1				
019A-1965	7/12	BP	12,5	1		Oil/gas		
019B-1977	2/1, 7/12	BP	50	1	72			2/1-2
020 -1965	16/8	BP	12,5	1				
022 -1965	2/3, 3/5	Gulf	11	1				3/5-1, 3/5-2
023 -1969	3/7	Elf	5	2				
024 -1969	25/1	Elf	5	4		Gas	Frigg	25/1-6
025 -1969	15/3	Elf	6	2				
026 -1969	25/2	Elf	5	2		Gas E	ast Frigg Southeast Frigg	
027 -1969	25/8	Esso	17.5	3				
028 -1969	25/10	Esso	17.5	3				
029 -1969	15/6	Esso	17.5	3		Gas/condens.	Sleipner	
030 -1969	30/10	Esso	17,5	3		Gas	Odin	
031 -1969	2/10	Phillips	17,5	2				
032 -1969	2/9	Amoco	10	3				
033 -1969	2/11	Amoco	10	3		Oil/gas	Valhall/Hod	2/11-3A, 2/11-4
036 -1971	25/4	Elf	40	4		Gas/condens.	Heimdal	
037 -1973	33/9, 33/12	Mobil	50	4		Oil/gas	Statfjord and Murchison	33/9-10, 33/9-11
038 -1974	6/3, 15/11, 15/12	Statoil	50	1	75			
039 -1974	24/9	Conoco	50	1	75			
040 -1974	29/9, 30/7	Norsk Hydro	50	1	66	Gas		30/7-6, 30/7-7
041 -1974	35/3	Saga	50	1	70			
042 -1974	36/1	Amoco	55	1	70			
043 -1976	29/6, 30/4	BP	50	1	75			30/4-1
044 -1976	1/9	Statoil	50	1	75	Gas/condens		1/9-3, 1/9-4, 1/9-5
045 -1976	24/11, 24/12	Statoil	50	5	75			24/12-1
046 -1976	15/8, 15/9	Statoil	50	1	75	Gas/condens	. Sleipner	15/9-2, 15/9-3
047 -1977	33/2, 33/5	Norsk Hydro	50	1	75			
048 -1977	15/2, 15/5	Norsk Hydro	50	1	75	Gas/condens		15/5-1, 15/5-2
049 -1977	33/6	Agip	50	1	70			
050 -1978	34/10	Statoil	85	6		Oil/gas		34/10-1, 34/10-2

Dutch Continental Shelf

L/16-B 1968	K/18, L/16	Cities Service	7,5	1	L/16-3
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* 1) - Carried interest 2) - Option for direct participation 3) - Net profit

4) - Option exercised
5) - Statoil covers 7,5 % of the exploration costs
6) - Statoil covers 77,5 % of the exploration costs

Norwegian Continental Shelf south of 62°N





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Administration

Arve Johnsen - President Henrik Ager-Hanssen - Executive Vice President Jacob Øxnevad - Senior Vice President Jan M. Wennesland - Senior Vice President

Martin Bekkeheien - Vice President, Organization Jan Erik Langangen - Vice President, Economy and Finance

Sverre Kristian Asserson - Manager, Procurement Jakob Bleie - Manager, Exploration Olav K. Christiansen - Manager, Prod. license 037, Statfjord Arne H. Halvorsen - Manager, Public Affairs and Information Christian Halvorsen - Manager, Administration Gunnar Haugen - Manager, Personnel and Organization Jon Huslid - Manager, Engineering Jose A. C. Kauffmann - Manager, Drilling and Production Kai Killerud - Manager, Safety and Quality Assurance Jacob S. Middelthon - Manager, Legal Affairs Erik Schanche - Manager, Marketing and Marine Transportation Helge Skinnemoen - Manager, Refining and Petrochemicals * Knut Åm - Manager, Technical Research and Development

* from 1 June 1979



The Board of Statoil, from left to right, Trond Bolstad, Thor Andreassen, Ottar Vollan, Chairman Finn Lied, Erling Haug, Einar H. Moxnes, and Vice-Chairman Ole Myrvoll.

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