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The United Kingdom's (UK's) philosophy, approach, and control over development of its North Sea oil and gas reserves was examined in order to gain pertinent information that could be useful to the United States for managing resources of the Outer Continental Shelf. Findings/Conclusions: The UK's decision to adopt a policy of rapid exploration and development was facilitated by the basic resolution of mineral rights ownership, oil price increases, and the ability to develop needed technology. The policies were implemented primarily through a system of licensing, establishment of a national oil company, and a system of taxation and royalty. The licensing system encouraged rapid exploration because the cost of licenses was low, two-thirds of the licensed area must be surrendered after 7 years, and the Government stressed intensive work programs. The British National Oil Corporation, created on January 1, 1976, provides the Government with a secure source of oil and gas because it is a 51% partner in all licenses. The tax and royalty system encourages development by allowing companies to recover capital costs early in the production life of oil fields. Major features include a petroleum revenue tax, a corporation tax, and a 12.5% royalty. (H1K)

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REPORT TO THE CONGRESS

*BY THE COMPTROLLER GENERAL
OF THE UNITED STATES*

The United Kingdom's Development Of Its North Sea Oil And Gas Reserves

Departments of State and the Interior

During the past decade the United Kingdom began to develop its oil and gas reserves in the North Sea. The British chose to rapidly exploit these energy resources and gained considerable knowledge, improved technology, and experience in doing so.

This report contains information on what the United Kingdom has done and how it could assist the Congress and the executive branch in establishing a philosophy, policy, and approach for the United States to meet its increasing energy demands in a safe and environmentally acceptable way.



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-118678

To the President of the Senate and the
Speaker of the House of Representatives

This report describes the United Kingdom's philosophy, approach, and control over development of its oil and gas reserves.

In view of the recognized importance of energy supply and availability, we believe that pertinent information on the experiences and results of North Sea oil and gas development could be useful to the Congress and officials of the executive branch responsible for managing the oil and natural gas resources of the Outer Continental Shelf.

We made our review pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

We are sending copies of this report to the Secretaries of State and the Interior and the Director, Office of Management and Budget.

A handwritten signature in black ink, reading "James A. Starks".

Comptroller General
of the United States

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

THE UNITED KINGDOM'S DEVELOPMENT
OF ITS NORTH SEA OIL AND GAS
RESERVES
Departments of State and the
Interior

D I G E S T

This report examines the United Kingdom's development of its North Sea oil and gas reserves as an information base for considering pending legislation amending the Outer Continental Shelf Lands Act.

Oil and gas development in the U.S. Outer Continental Shelf is of particular concern in light of the rising American dependence on foreign energy sources. In May 1977, the President urged expeditious passage of amendments to the Outer Continental Shelf Lands Act. He also directed the Secretary of the Interior to assess the size and scheduling of Outer Continental Shelf development in close consultation with governors of affected coastal States.

Presentation of the United Kingdom's development of its North Sea oil and gas resources is not intended to be a comprehensive assessment of the appropriateness of its approach for the United States' development of its Outer Continental Shelf resources. Moreover, GAO did not assess the success of United Kingdom development nor the extent of the Government's role in the results. Nevertheless, the British experience does provide a base for the U.S. Government to examine more closely aspects of United Kingdom exploitation which may apply to U.S. development.

POLICIES AND CONDITIONS AFFECTING
THE UNITED KINGDOM'S NORTH
SEA DEVELOPMENT

Worldwide recession, severe imbalance of payments (due in large part to oil imports), and related problems combined to

place the United Kingdom in perhaps the worst economic situation of any of the larger Western European countries. Britain needed to locate and develop secure, and hopefully economic, energy sources. It adopted a policy of rapid exploration and development of oil reserves in the North Sea. (See p. 6.)

This was facilitated by:

--Basic resolution of territorial ownership of mineral rights between North Sea coastal countries following the 1958 Geneva Continental Shelf Convention.

--The oil price increase of 1973 by the Organization of Petroleum Exporting Countries.

--The ability to develop the technology needed to operate in the hostile environment of the North Sea. (See p. 7.)

GOVERNMENT CONTROL AND RESPONSIBILITY

The pace and extent of the United Kingdom's search for oil and gas is strongly influenced by its Government's policies of rapid development and control. These policies were implemented primarily through a system of licensing, establishment of a national oil company, and a system of taxation and royalty. Although it appears that the oil industry would prefer not having a national oil company, the industry has accepted this situation. (See pp. 11 and 15.)

United Kingdom Licensing System

Determining who receives permission to explore and develop North Sea energy resources is a matter of discretion on the part of the United Kingdom Government. Licenses are not awarded on the basis of competitive bidding. The United Kingdom encourages rapid exploration and development because

- the cost of licenses is low,
- two-thirds of the licensed area must be surrendered after 7 years, and
- the Government stresses intensive work programs in its licensee selection process.

Government powers to control production levels are stated in every license and each licensee must agree to provide United Kingdom industry a "full and fair opportunity" in competing for oil-related goods and services. (See p. 11.)

The British National Oil Corporation was created on January 1, 1976. The corporation provides the Government with a secure source of North Sea oil and gas because it is a 51-percent partner in all licenses. Powers of the corporation include the right to

- explore for and get petroleum anywhere in the world;
- transport, refine, store, distribute, buy, and sell petroleum; and
- build, hire, or operate refineries, pipelines, and tankers. (See p. 14.)

Taxation and royalty

The tax and royalty system encourages development by allowing companies to recover their capital costs early in the production life of oil fields. As a result tax and royalty receipts through 1976 were negligible. When fields mature and initial allowances against cost are used up, it is expected that the Government income will amount to something over 70 percent of the oil companies' net revenue. (See p. 16.)

Major features of the tax and royalty system include a petroleum revenue tax, a corporation tax, and a 12.5-percent royalty. Also

included are tax incentives for developing marginal fields and provisions that prohibit losses and allowances for activities outside the North Sea to be used to reduce a company's tax liability for activities there. Control over the revenues is maintained through a national oil account. (See p. 16.)

Dealing with oil spills

Government emphasis is placed on minimizing the risks of oil spills and being prepared to protect sea and coasts from damage. The Government recognizes that despite all precautions, spills will occur when exploiting energy resources below the North Sea. (See p. 17.)

A system for reporting oil spills has been implemented and contingency cleanup plans have been established by government and industry. Much responsibility for cleanup action rests with local communities. Except in very calm waters and ecologically sensitive areas, the most effective way to treat oil spills around the United Kingdom is considered to be dispersant spraying. Dispersants are limited to those that have passed a toxicity test. Several voluntary agreements have been drawn up by tanker owners, oil companies, and offshore operators to recover cleanup costs and damage from oil pollution. (See p. 19.)

SPIRIT OF COOPERATION IN DEVELOPMENT OF NORTH SEA OIL RESERVES

Development of the United Kingdom sector of the North Sea has been marked by a spirit of cooperation among government, communities, the oil industry, and private interest groups. Government and oil industry officials said that there has been frequent and constructive interaction. In particular, when important legislation was being considered, oil company views were solicited and considered. (See p. 26.)

Land use planning in the United Kingdom has allowed local communities to take an early, active role and produced mutually acceptable agreements among communities, Government, oil companies, and private interest groups. The persons interviewed pointed to the construction of a large oil terminal and pipeline as examples where cooperation facilitated development. (See p. 26.)

Agreement among the United Kingdom and the fishing and oil industries facilitated the creation of the Fisheries and Offshore Oil Consultive Group--a body which resolves problems of mutual concern between the oil and fishing industries. One problem resolved by the group provides for claims settlement resulting from damage to fishing gear caused by debris from oil production platforms. (See p. 31.)

C o n t e n t s

		<u>Page</u>
DIGEST		i
CHAPTER		
1	INTRODUCTION	1
	Scope	3
	National boundaries of the North Sea	5
2	PHILOSOPHY AND CONDITIONS RELATIVE TO UNITED KINGDOM DEVELOPMENT OF NORTH SEA OIL	6
	Philosophies	6
	Factors relevant to development	7
	Impact of North Sea oil on world supply	9
	Benefit to the economy	9
3	GOVERNMENT CONTROL AND RESPONSIBILITY	11
	Licensing	11
	Majority state participation	14
	Changes proposed in U.S. leasing	16
	Taxation	16
	Prevention of and preparation for off- shore accidental oil pollution	17
	Assessment of U.K. preparedness	24
	Industry's oil spill record	24
4	SPIRIT OF COOPERATION IN DEVELOPMENT OF NORTH SEA OIL RESERVES	26
	Central Government and oil industry cooperation	26
	Cooperation between Central Government and local communities: land-use planning and development	26
	Cooperation between local government, the oil industry, and private in- terests	29
	Special interest groups and the oil industry: fisheries and offshore oil consultative groups	31
APPENDIX		
I	Bibliography	32
II	Legislation governing offshore operations in the United Kingdom	33

APPENDIX

III	One oil company's estimate of United Kingdom self-sufficiency and net exports from North Sea oil	39
IV	Criteria and conditions for obtaining United Kingdom offshore production licenses	41
V	Memorandum of understanding and code of practice between the U.K. Government and oil companies giving U.K. industry full and fair opportunity to compete for oil-related goods and services	48

ABBREVIATIONS

BNOG	British National Oil Corporation
GAO	General Accounting Office
OCS	Outer Continental Shelf
PRT	Petroleum Revenue Tax
U.K.	United Kingdom

CHAPTER 1

INTRODUCTION

President Carter, in a message to the Congress on May 23, 1977, said that the United States should "satisfy our energy needs from existing sources, both fossil and nuclear, in a safe and environmentally acceptable way." Regarding Outer Continental Shelf (OCS) leasing, the President asked the Congress for expeditious passage of proposed amendments to the OCS Lands Act and said he particularly favored provisions of the bill which would

- permit full evaluation of the effects of oil production, and cancel leases or terminate operations when harm or damage to the environment outweighs the advantage of continued operations;
- improve consultation with States and communities to assure that they have a real role in decisions which affect them; and
- require that the best available economically achievable safety and pollution control technology in OCS operations are used.

President Carter said he has directed the Secretary of Interior to assess the size and scheduling of the long-term OCS program in close consultation with governors of affected coastal States. In addition, the President directed the Secretary of Interior among other things to

- establish an OCS information clearinghouse to receive inquiries about Federal OCS activity;
- facilitate cooperative planning among industry, the Department of the Interior, the Department of Transportation, and the States for lease development, pipeline locations, pipeline standards, and onshore facilities; and
- study the prospect of reorganizing the Interior Department's management of OCS resources.

The Senate Committee on Energy and Natural Resources and the House Ad Hoc Select Committee on the Outer Continental Shelf have considered amendments to the Outer Continental Shelf Lands Act (43 U.S.C.-1331 et seq.) to establish policies and procedures for managing OCS oil and natural gas resources.

The Senate bill was passed on July 15, 1977, while the House has not completed action on H.R. 1614. The Congress returns from its summer recess in September.

Some noteworthy findings of the Senate Committee report of June 1977 included:

- The demand for energy in the United States is increasing and will continue to increase in the foreseeable future.
- Technology is or can be made available to allow significantly increased domestic production of oil and gas without undue damage to the environment.
- OCS contains significant quantities of petroleum and natural gas and is a vital national resource which must be carefully managed so as to realize fair value, to preserve and maintain competition, and to reflect the public interest.
- Environmental and safety regulations relating to activities on the OCS should be reviewed in light of current technology and information.
- Funds must be made available to pay for prompt removal of oil spills and for damages to public or private interests including commercial fishing vessels and gear.
- The Federal Government must assume responsibility for minimizing or eliminating any conflict, including those among the oil, fishing, recreational, and public interests.

This report examines the United Kingdom's (U.K.'s) development of its North Sea oil and gas reserves. It focuses on the U.K. control of and philosophy and approach to development of its oil and gas reserves to identify ways that the United States might benefit from U.K.'s experience. In view of the recognized importance of energy supply and availability, we believe that pertinent information on the experiences and results of North Sea oil and gas development could be useful to U.S. officials involved in energy matters. We had also planned to include Norway's philosophy, approach, and experience in the North Sea, but because of a major blowout in one of their offshore fields the U.S. Embassy asked us to delete that portion of this study.

We recognize that no subject as complex as OCS development can be adequately covered by a report such as this. Moreover, presentation of the salient features of the U.K. approach to exploitation of its North Sea resources is not

intended to be a comprehensive assessment of the appropriateness or applicability to comparable exploitation of U.S. OCS resources. We did not assess the success of U.K. development or the extent of that Government's role in the results obtained. Nevertheless, we believe that the features covered in this report provide a base for the Congress and the executive branch to examine more closely those aspects of U.K. exploitation which may apply to U.S. development, especially in view of the pending legislation amending the Outer Continental Shelf Lands Act.

Although the report describes a current favorable climate for developing North Sea resources, it should be noted that many difficulties were encountered during the early years. High development costs were experienced due to inflation, sterling devaluation, supply and equipment shortages, and delays due to technical difficulties. Also, oil companies were faced with uncertainties from an ever-changing Government policy. These problems were eventually overcome, according to oil company spokesmen, because of the cooperative attitude of the U.K. Government. As a result of this attitude, most officials we interviewed indicated that present arrangements are generally satisfactory.

SCOPE

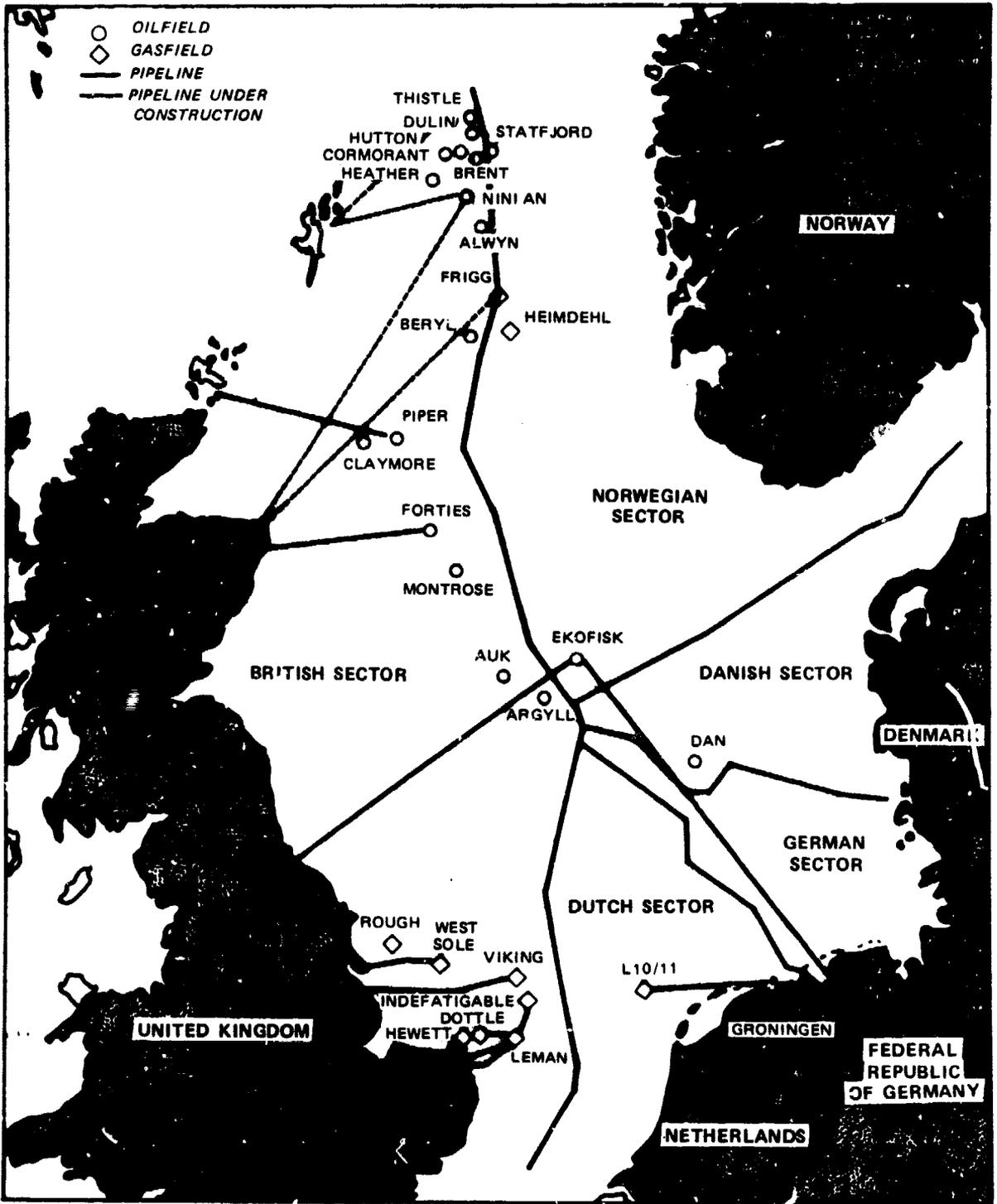
We focused on the U.K.'s experience in developing its sector of the North Sea as it has the largest, and potentially most productive sector. Also, as a result of its philosophy to accelerate exploration and development, the U.K. has issued exploration and production licenses for over 65 percent of its sector.

As there are philosophies for North Sea development that differ from the U.K., we gathered limited information on Norway's approach. Norway has potentially the second largest quantity of energy reserves in the North Sea but has leased only 35 percent of its sector.

There have been many reports published on the various aspects of the development and impact of the North Sea--we made extensive use of these reports. (See app. I.) We performed fieldwork in the United Kingdom, including England, Scotland, and Shetland Islands, during a 4-week period. We interviewed officials from the U.S. Embassy, the U.K. Government, local governing bodies, and U.S. and U.K. oil companies. We examined the policies, laws (see app. II), and roles of the Central and local governments in the North Sea development.

Informal comments on our draft report by officials of the Departments of State and Interior were considered in finalizing this report.

NATIONAL BOUNDARIES OF THE NORTH SEA



CHAPTER 2
PHILOSOPHY AND CONDITIONS RELATIVE
TO UNITED KINGDOM DEVELOPMENT
OF NORTH SEA OIL

The United Kingdom attempted rapid exploration and development of its sector of the North Sea to bolster its sagging economy. In contrast, Norway, with a strong economy, has adopted a more cautious approach.

The United Kingdom's efforts to rapidly exploit North Sea oil was facilitated by: (1) basic resolution of territorial ownership of mineral rights between North Sea coastal countries following the 1958 Geneva Continental Shelf Convention, (2) the 1973 Organization of Petroleum Exporting Countries' oil price increase (North Sea oil is expensive to produce), and (3) the ability to develop the technology needed to operate in the hostile environment of the North Sea.

It has been estimated that the United Kingdom will be a net exporter of oil through the 1980s. One estimate shows that all sectors of the North Sea hold about 2 percent of the free world's known reserves.

PHILOSOPHIES

Worldwide recession, severe external payments pressures, and deep-seated structural problems combined to place the U.K. in perhaps the worst economic situation of any major Western European country. Therefore, it was desirable to locate and develop a secure and, hopefully, cheap source of fuel from indigenous sources, which would benefit the balance of payments.

Discovery of the North Sea reserves in the U.K. sector came when the United Kingdom's economy was being severely strained by its reliance on foreign oil. In 1970, the U.K. imported 100 million tons of oil with a net deficit effect on its balance of trade of over \$1.2 billion. As a result of North Sea reserves, the U.K. is expected to become self-sufficient in oil by 1980 and, later in the decade, be a net exporter of oil with a resulting positive effect on its balance of trade. The quick realization of this potential has been the basic aim of the U.K.'s approach to the development of the North Sea.

Self-sufficiency depends on the potential reserves of the North Sea and the speed in which they are used. Estimates vary as to the projected proven and probable reserves of oil in the U.K. sector; the U.K. Government estimates between 22 to 33 billion barrels. One oil company anticipates (based on a projection of 25 billion barrels of oil reserves) a period of self-sufficiency and net exports through the 1980s. (See app. III.) Even if the United Kingdom prohibits oil export the period of self-sufficiency would increase only an additional 2 years. By 1991, then, the U.K. could again have to import oil to meet its needs.

The United Kingdom Government has apparently recognized the need for proper planning and use of North Sea oil benefits, as summarized in its 1977 forecast of North Sea development:

"This potential benefit must not be frittered away, and we need to run substantial current account surpluses in order to repay overseas debts and create conditions favorable to investment which will strengthen the economy. There is also a case for using some part of the benefit for the development of alternative energy sources."

The Norwegian approach to the development of its sector of the North Sea has been characterized as a "cautious-go-slow" policy. It now imports little oil and, in fact, is already a net exporter. By 1980, it is projected that Norway will produce about 1.1 million barrels a day with a consumption rate of significantly less (according to one estimate, less than 300,000 barrels a day). The concern of Norway is that oil revenue could "overheat" the Norwegian economy, which already provides one of the highest standards of living in the world.

FACTORS RELEVANT TO DEVELOPMENT

Serious petroleum exploration of the North Sea began shortly after a giant onshore gasfield was discovered in 1959 at Gronigan, the Netherlands. The desire to explore the waters of the southern area of the North Sea (where it was thought there were additional substantial reserves of gas) had to wait, however, for establishing legal territorial ownership of the waters. Resolution was facilitated by the 1958 Geneva Continental Shelf Convention. The Convention had the effect of extending the sovereign rights of the North Sea coastal countries to include the exploration and

exploitation of the natural resources of the seabed on the Continental Shelf. Boundaries were to be negotiated by any set of principles. However, the Convention stipulated that when mutual agreements between countries could not be reached, in the absence of special circumstances, boundary lines would be determined by the principle of equidistance (measuring the width of the North Sea at the widest point between two countries and giving half of the area to each country).

The line demarcating the U.K. sector of the North Sea was established by five separate agreements with each of the coastal countries.

A similar boundary question is relevant to the United States, which is working on questions on the extension of coastal states' boundaries to the Outer Continental Shelf and the resulting ownership of seabed rights.

Hostile environmental conditions hamper North Sea exploration and development operations. Pipelaying operations, resupply of drilling rigs and platforms, and rig and platform towing can be delayed for days because of inclement weather. The "weather window," a term used by industry, is that period of time which enables resupply, pipelaying, and towing operations to continue. One study of weather conditions during a 180-day period in the winter showed that the weather was unsuitable for resupply of platforms about 76 percent of the time. According to oil company representatives, weather, being an uncontrollable variable, can play havoc with production schedules.

The cost of investment has been high--for instance, according to one oil company, the cost to build, outfit, and place into operation one production platform can be between \$800 million and \$1 billion. As of April 1977 there were 14 oil production platforms installed in the U.K. sector of the North Sea. Six more are under construction.

The cost to produce North Sea oil as compared to oil produced by the Organization of Petroleum Exporting Countries requires that the selling price of oil remain high. As an example, production costs for North Sea oil is approximately 25 times greater than Middle East oil and 2.8 times greater than oil produced in the Gulf of Mexico. While a significant reduction in Middle East oil prices could render the North Sea oil fields unprofitable, many persons interviewed consider it unlikely that such a reduction in price will ever take place. One oil company representative said he believes North Sea oil will not be large enough to stimulate such action.

The Organization of Petroleum Exporting Countries' oil embargo of 1973 eventually caused the quadrupling of the per-barrel oil price--from \$3 to \$12 (in 1974 the United Kingdom paid \$4.2 billion more for 2-percent less oil than it imported in 1973). This factor, among others, enabled extensive offshore exploration and development of the North Sea's energy resources to become a more commercially attractive venture.

The technology needed for exploration and development of North Sea energy resources has been an important factor. Although the technology has advanced rapidly, there have been problems which affect production schedules that cost oil companies a considerable amount of capital. Initially, platform design was based on those used in the United States' Gulf of Mexico. There rigs experience relatively mild weather, and operate in water depths of about 200 feet. Because of the severe weather conditions in the North Sea, platforms now are constructed to withstand waves up to 106 feet high and winds approaching 130 miles per hour. The technological capability now exists for operating in water depths and weather conditions worse than expected to be encountered off the U.S. Atlantic Coast. Oil company officials stated that the experience gained in dealing with environmental conditions, cost increases, and technical problems are the significant lessons learned from the North Sea.

IMPACT OF NORTH SEA OIL ON WORLD SUPPLY

In terms of free world supply, North Sea oil projections of around 40 billion barrels of proven and probable reserves of oil rank it, according to one source, 10th in the free world, with about 2 percent of known reserves. The people interviewed (in both Government and the private sector) agree that the North Sea's worldwide impact on supply and price will be marginal, at best. Impact of the oil will be greatest in Western Europe, where, according to a State Department analysis, North Sea oil and gas in the aggregate are expected to reduce Western Europe's dependence on oil imports in the 1980-85 period from nearly 60 percent to about 40 percent of its total energy needs.

BENEFIT TO THE ECONOMY

Britain's economy should be bolstered by the increasing volume of oil and gas production. By the end of 1976, North Sea wells were producing over half a million barrels of oil a day. The U.K. Department of Energy predicts that by the end

of 1977 oil production should be equal to half or more of U.K. consumption and estimates that the nation will be self-sufficient by 1980.

Oil production is already having a favorable effect on the U.K.'s financial situation. In the past year, the U.K. realized substantial economic benefits from oil worth about \$1.2 billion in terms of balance of payments and another \$77 million in royalties (if gas was also to be valued at the cost of imported energy it replaced, the total balance of payments savings would be around \$5.3 billion).

The U.K. Department of Energy, in its April 1977 report to Parliament, claimed an increase in employment directly or indirectly related to offshore work of at least 100,000 jobs. The total includes an increase of 50 percent in the offshore labor force of about 10,000 plus several thousand more on pipe-laying, crane barges, and supply boats.

CHAPTER 3

GOVERNMENT CONTROL AND

RESPONSIBILITY

The pace and extent of the U.K.'s search for oil and gas is strongly influenced by Government policies of rapid development and control. The policies were primarily implemented through a system of licensing, establishing a national oil company, and a system of taxation and royalty.

Licensing in the U.K. encourages rapid exploration and development because (1) the cost of licenses is low, (2) two-thirds of the licensed area must be surrendered after 7 years, and (3) the Government stresses intensive work programs in its licensee selection process. Government powers to control production levels are stated in every license.

On January 1, 1976, the British National Oil Corporation was created. The Corporation provides the Government with a secure source of North Sea oil and gas because the Government is a 51-percent partner in all licenses.

The U.K.'s taxation and royalty system preserves a share of profit for the nation approaching 70 percent of oil company net revenues. The system is designed to encourage development by allowing companies to recover their capital costs early in the production life of oil fields. In addition, it provides incentives for the development of marginal fields. Control over the revenues is maintained through a National Oil Account.

In terms of oil pollution, Government emphasis is placed on minimizing the risks of such occurrences and being prepared to protect the seas and coasts from damage. A reporting system for oil spills has been implemented, and contingency plans for cleanup have been established by Government and industry.

LICENSING

Two kinds of licenses are issued: exploration licenses and production licenses. The former is a nonexclusive license that entitles the holder, along with others, to conduct geological and geophysical surveys. A production license is exclusive and authorizes postexploration searching for, and drilling and removal of, petroleum.

Quick exploitation was the main driving force for designing the United Kingdom's licensing system. It is said that the U.K. method for allocating production licenses encourages rapid exploration because:

- Intensive work programs which meet the Secretary of State for Energy's approval are required as a condition for receiving a license.
- Each licensee is required to surrender two-thirds of his area after 7 years.
- The initial cost and annual rents of licenses (both exploration and production) are small, thereby placing minimal strain on the working capital of oil companies and enabling them to finance rapid exploration.

Determining who does and does not receive a license is a matter of discretion on the part of the U.K. Secretary of State for Energy--licenses are not awarded on the basis of competitive bidding and, therefore, the Government has control over who will develop the North Sea. Specific criteria is used by the Department of Energy to evaluate license applications. (See app. IV.) One of the most important of these criteria is the requirement that prospective licensees submit an "appropriate" work plan. The work program must specify

- the relevant work which the licensee proposes to carry out;
- the proposed locations of the work, the purposes for which it is proposed, and the times at which it is to begin and end; and
- the maximum and minimum quantities of petroleum the licensee proposes to produce in each calendar year.

An "appropriate" work program is defined as one in which any applicant (1) exploits the rights granted by a license, (2) has the competence and resources needed to exploit these rights, (3) is exploiting these rights to the best commercial advantage, and (4) can reasonably be expected to carry out the work during the term of the license.

After 7 years, the licensee must surrender at least two-thirds of the licensed area to the Government. It is claimed that such a policy encourages the licensee to actively develop his total area so as not to lose potentially large amounts of revenue.

Licenses are inexpensive. For instance, a production license currently requires an initial fee of \$1,710. Subsequent fees amount to \$13.68 per square kilometer for the first 4 years, \$205.20 per square kilometer the next 3 years, \$342 per square kilometer the 8th year, and increasing \$342 per square kilometer each year thereafter, not to exceed \$1,130 per square kilometer. In addition, a royalty fee of 12.5 percent on the value of petroleum is assessed.

Some experts argue that the speed in developing the North Sea was at the expense of some short-term loss to the United Kingdom treasury, as a competitive system of awarding licenses would almost certainly have produced higher annual rental fees. Others say that, in the long run, revenues from the U.K. licensing system tend to equal those revenues generated by competitive bidding.

In addition, some experts argue that U.K. licensing is not the only way to assure quick exploration. In particular, these people say that there is no reason to believe that an auctioning system would prohibit rapid exploration. Indeed, auctioning might lead to faster exploitation because, having invested capital in buying a license, the licensee might wish to obtain a return on that capital as quickly as possible.

Another criteria used to evaluate license applications is the applicant's past performance, and agreement that U.K. industry be provided a full and fair opportunity to compete for oil-related goods and services. When the applicant does not already hold a license, he must agree that industry will be given this opportunity. A company's performance is monitored by the Government. It is hoped that U.K. industry will acquire a larger share of the North Sea market and gain sufficient expertise to compete worldwide in oil development. Government emphasis on helping U.K. industry has resulted in U.K. companies securing 52 percent of North Sea contracts in 1975 (worth \$1.07 billion). According to a U.K. Government official, the "full and fair" concept is not the same as the U.S. policy of "buy American." He said that oil companies do have the final say as to whom they buy from. The "full and fair" concept was achieved through a memorandum of understanding and code of practice endorsed by oil company representatives. (See app. V.)

Government powers to control future rates of oil depletion are stated in every production license. Therefore, should the need arise, the British Government does have the control to regulate production. In fact, production levels must be approved by the Department of Energy prior to extracting oil or gas.

More recently, the U.K. Department of Energy moved to tighten controls on gas-flaring in North Sea oil fields. The Government energy unit advised one company that gas reinjection equipment must be installed in a specific field before production will be permitted to resume. The Department of Energy emphasized that an effort must be made to conserve gas. Further, the Department of Energy announced that, in the future, companies coming in with development plans for North Sea oilfields must have reinjection plans.

Most oil company representatives spoke favorably of the U.K. licensing system and cited two major reasons why they felt this way:

- Licensing gives smaller companies the opportunity to participate (under competitive bidding, the smaller companies usually get out-bid).
- Inexpensive licenses allow oil companies to invest in exploration and development.

However, one U.K. financial analyst interviewed said the U.K. licensing system has resulted in several smaller companies not being able to fulfill their work plan, thereby requiring that the interest be sold to another investor.

MAJORITY STATE PARTICIPATION

To exercise more effective control over North Sea energy resources, the Petroleum and Submarine Pipelines Act, 1975, was enacted. Highlighting the act was the creation of the British National Oil Corporation (BNOC), through which the U.K. Government is guaranteed a majority participatory share in all North Sea oil and gas fields. BNOC has been given the power to

- explore for and get petroleum in any part of the world;
- transport and refine petroleum;
- store, distribute, buy, and sell petroleum and any products derived from it;
- take over the Government's participation interest in U.K. licenses;
- carry out consultancy, research, and training in petroleum matters; and

--build, hire, or operate refineries, pipelines, and tankers.

The Secretary of State for Energy (who has responsibility for the U.K.'s Department of Energy) has overall responsibility for BNOC operations. He may give BNOC directions, request it to perform duties of a financial nature, and provide loans to the corporation. In addition, certain BNOC activities can be carried out only with the consent of the Secretary of State (i.e., exploration and production abroad, refining, and trading petroleum, setting up or acquiring subsidiaries, and giving loans). BNOC is required to notify the Secretary of State before it begins any new activity or a substantial expansion of an existing activity.

BNOC, if it so chooses, became a 51-percent partner in all licenses awarded after August 1976, and oil companies had to accept this condition if they wanted a license after that date. For those oil companies having licenses prior to August 1976 an agreement was sought on existing fields to give BNOC the right to purchase 51 percent of the oil and gas at fair market prices. Seeking such an agreement was a condition for fifth-round licensing. We noted one instance where no agreement was reached and, in turn, the oil company was not awarded a license. U.K. Government officials said that BNOC's 51-percent ownership provides the Government with 51 percent of the oil and gas produced. Appendix IV describes criteria and conditions for obtaining U.K. offshore production licenses.

BNOC has become a sole operator of some small North Sea oil fields and has an operational interest in others. BNOC, therefore, is in a position to respond, react, and offer constructive opinions on Government regulations as they affect operators. Technical expertise is also being achieved which is hoped will enable BNOC to explore and develop other areas of the Outer Continental Shelf, particularly marginal fields.

Finally, BNOC, as an extension of the Government and a commercial force, does provide feedback about events in the North Sea. Government officials stated that the access and abundance of needed information is enhanced through BNOC.

Although it appears that oil companies would prefer not having BNOC, it is a situation they have to live with. Most corporate officials interviewed said that cooperation has been good between oil companies and BNOC. There is some concern that the confidentiality of corporate data shared with BNOC may not be maintained.

CHANGES PROPOSED IN U.S. LEASING

One U.S. Government leasing and management goal is receiving a fair market value for leased resources. The Secretary of the Interior, under changes proposed in the Outer Continental Shelf Lands Act Amendments of 1977, would be able to use alternative bidding and leasing systems not specifically enumerated. Annually, the Secretary would be required to evaluate and report on the bidding system to include an evaluation and description of any additional measures to encourage the entry of new competitors.

Another proposal calls for leasees to submit a work plan to the Secretary of the Interior for approval. Such a requirement is quite similar to the U.K. work program approach. Terms of leases would cover an initial 5-year period but not exceed 10 years, and would require that leasees produce oil and gas at prescribed rates. Also, the Secretary of the Interior would have access to all data obtained from activities in exploration, development, or production of oil or gas.

TAXATION

The U.K. tax and royalty system objectives for the North Sea are to (1) secure a fair share of profits for the nation and maximize the gain to the balance of payments, and (2) assert control over oil company revenues. It is also designed to encourage development by allowing companies to recover their capital costs early in the productive life of oil fields. The effect of the system is that tax and royalty receipts through 1976 were negligible (\$75.6 million). However, total revenue from oil and gas production through 1980 is expected to be \$9.4 billion at 1976 prices. In the early 1980s, as fields mature and initial allowances against cost are used up, revenues are expected to amount to \$7.3 billion per year. It is expected that during the 1980s the combined Government income from the tax and royalty system will amount to something over 70 percent of the oil companies' net revenues.

Government income from the offshore oil fields is made up of:

--A royalty at 12.5 percent of the well-head value of the oil.

--A petroleum revenue tax (PRT) at 45 percent of receipts from oil sales less current and capital expenses and royalty.

--A corporation tax (currently 52 percent) on net revenue after deduction of royalty, PRT, and expenses (provisions prevent the tax from being eroded by losses and allowances outside the North Sea).

The tax system also provides incentives to develop marginal fields by (1) increasing capital expenditure deductions by 75 percent against the PRT, (2) allowing 1 million tons of oil a year per field (not to exceed 10 million tons) free of PRT, (3) canceling PRT if its application reduces annual profits to below 30 percent of capital expenditure, and (4) refunding royalties in whole or in part.

Control over the enormous revenues generated by the North Sea oil fields is accomplished through the National Oil Account. All royalties, rentals, and license fees are paid into the account, including those revenues generated by BNOB. In addition, all BNOB expenditures are met out of this account. The account is under the control and management of the Secretary of State for Energy.

PREVENTION OF AND PREPARATION FOR OFFSHORE ACCIDENTAL OIL POLLUTION

Current U.K. arrangements for preventing and dealing with oil pollution resulted primarily from a large tanker spill in 1967 that polluted beaches in the U.K. and France. For this emergency the U.K. was without a detailed plan or an organization capable of responding to a large pollution disaster. Emphasis is now placed on minimizing the risks of environmental pollution and being prepared to protect the seas and coasts from damage. The Government realizes that despite all precautions spills will occur when exploiting energy resources below the North Sea.

Preventive measures

Oil companies are required to take all steps practicable to prevent the escape of petroleum into any waters in or in the vicinity of the licensed area. All apparatus, appliances, and wells are required to be in good repair. Operations are to be conducted in a " * * * proper and workmanlike manner in accordance with methods and practice customarily used in good oil field practice." (Some discharges of water that contain small amounts of oil obtained during oil production

and processing are permitted. Companies are normally required to maintain the oil content of any discharge below an average of 40 to 50 parts per million and below 100 parts per million 96 percent of the time.)

Every offshore installation operating on the U.K. Continental Shelf is required to have a valid certificate of fitness issued by a certifying authority appointed by the Secretary of State for Energy. A certificate of fitness means that the offshore structure should be capable of withstanding the environmental conditions to be experienced and any other forces that the structure will be subjected to. The materials to be used and the construction to be carried out must be in accordance with drawings and specifications approved by the certifying authority. A certificate of fitness may be valid up to 5 years, during which time annual surveys are made to assure that the installation is maintaining satisfactory standards.

Offshore installations have to be clearly identified and lighted and their positions marked on mariners' charts. As a further precaution, safety zones of a 500-meter radius are prescribed around fixed platforms, into which vessels may not enter without permission.

The Secretary of State for Energy has the power to control the standards for pipelines and safety features. During construction, pipeline welds are examined by X-ray or gamma ray processes and defects are repaired. Before operation each pipeline is subjected to a pressure test which produces stress in the pipe material equal to 125 percent of the expected working pressure. Pipelines laid in water are required to be buried wherever practicable to reduce the risk of vessels anchoring or trawling across them.

Single point moorings are used to load oil into tankers either near the production platform or in an oil terminal harbor area. The flow of oil is controlled by pumps at the platform or terminal and is monitored at the tanker. There are automatic shutdown devices to minimize any spillage which may occur from breakage or leakage of connections.

Pollution could result from acts of sabotage to offshore installations. Government protection measures include plans to provide five offshore patrol vessels and four aircraft. As of April 1977 two of the vessels were operational. All vessels are expected to be in service by early 1978. Since January 1, 1977, a long range maritime patrol force has

provided surveillance effort equivalent to that of four aircraft.

Preparation for dealing with oil spills

Responsibility for dealing with oil pollution at sea rests with the U.K. Department of Trade. Although not bound to do so, local authorities have accepted responsibility for clearing oil from beaches, banks of estuaries, and up to one mile from shore. Oil pollution in docks and harbors is normally dealt with by the dock and harbor authorities concerned.

Contingency planning

Contingency plans have been developed at all levels, including oil companies. The Department of Trade's plans are essentially regional and based on the principle that responsibility is firmly placed on one official--the Principal Marine Officer (a Department of Trade official) of each of the nine regions covering the U.K. coastline.

A typical contingency plan from the Principal Marine Officer describes the communications network for reporting oil spills and arrangements for obtaining accurate local weather forecasts from which the likely movement of slicks may be predicted. It also provides a directory of contacts whose services, knowledge, or resources (e.g., boats) might be called upon in an emergency. In addition, it indicates the extent and location of stocks of dispersants and spraying equipment and the means of communication (telephone, telex, radio) by which contact could be maintained among those involved. Finally, the plan defines particularly sensitive lengths of coast and sea areas.

As mentioned above, when oil spilled at sea approaches the coast, responsibility for dealing with it shifts from the Department of Trade to local coastal authorities. Contingency plans prepared by local authorities are similar to the plans of Principal Marine Officers in that they provide for the designation of oil pollution officers responsible for preparation of the plan, organization of local arrangements, and execution of clearance operations. The Central Government receives copies of these plans but does not formally evaluate or endorse them. It sees its role as one of giving the local authorities whatever advice and guidance it can.

Each oil company has been asked by the Government to submit oil spill contingency plans. As of April 1977 the majority of these plans had been submitted and were being examined by the Government to assure their adequacy and compatibility with Government plans.

The North Sea Operators Clean Seas Committee, an informal coordination and liaison body whose members represent oil company organizations from seven countries, has established a contingency plan. The plan provides for assistance (in the form of equipment and materials) to any individual oil company which is a member.

Reporting of slicks

The Department of Trade has arranged that all U.K. ships and aircraft, whether civil or military, report any accident or casualty to a ship which is causing or likely to cause oil pollution and the nature and extent of any slick seen in the sea. Private fishing vessels and boats participate in these arrangements. Offshore operators also participate and are required to warn of escapes of petroleum from their installations under the terms of their licenses.

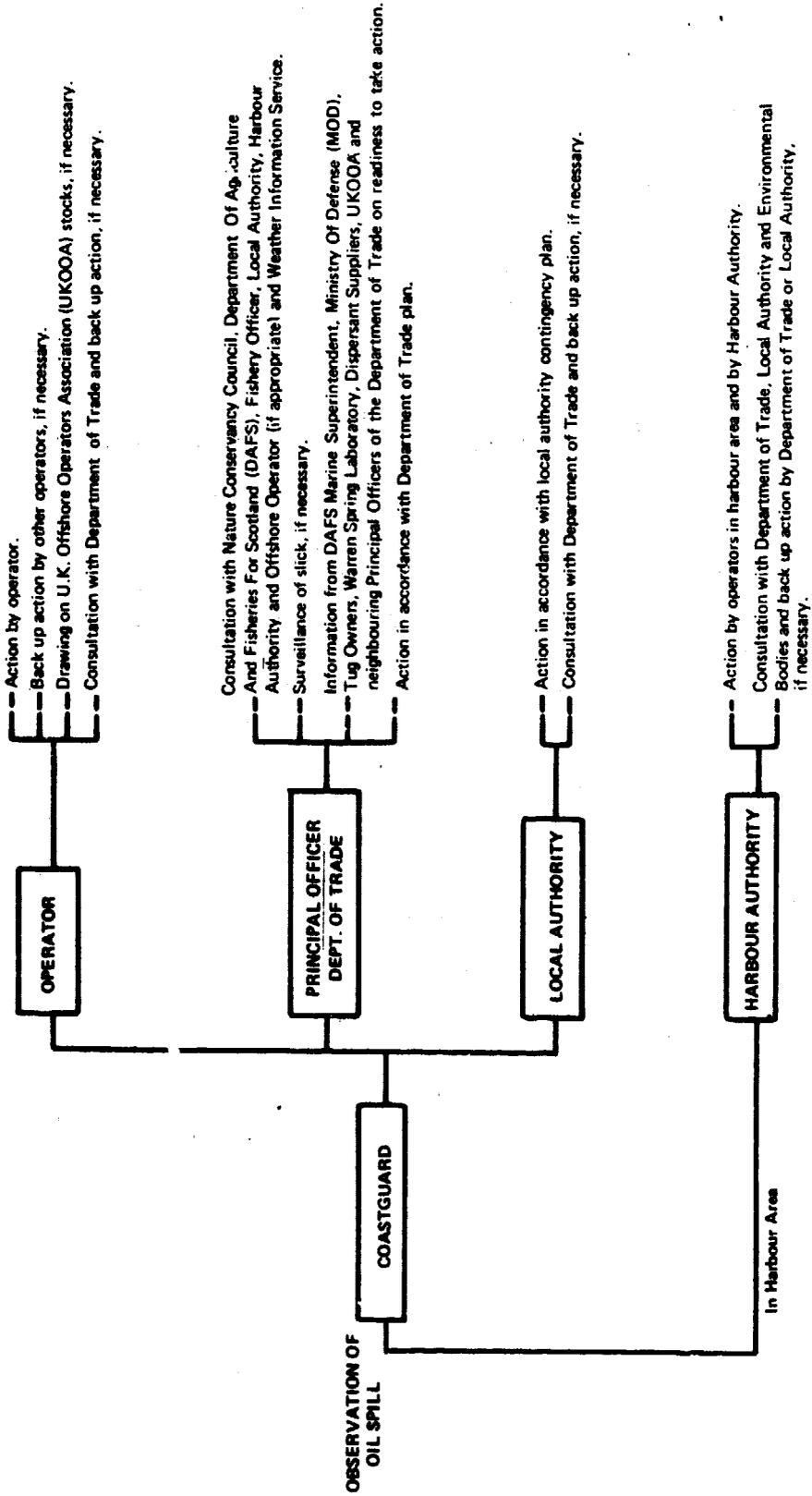
All these reports are channeled to the U.K. Coast Guard. The Coast Guard disseminates the reports in a standard layout which gives such details as time, date, and place of the incident, weather and sea conditions, the extent of the slick, the name of the polluting vessel (if known) and an opinion on whether the oil is likely to come ashore. These reports are sent to interested parties (e.g., the Principal Marine Officer and local authorities). Figure 1 illustrates the channels of communication for reporting oil spills.

These arrangements are complemented by international agreement among the coastal states of Norway, Denmark, West Germany, the Netherlands, Belgium, France, and the United Kingdom. Under this agreement, any country becoming aware of an accident or oil slick that threatens the coast of another is required to warn the country concerned. Also, each country is allocated an area of the North Sea within which it has special responsibility for surveillance of oil slicks and to take action to deal with them.

Resources

The Department of Trade's policy for the treatment of oil slicks requires the provision of three essential items--boats, spraying equipment, and dispersant. The Department

CHANNELS OF COMMUNICATION FOR REPORTING OIL SPILLS



does not own any boats for spraying but can call on both Government and private vessels (assuming they are available at the time) on a prearranged basis. Therefore, there is no guarantee that a particular boat would necessarily be available in an emergency since vessels could have prior tasks.

Except in very calm waters and in ecologically sensitive areas, the most effective way of treating oil on the waters around the U.K. is considered to be spraying dispersant on the oil and then agitating the resulting mixture to accelerate the natural process of degradation. Dispersants are limited to those that have passed a toxicity test. The Principal Marine Officers are provided with enough dispersant to allow 48 hours' operation during which time the Officer can seek replenishment from other sources. To supplement stocks the Officer first checks other regions and then the manufacturer. Principal Marine Officers are also provided with spraying gear, protective clothing, and pumps.

Dispersant and devices to apply it are held in reserve by most local authorities. Much of the equipment held for other local authority purposes (such as pumps, tractors, and bulldozers) can be used for beach clearance.

Oil companies maintain clearance equipment at their offshore installations. The U.K. Offshore Operators Association (which acts as the focal point on pollution matters in dealings between the industry and Government) has stockpiled spray gear and dispersant at various locations around the North Sea. These resources would be made available to its members.

Exercises

To test the adequacy of its regional organization, the Department of Trade conducts exercises to deal with simulated pollution incidents. The aim is to hold one major exercise in each region every 3 years. Since 1973 a total of eight exercises have been mounted so that all but one region has been involved.

Voluntary agreements on compensation

The Department of Trade, on behalf of the Government, and the local authorities attempt to recover their cleanup costs whenever those responsible for the pollution can be identified. Voluntary agreements on compensation have been drawn up by tanker owners, oil companies, and offshore operators:

- The Civil Liability Convention makes operators of ships carrying 2,000 or more tons of bulk oil liable for pollution damage and requires them to have appropriate insurance to cover this liability. This convention has been ratified by most states in Northwest Europe.
- Where the Civil Liability Convention does not apply, compensation may be obtained through a voluntary scheme known as the Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution. Tanker owners are required to reimburse governments for the cost of any cleanup operations up to a maximum of \$100 per gross ton of the tanker or \$10 million, whichever is less.
- A further voluntary scheme which supplements the above agreements provides compensation for situations where there is a shipowner's exemption or when compensation is insufficient. This agreement among oil companies is known as the Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution; the maximum compensation available per incident is \$30 million. An oil company which becomes a party to the agreement makes a periodic payment to a central fund, derived by assessing the crude oil and fuel oil receipts for the previous year. This voluntary scheme will be replaced by an International Fund for Compensation for Oil Pollution Damage.
- At a conference in December 1976 several countries agreed on the text of an international convention under which compensation will be payable by offshore operators for oil pollution damage caused by their activities in waters off the coasts of countries which join the convention. Although not yet in effect, the maximum amount available for compensation will be at least \$35 million per incident initially, and will rise to \$45 million. As an interim measure, the U.K. offshore oil industry has devised a voluntary offshore pollution liability agreement that came into force on May 1, 1975. The agreement provides up to \$25 million per incident to compensate for oil pollution damage caused by the operations of members of the agreement, other than movement of tankers. The scheme has since been extended to any operators from several countries who may wish to join.

ASSESSMENT OF U.K. PREPAREDNESS

In 1976 the U.K. Department of the Environment published the results of a detailed study on the present organization for dealing with accidental oil spills, and included suggestions for future resources and organization. As of May 1977, the U.K. Government was collecting comments on the study and its recommendations to have better knowledge of the situation before arriving at decisions on the recommendations. It is possible, therefore, that in the near future some of the procedures described above could change. Some of the more important findings and recommendations of the study are summarized below:

- The more closely the U.K. examined the way that emergency arrangements might best be organized, the more it feels that the present division of responsibility is essentially correct (Government responsibility at sea and local responsibility when oil approaches the coast).
- Within the constraints of its resources, the present organization has, on the whole, coped well with a number of oil spill emergencies at sea.
- The supply of backup stocks of dispersant could become a real constraint on cleanup efforts and therefore clear agreements with manufacturers should be reached over the rate that dispersant will be supplied within 2 days of notification.
- As there are no contractual arrangements for securing the use of spraying vessels, the Government should satisfy itself (whether by establishing a system of retainers or by other means) that a sufficient number of vessels will be available when needed.
- Responsibility for cleaning up spills during offshore operation should be directly upon the industry (with Government intervention only if needed).

INDUSTRY'S OIL SPILL RECORD

With the exception of the Ekofisk blowout described below, industry has maintained a good oil spill record considering the intensive activity in the North Sea. According to one oil company study, as of March 17, 1977, a total of 793 wells had been drilled with no reported oil spill during

the drilling of these wells. The study also pointed out that during the same period 84 oil fields were identified, of which those in production produced some 874,000 bbls/day in January 1977. One minor spill, an estimated 3,000 barrels of oil, was reported in the study. However, this spill was cleaned up without incident or significant environmental effect by industry's own United Kingdom Offshore Operator's Association.

The Ekofisk oil spill occurred on April 23, 1977, in the Norwegian sector of the North Sea. An estimated 88,000 barrels of oil was discharged into the North Sea over 8 days. Estimates are that the cleanup bill for the Ekofisk spill will be about \$6.6 million.

Although the Ekofisk accident was classified a major oil spill, little environmental damage has been reported. The oil slick associated with the spill dissipated before reaching shore.

In the wake of the Ekofisk spill, Norwegian and U.K. Government officials, as well as other North Sea nations, have been studying the effect of oil spills. A Norwegian panel designated to conduct a thorough study of the Ekofisk incident had not completed its study by early August. The European Economic Community Commission has developed some proposals of its own. Among others, the Commission has proposed:

- Creation of a data bank to help deal with oil spills.
- Joint research into technologies for collection and dispersion of hydrocarbons, as well as what becomes of hydrocarbons spilled at sea and their effects.
- Appointing a high-level group to study the implications of Ekofisk-type disasters and the possibility of environmental impact statements for North Sea installations.

It seems that the unfortunate Ekofisk experience may, in the final analysis, improve Government and industry's capability and resolve to deal with oil spills.

CHAPTER 4

SPIRIT OF COOPERATION IN DEVELOPMENT

OF NORTH SEA OIL RESERVES

Development of the United Kingdom sector of the North Sea has been marked, according to most persons interviewed, by a spirit of cooperation among Government, the oil industry, and private interests. There has been, they claim, a recognition by all parties involved of the importance of North Sea oil to the U.K.

CENTRAL GOVERNMENT AND OIL INDUSTRY COOPERATION

Government and oil industry officials said that there has been frequent and constructive dialogue between them. Views have been solicited and considered, and this has produced excellent cooperation.

Oil company representatives frequently point to the formulation and passage of the Petroleum and Submarine Pipelines Act as an example of the cooperation which they believe has aided in the successful development of the North Sea. They claim there had been a great deal of consultation between representatives of their association (the United Kingdom Offshore Operator's Association) and Government representatives in drafting the act. This dialogue continued through the legislative process and produced the enactment of a law which is satisfactory to both Government and oil companies. The Government achieved its goal of assuring Government participation in North Sea development and the oil industry was satisfied that its views had been solicited and given consideration.

On November 12, 1975, the Petroleum and Submarine Pipeline Act received Royal Assent. The act provides for the creation of BNOG, through which the Government has achieved one of its major goals of assuring a majority participation in the development of the North Sea.

COOPERATION BETWEEN CENTRAL GOVERNMENT AND LOCAL COMMUNITIES: LAND-USE PLANNING AND DEVELOPMENT

The pace and extent of all offshore oil and gas development can have a tremendous effect on communities. If not properly planned, severe environmental, social, and economic

effects can occur. The probability of these occurrences taking place increases when a rapid exploitation policy is undertaken. In essence, the U.K. set two goals for onshore oil-related development

- minimize the disruption that would occur on land, and
- involve local communities in the planning process.

Land-use planning in the United Kingdom has allowed local communities to take an early, active role in the planning process and, according to Government officials, caused people to be caught up in the spirit of planning their own future. This involvement also caused cooperation and mutually acceptable agreements among communities, Government, oil companies, and private interests.

Government involvement has taken several forms, including (1) planning guidance, (2) financial assistance, and (3) research.

Planning guidance

To assist regional and local governments in preparing and dealing with North Sea oil development, the Central Government provides planning guidance. Guidance has taken the form of (1) setting forth a national strategy for coastal development, (2) establishing preferred development zones and preferred conservation zones, and (3) suggesting techniques which can be used to measure the effects that proposed major developments may have (i.e., noise, water pollution, landscape, ecological factors, social, and economic aspects).

Financial assistance

Heavy demands, often in comparatively remote areas of Scotland, for many kinds of supporting services have been created by the rapid growth of oil-related industry. Some local authorities in particular have had to undertake heavy expenditure to provide infrastructure for offshore developments, placing an undue burden on their resources. The Government considered that the local authorities needed financial assistance and in November 1974 announced that the authorities affected would receive special support to take account of their extra spending. The first year this arrangement operated was 1975-76, and \$4.3 million in special assistance was paid. For 1976-77, the figure was \$8.5 million. Specifically, monies are being paid for housing,

roads, and improving railways, airports, ports, water, and sewage systems; educational, social, cultural, and recreational facilities; health facilities; and police services.

Research

The Scottish Office of the United Kingdom Government is directly involved with the promotion of oil-related research and development projects. It has commissioned several research projects in universities. A 3-year study on the impact of North Sea oil on the Scottish economy was completed by the Department of Political Economy at Aberdeen University in September 1976. The study included Government representatives.

The Institute for the Study of Sparsely Populated Areas and the Department of Sociology, Aberdeen University, have carried out a short-term analysis of some of the social consequences of oil developments in Scotland. According to a Government publication, this study will enable the Scottish Office of the Government to better guide local authorities following rapid industrialization in sparsely populated areas.

In addition, the Geography Department of Aberdeen University was commissioned to develop techniques to make a balanced appraisal of the potential effects of industrial development on the physical environment. The aim was to evolve methods for general application. The research drew on experience of oil developments in Scotland and work done in the university's economic and social impact projects. The results were published in the form of a manual for local authorities. A further 2-year commission has been awarded to improve the manual in the light of practical experience.

A panel based in Glasgow, Scotland, has been set up to devise research into the social and economic effects of North Sea oil on Scotland through 1979. Government officials are included as panel members.

Various other Government publications are available to deal with the whole spectrum of North Sea development (i.e., coastal planning guidelines, environment, training, and impact on fishing).

COOPERATION BETWEEN LOCAL GOVERNMENT, THE OIL INDUSTRY, AND PRIVATE INTERESTS

Cooperation between local government, the oil industry, and private interests has also been very good and has contributed to the development of North Sea oil. Examples of this are the development of the Sullom Voe oil terminal; the Forties oil pipeline; and an agreement among Government, fishery interests, and the oil industry resulting in the establishment in 1974 of the Fisheries and Offshore Oil Consultative Group--a body which seeks resolution of problems of mutual concern between the oil and fishing industries.

Development of the Sullom Voe oil terminal

Some of the largest oil fields in the North Sea are located east of the Shetland Islands--in fact, it is expected that over half the North Sea production will come from the northern part of the North Sea. Because of the proximity to the Shetland Islands, most oil will be piped to the Islands, thus necessitating an oil terminal for storage and loading into tankers for transshipment.

The Shetland County Council recognized this need and commissioned a study to identify potential oil terminal sites in the Islands. The council then initiated two actions which serve as the basis for the relationship between it and the oil industry. First, the council drafted a statement of powers which put it in a position to control land use and to participate as partners with the oil companies in the landside operations of piping oil ashore. These powers were granted by Parliament in 1974. Secondly, the council commissioned a major multidisciplinary study of likely on-shore requirements of the oil industry and how best to meet them.

The council also publicized its proposed plans for the construction of the oil terminal and the likely changes it would bring. Results of these public hearings were incorporated into the proposed plan and a formal planning document was then adopted--it serves as an approach to the development of the terminal and includes planning for the effect on employment, housing, transportation, community facilities, and environment.

The council has also organized a nonprofit association which will serve as "landlords" of the terminal--the oil companies will pay for use of the terminal based on landed

oil. Revenue generated from oil will be used to help maintain current industries which are affected by the oil industry, as well as used in attracting new industry.

We were advised by a council representative that to date there has been a good relationship between the oil industry and the council--both sides have been willing to discuss and compromise to resolve problems. The Sullom Voe terminal is currently under construction and oil is expected to begin flowing into the terminal in the spring of 1978.

Development of the Forties pipeline

In 1970, when the North Sea's Forties Field was found to have oil in commercial quantities, one of the big decisions to be made was how to get the oil to a refinery. After much thought and analysis of the various options, a decision was made to construct a pipeline linking the offshore oil production platforms with a refinery near Edinburgh, Scotland. The pipeline was to be built in two sections: a 106-mile underwater leg from the platforms to land and a 130-mile underground land pipeline to the refinery. Oil company representatives believe the events leading up to the actual construction and completion of the land pipeline provide another example of the cooperation among the oil industry, local communities, and special interest groups. In addition, they believe this project demonstrates that a pipeline can be laid in coastal areas without adversely affecting the area's ecology or environment.

Early in the planning process, the proposed land route had to be mapped and discussed with the U.K. Government. A number of public meetings were held, where objections were voiced and which subsequently caused some route changes. The pipeline pathway involved obtaining permission and negotiating payment to cross land owned by some 300 landowners. Landowners were given the fullest information about the pipeline and what it would mean to their surroundings, and local communities were also kept apprised of pipeline developments.

During construction, much thought was given to the conservation of wildlife: two river crossings were planned and carried out at times of the year so that salmon and other riverlife would not be seriously affected, and diversions were made around fragile ecological areas. Never more than a mile of trench was open at any one time. The pipeline was laid primarily in farm areas and topsoil was

put over the trench after it was dug and the pipeline put in.

Today, after a number of growing seasons, it is virtually impossible to trace the pipeline's route. The only things still missing along the route are large trees (because their roots might disturb the pipe) and permanent buildings (which might block emergency access).

SPECIAL INTEREST GROUPS AND THE
OIL INDUSTRY: FISHERIES AND
OFFSHORE OIL CONSULTATIVE GROUP

Agreement among the U.K. Government and the fishing and oil industries caused the establishment in 1974 of the Fisheries and Offshore Oil Consultative Group. The group consists of representatives from the British Trawlers Federation, the two Scottish fishing federations, and the United Kingdom Offshore Operators Association, together with representatives of a number of U.K. Government departments. These include the Department of Agriculture and Fisheries for Scotland; the Ministry of Agriculture, Fisheries, and Food; and the Departments of Energy and Trade.

The group has studied areas which are of mutual concern between the oil and fishing industries:

- Navigational questions (placement and markings of buoys, navigation of vessels).
- Seabed problems (oil-related debris, pipelines, underwater installations, long-term effects of offshore oil on fishing industry).

In this area, agreements were reached whereby claims for damage or loss of fishing gear would be directed at the company identified as being responsible for the debris. In the case where it is not possible to identify a particular company, a voluntary fund provided by the operator's association was set up--the fund is administered by the three fishermen's federations.

In its annual report, the group concluded that:

"Its work has been useful and has led to a better understanding between the two industries. The cooperative attitude adopted by the industries has led to the solution of some problems and the group is confident that as it continues its work, difficulties will be successfully overcome."

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LEGISLATION GOVERNING OFFSHORE OPERATIONSIN THE UNITED KINGDOMContinental Shelf Act 1964

The 1958 United Nations Convention on the Continental Shelf recognized the right of a coastal state to exercise sovereign rights over its continental shelf for the purpose of exploring and exploiting its natural resources. In 1964, the Continental Shelf Act was enacted. The act enabled relevant provisions of the Convention to be given effect. It vested in the Crown the right to explore and exploit the seabed and subsoil outside territorial waters, and provided a framework in domestic law for the granting of licenses for its exploration and exploitation by extending, to the continental shelf, relevant provisions of the Petroleum (Production) Act 1934.

Under these provisions five rounds of licensing have been held.

Under the terms of the act, the Secretary of State for Energy has the power to make orders specifying safety zones around offshore installations employed in the exploitation of the U.K. Continental Shelf.

The Orders prohibit all shipping from going within 500 meters of an installation except under certain conditions or with the express permission of the Secretary of State. By mid-1976 safety zones covering 50 installations had been designated.

Petroleum (Production)
Act 1934

Licenses to explore for and exploit petroleum oil and gas on the United Kingdom Continental Shelf are issued by the Secretary of State for Energy under powers conferred upon him by the Petroleum (Production) Act 1934 as applied by the Continental Shelf Act 1964. The Petroleum (Production) Regulations 1976, made under these acts, and the Petroleum and Submarine Pipelines Act 1975 set out model clauses which are incorporated in licenses. Failure of licensees to abide by the terms and conditions contained in these model clauses renders the license liable to revocation. The model clauses provide that license operators must execute their operations in accordance with good oilfield practice.

The Mineral Workings (Offshore Installations) Act 1971

Under the Mineral Workings (Offshore Installations) Act 1971, a comprehensive code of safety regulations is being introduced covering the safety of the installations on the U.K.'s Continental Shelf and the safety, health, and welfare of the persons on board them. To date, regulations have been made covering the

- registration of all installations with the Department of Energy;
- appointment of installation managers to be responsible for overall installation safety;
- keeping of logbooks, and the registration of deaths of persons on installations;
- functions and powers of the Department's Inspectors, and the notification of accidents;
- holding of public inquiries into accidents;
- surveying of offshore structures and the issuing of Certificates of Fitness by appointed certifying authorities;
- safety of diving operations from or in connection with installations;
- extension of the Employers' Liability (Compulsory Insurance) Act 1969 to require that employers of persons working on offshore installations obtain insurance coverage against employee claims for injuries;
- day-to-day personnel safety, the safety of equipment and working procedures, and the provision of medical facilities;
- life-saving appliances; and
- emerging procedures and the holding of regular drills and practice musters.

The Department of Energy's Petroleum Engineering Inspectorate is responsible for enforcing these regulations.

Further regulations are being prepared which will cover the provision of firefighting systems and equipment.

Petroleum and Submarine
Pipelines Act 1975

This act came into force on January 1, 1976. Its main provisions include:

1. The setting up of the British National Oil Corporation (BNOC) with powers to:
 - explore for and produce petroleum;
 - transport and refine petroleum;
 - store, distribute, and buy and sell petroleum and products;
 - take over the Government's participation interest in U.K. licenses;
 - carry out consultancy, research, and training in petroleum matters;
 - build, hire, or operate refineries, pipelines, and tankers.

Certain activities (e.g., exploration and production abroad, "downstream" activities such as refining and trading in products, setting up or acquiring subsidiaries, giving loans and guarantees) can be carried out by BNOC only with the consent of the Secretary of State for Energy.

2. The introduction of additional controls over exploration and exploitation of the U.K. Continental Shelf to assure its orderly development; this includes Government powers to control future rates of oil depletion.
3. The introduction of controls over the construction and operation of submarine pipelines, including the use of third parties of both proposed and existing pipelines. The Act also empowers the Secretary of State to assure the safety of pipelines and the safety and health of people working on them.

4. Powers to control the construction of new refineries and the expansion of existing refineries.
5. The setting up of the National Oil Account.

The Submarine Pipelines (Diving Operations) Regulations 1976, which came into force on July 10, 1976, relate to diving operations carried out in respect to submarine pipelines and associated works. They closely follow the Offshore Installations (Diving Operations) Regulations 1974 and the Merchant Shipping (Diving Operations) 1975.

With the introduction of these regulations there are statutory safety provisions for all commercial diving operations taking place in U.K. territorial seas, and all diving in connection with offshore petroleum operations on the U.K. Continental Shelf.

These regulations have been adopted almost in their entirety by Norway and are currently being used as a basis for drawing up a code of practice for diving operations in Europe by the European Diving Technology Committee.

Oil Taxation Act, 1975

This act established the current taxation and royalty system used in the United Kingdom sector of the North Sea. Its main features include the petroleum revenue tax of 45 percent, a corporation tax of 52 percent, and a 12.5-percent royalty. Also included are tax incentives for developing marginal fields, and provisions which prohibit losses and allowances for activities outside the North Sea to be used to reduce a company's tax liability for activities there.

The Offshore Petroleum Development (Scotland) Act 1975

In this act the Government took control of certain types of oil-related developments in the public interest. The act provides for the acquisition and reinstatement of oil sites in Scotland and for the control of certain oil-related operations within territorial waters.

The Secretary of State for Scotland is given the power to acquire land either by agreement or compulsorily if it is required for one of a number of defined oil-related purposes. Where such land is urgently required (and planning permission has been given) the Secretary of State may acquire it by an

expedited acquisition order. A statutory instrument containing such an order cannot be made unless a draft of it has been laid before, and approved by resolution of, each House of Parliament.

The act stresses the rehabilitation of oil sites after use, and local authorities are empowered to make financial arrangements with developers to assure that money is available for restoration.

Town and Country Planning (Scotland) Act 1972

This act provides local government with the authority to plan for land development. It requires that each proposal for development be the subject of a planning application to the planning authority for review and decision.

Merchant Shipping (Oil Pollution) Act 1971

The act places a liability on the owner of a tanker from which oil escapes and requires him to carry insurance against the liability.

Merchant Shipping Act 1974

The Merchant Shipping Act 1974 provides that oil importers contribute to an international fund that will compensate for pollution damage in the U.K. where persons suffering the damage are unable to obtain full compensation under the Merchant Shipping (Oil Pollution) Act 1971. The act also enables the Secretary of State to regulate the design and construction of British oil tankers and the admission of foreign tankers to British ports.

Prevention of Oil Pollution Act 1971

This act makes it an offense for ships of any nationality to discharge any oil into U.K. waters, and additionally for U.K.-registered ships to discharge any persistent oil anywhere at sea, except in accordance with very stringent regulations.

The act also controls discharge of oil or oily water from installations on land into U.K. waters and from offshore platforms or pipelines on the U.K. Continental Shelf into the sea.

The prevention of accidental pollution from offshore installations is essentially a matter of using safe working practices which, while aimed primarily at the safety of men and installations, undoubtedly reduces the risks of pollution from oil spills.

Coast Protection Act 1949

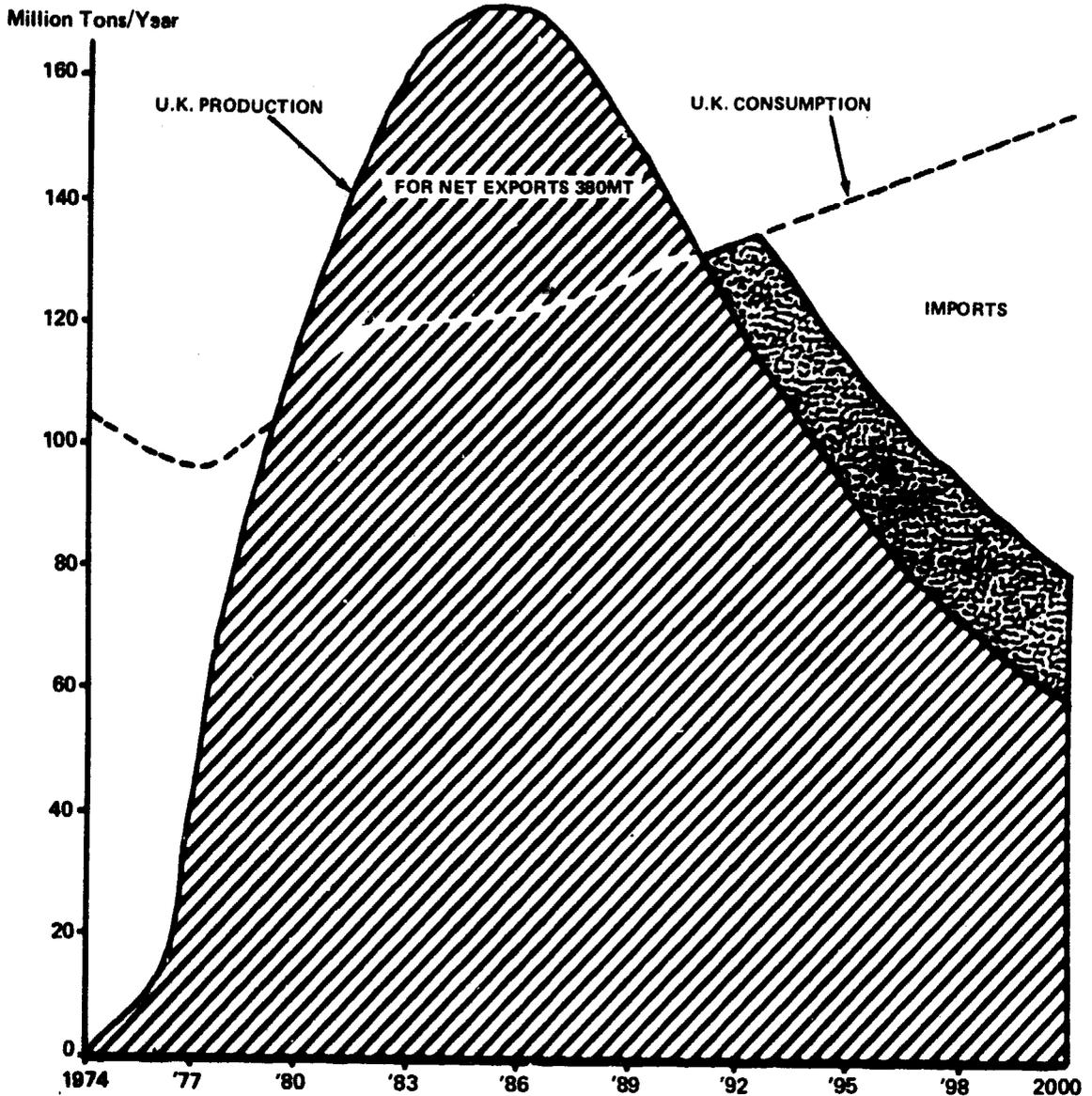
Precautions are taken to minimize the risk of a collision between a ship and an offshore installation. Before an installation (whether a mobile drilling platform or a fixed production platform) can be sited, consent has to be obtained from the Department of Trade under the Coast Protection Act 1949 as extended by the Continental Shelf Act 1964. Navigational requirements are taken into account before consent is issued. Consent also requires that installations be adequately lit and marked and their locations be publicized in notices to mariners and (for fixed installations only) marked on charts. The Convention on the Continental Shelf 1958 allows states to establish safety zones of not more than 500-meter radius around installations, and both British and foreign ships are prohibited from entering safety zones unless they have business with an installation.

Dumping at Sea Act 1974

The Dumping at Sea Act 1974 provides legislative support in the United Kingdom for control of dumping at sea and replaces a previous voluntary control scheme. It provides that before any materials can be disposed of at sea by "dumping" (excluding discharge through pipelines) a certificate must be obtained. The determining factor in deciding whether to grant a license is the need to protect the marine environment and its living resources.

ONE OIL COMPANY'S ESTIMATE OF UNITED KINGDOM SELF-SUFFICIENCY AND NET EXPORTS FROM NORTH SEA OIL

(2% ELECTRICITY GROWTH, LOW ELECTRICITY PROFILE AND
MIXED FUEL PREFERENCES)



1. The U.K. production profile shown is based on a feasible but not fastest development of U.K. reserves. The reserves are assumed to be 25 billion barrels, of which about 15 billion barrels have been discovered and 10 billion barrels remain to be discovered.
2. Production increases from virtually zero in 1975 to a peak of 170 mt (million tons) in the mid-1980s and declines to 60 mt in 2000. U.K. oil demand increases from 92 mt in 1975 to 120 mt in 1985 and 150 mt in 2000.
3. Thus the U.K. is expected to be a net exporter of oil throughout the 1980s but has to return to importing oil in the early 1990s. Total net exports will probably be around 380 mt which represents about 11% of total reserves.
4. One alternative to this profile is for U.K. to adopt a policy of keeping oil at home--i.e. restricting oil production to U.K. oil demand with no net exports. The resulting profile is shown as an overlay. The effect is to maintain the U.K.'s self-sufficiency in oil for 2 extra years (from 1991 to 1993) and to make the decline in oil production slightly less severe. Oil imports in 2000 are reduced from about 90 mt in 2000 to about 65 mt. In place of exports of 380 mt the effect is to reduce total oil imports between 1990 and 2000 by about 270 mt and to increase reserves in the ground in 2000 by 110 mt.
5. Technically, it is doubtful whether such a profile could be arranged. In terms of national security the effect is small--it only delays the U.K.'s return to world markets for its oil imports by a few years.

CRITERIA AND CONDITIONS FOR OBTAINING
UNITED KINGDOM OFFSHORE PRODUCTION LICENSES
EXTRACTED FROM THE GOVERNMENT'S
ANNOUNCEMENT OF 5TH ROUND LICENSES

Licences will be granted on the basis that the British National Oil Corporation (BNOC), or one of its subsidiaries, is from the grant of the licence a co-licensee entitled to a 51% share in all the benefits of the licence, except

- (a) that where another state corporation or subsidiary of such a Corporation is also to be a co-licensee, the combined share to be held in the licence by that other corporation or its subsidiary, and the BNOC or its subsidiary, shall total 51%; and
- (b) where the Secretary of State decides to grant a licence solely to a state corporation or its subsidiary.

The consideration required in respect of production licences granted as a result of this invitation will be:

- (a) in respect of the first period of four years of the licence a non-recurrent fee payable upon the grant of the licence of eighty pounds for each square kilometre comprised in the licence area; and in respect of any second period of three years, a non-recurrent fee payable at the end of the fourth year of one hundred and twenty pounds for each square kilometre comprised in the continuing part;
- (b) in respect of the first year after the expiry of the second period (on exercise of the option to continue as to the remaining period of the licence) the sum of two hundred pounds for each square kilometre in the continuing part; in respect of the second year four hundred pounds, and similarly by annual increments of two hundred pounds until an annual sum of three thousand pounds will be payable for each square kilometre comprised in the licensed area;
- (c) a royalty at the rate of 12-1/2 per cent, either in kind or by value on all quantities of petroleum won and saved.

Licences granted may be subject to special conditions governing the notice required for, and the timing and circumstances of, drilling.

Applicants will be judged against the background of the continuing need for expeditious, thorough and efficient exploration to identify oil and gas resources of the U.K. Continental Shelf, and the following factors will be particularly borne in mind when examining applications:

- (a) technical competence to undertake a programme of exploration and production;
- (b) capability to produce funds commensurate with work programme obligations in respect of initial exploration and the extent of access to adequate funds in the event of a commercial discovery being made;
- (c) where the applicant already holds or has held a licence, his overall performance to date in meeting licence obligations;
- (d) exploration already done by or on behalf of the applicant which is relevant to the areas applied for;
- (e) the extent of the contribution which the applicant has made or is planning to make to the economy of the U.K., including the strengthening of the U.K. balance of payments and the growth of industry and employment;
- (f) where a body incorporated in a country outside the United Kingdom applies for a licence or holds a controlling interest in the applicant, how far equitable treatment is afforded in such other country;
- (g) the degree to which the applicant, or any existing licensee in whom he has a controlling interest, or any existing licensee who has a controlling interest in the applicant, has demonstrated his agreement to the conceding to the State a majority share in any discovery made under existing licences;
- (h) whether the applicant subscribes to the Memorandum of Understanding agreed by the Secretary of State and United Kingdom Offshore Operators Association to ensure that full and fair opportunity is provided to U.K. industry to compete for orders of goods and

services. Where the applicant is an existing licensee, his past performance in providing full and fair opportunity to U.K. industry will be taken fully into account;

- (i) whether the applicant is willing to grant reasonable access to representatives of independent trade unions to his offshore installations, having in mind the Government's objective to negotiate a memorandum of understanding on this matter.

The Secretary of State will in due course notify those applicants who are being favourably considered for the grant of a licence that they will be offered a licence if (a) they settle a form of operating agreement with the BNOC to the satisfaction of the Secretary of State and (b) in association with the BNOC, they agree with the Secretary of State an acceptable work programme for the prospective licence. In respect of the settlement of both the operating agreement and the work programme, the Secretary of State will wish to be satisfied that adequate exchange of information between the BNOC and the prospective licensees takes place to ensure that negotiations for this purpose are meaningful. Guidelines as to the type of arrangements which the Secretary of State expects to be included in the operating agreements are set out on the next page.

GUIDELINES AS TO THE RELATIONSHIP
BETWEEN BNOC AND CO-LICENSEES ON
LICENCE ACTIVITIES

BNOC to be a Co-licensee

1 Licences will be granted on the basis that the British National Oil Corporation (BNOC), either directly or through subsidiaries, is a co-licensee from the outset. It will therefore be necessary for applicants for licences, who have been notified that their application is likely to be successful, to settle a form of operating agreement with BNOC in advance of the grant of the licences.

Nature of the Guidelines

2 In exercising his discretion as to the grant of licences, the Secretary of State will wish to examine the form of the operating agreement settled between BNOC and its proposed co-licensees in the licence. The Secretary of State will expect to see that the agreement incorporates the substance of the guidelines set out hereunder but he will be prepared exceptionally to consider variations which the proposed parties can satisfy him are reasonable, and which are consistent with the national interest, including any which may be necessary in circumstances where the subsidiaries of BNOC or of the British Gas Corporation (BGC) are involved.

BNOC's share in the licence

3 The form of the agreement is to provide that BNOC is to be entitled to a 51% share in all the benefits of the licence, including a corresponding share of the petroleum produced and the income which accrues from petroleum discoveries within the licensed area; except where BNOC decides not to participate in a development, in which case the arrangements should be as described in paragraph 7 below.

Operating Committee

4 BNOC is to be entitled, from the date of issue of the licence, to a vote, appropriate to its having a 51% share, on any Operating Committee which is set up. It will be fully involved before decisions are taken. It will nominate a representative (and alternates) to attend all meetings of the Committee, and any sub-committees. BNOC's nominated representative will be entitled to cast BNOC's 51% vote after taking part in the appropriate discussions in respect of both exploration and development, save as provided in paragraph 7 below.

Decisions of the Committee

5 BNOG should not be able to decide questions brought before the Committee solely by the use of its majority vote, nor should holders of small percentages of the licences have a power of veto. It should be left to the parties including BNOG to decide upon suitable arrangements for voting by reference to these parameters. Different voting arrangements for different kinds of decisions would be acceptable in appropriate cases. For example if majority decisions are to be arrived at on the basis of percentage votes, arrangements requiring votes representing no less than 60% of the shares in the licence and no more than 90%, would be regarded as reasonable. Arrangements requiring votes exceeding 90% would not generally be regarded as satisfactory, except where there are only two co-licensees, including BNOG, in which case decisions could be required to be unanimous. Where majority decisions could not be obtained, work might be able to proceed under sole risk arrangements--see paragraph 11.

BNOG's liability to contribute

6 BNOG is to be liable for its share of expenditure properly incurred in the licensed area, except that related to (a) "sole risk" exploration or appraisal in which BNOG has decided not to join; or (b) the development of a discovery in which the Corporation has decided not to participate.

7 Following a decision by BNOG not to be involved in any particular development, its co-licensee(s) could proceed with the development under the sole risk arrangements. BNOG should continue to be able to attend all meetings, to receive information about the development and to take part in discussions. BNOG would not be entitled to a share in the petroleum produced from that development; nor a share in the ownership of assets relevant to that development; nor to a vote on matters arising in respect of that development: save in the event it rejoined the venture under sole risk provisions included in the agreement, as provided for in paragraph 11 below.

8 In respect of

- (a) exploration work carried out under the licence; and
- (b) appraisal work undertaken on a discovery before the Corporation decides whether to participate

the Corporation will pay its share of expenditure as it is incurred.

9 In the event of BNOC deciding to participate in the development of a discovery, the method under which the Corporation is to pay its share of expenditure on the discovery and its development following the decision to participate shall be a matter for BNOC: the detailed arrangements for payment will be for negotiation between the Corporation and its co-licensee(s). If BNOC's share of expenditure is not to be paid at the time it is incurred, interest shall be chargeable to the Corporation, at a commercial rate until payment is made.

Programmes of Work

10 The joint licensees should be entitled to agree by majority decision (see paragraph 5) programmes of work to be carried out other than at sole risk under the licence.

Sole Risk

11 The agreement should contain sole risk arrangements including a requirement that the "sole risk licensee" is to indemnify the other co-licensee(s) against all claims or proceedings brought by a third party arising out of the "sole risk operation"; and against all damages and costs or losses by interference caused to Approved Work Programmes. The sole risk arrangements are also to include provisions enabling a co-licensee, other than the "sole risk licensee", to join the venture at a later date.

Detailed financial arrangements

12 The operating agreement is to include, or contain in documents annexed to it, arrangements for the detailed financial management of the licence activities: such as the dates on which the parties' contributions are to become due (but subject to the arrangements agreed whereby BNOC is to pay its share of development and operating costs), provisions for default in such contributions, and accounting and auditing procedures.

Disposal of petroleum

13 The operating agreement may provide for arrangements between BNOC and its co-licensee(s) whereby respective shares of petroleum produced may be transferred to any (or all) of the other co-licensee(s) or to other persons (subject to the restrictions contained in the terms of the licence): and other mutually acceptable arrangements in respect of up-take of production.

Appointment of Operator

14 BNOC should not solely by virtue of its share of the licence be entitled to determine that it should itself be the operator. Neither is BNOC ruled out from being the operator. The appointment of the operator (which under the licence will need the Secretary of State's approval) should for the purposes of the operating agreement be determined by majority decision such as outlined in paragraph 5.

Assignment of License interests to State Corporations

15 The operating agreement should recognize that in the event of the Secretary of State directing BNOC or BGC to assign its interest in the licence, together with all associated rights and obligations, to the other corporation or its subsidiary, BNOC or BGC will be entitled so to assign its interest.

Disputes in respect of the Operating Agreement

16 There should be satisfactory arrangements for the resolution of any disputes between the parties to the operating agreement.



**MEMORANDUM OF UNDERSTANDING BETWEEN DEPARTMENT OF ENERGY
AND UNITED KINGDOM OFFSHORE OPERATORS ASSOCIATION LIMITED**

- 1 It is the declared intention of the Government that the UK offshore industry should provide, on a competitive basis, a major and progressively increasing share of the goods and services required for the development of our continental shelf, and should establish a growing export market. For this purpose, the Government has made it clear that UK industry should be given full and fair opportunity to compete and Members of the United Kingdom Offshore Operators Association Limited (UKOOA) fully support this policy.
- 2 The Offshore Supplies Office (OSO) of the Department of Energy is responsible to the Secretary of State for ensuring the maximum possible involvement of UK manufacturers, consultants, contractors and service companies in the provision of supplies and services to the offshore hydrocarbon industry. This includes the creation of new industrial capacity to meet existing and emerging needs and measures to ensure that such new capacity is as fully and continuously utilised as possible. For this purpose, the Government stands ready, in selected cases, to make use of the resources of the Industry Act 1972, the new powers to be granted by the Industry Bill now before Parliament and the proposed Scottish and Welsh Development Agencies.
- 3 Members of UKOOA have undertaken to give UK industry a full and fair opportunity to manufacture and supply the goods and provide the services necessary for the programme of exploration, field delineation and the development of a field and associated facilities to full production and beyond. Further, individual Members recognise the potential benefits of encouraging, through appropriate technical and contractual support, the creation of UK capacity to meet the mutually agreed needs, both existing and emerging, of their respective offshore activities. The Members shall use goods and services of British origin in these activities whenever they are competitive in regard to specification, service, delivery and price.
- 4 To satisfy the Secretary of State for Energy that the procedures and practices adopted by all Members are such as to support the Government's policy described above, the Members of UKOOA (detailed in Appendix A of this Memorandum) have individually agreed to comply with the Code of Practice set out in the attached annex and to make available to officers of the OSO such information as those officers may reasonably require to satisfy themselves that the Government's objectives are being met.



5 EMI and OSO recognise that Members remain fully responsible for the safety and commercial success or failure of their operations and will take all reasonable steps not to delay the Members' decision-making processes and commercial practices (consistent with the other obligations in this document). Further, the strictest confidentiality will be maintained by the Department in respect of competitive commercial information submitted to OSO under the terms of the Code of Practice.

6 This Memorandum shall be interpreted and applied in a manner consistent with the provisions of the Treaty establishing the European Economic Community.

3 November 1975

ANNEX TO MEMORANDUM
OF UNDERSTANDINGCODE OF PRACTICE FOR PURCHASERS OF GOODS AND SERVICES FOR OIL
RELATED ACTIVITIES ON THE UK CONTINENTAL SHELFIntroduction

This Code of Practice defines the procedure which Members of UKOOA have undertaken to apply in the procurement of materials and services required to support oil related activities on the UK continental shelf. While this Code of Practice applies to all purchases, the principle of prior information of intent to make a purchase or place a contract outside the UK will not normally apply to orders for materials and manufactures below £100,000 and to construction and services contracts below £500,000, except in those cases in which OSO has a special interest as agreed in discussion with the operators.

In accordance with the associated Memorandum of Understanding between the Department of Energy and UKOOA dated 3 November 1975 the Department undertakes to observe the strictest confidentiality on all aspects relating to the commercially competitive data submitted to them under the terms of this Code of Practice, and operators undertake to maintain strict confidentiality on such discussions with OSO.

Code of Practice

1 To ensure that UK organisations are given a full and fair opportunity on each and every contract, the operator will ensure that:-

- (a) all potential suppliers selected to bid receive a fully definitive enquiry specification in the English language for the goods and/or services required;
- (b) the specification is in accordance with the accepted oil industry standards or British standards, it indicates a willingness to accept equivalents and states the equivalent wherever possible;
- (c) the specification is drawn in a manner which does not deliberately preclude UK suppliers from tendering or diminish their prospects of submitting a successful tender;
- (d) any amendments to the specification that emerge during the course of the tender preparation are notified to all bidders so that there is full equality of information;



(e) all potential suppliers selected to bid are given an equal and adequate period in which to tender, such period to take into account the need to meet demonstrably unavoidable critical construction or production schedules of the operator;

(f) any special conditions attached to the materials, the source of supply of components and materials, and the inspection of goods are stated in the specification or enquiry documents;

(g) stated delivery requirements are not more stringent than is necessary to meet the construction and/or production schedules of the operator;

(h) where the requirement includes the need to develop equipment or proposals in conjunction with the operator, all bidders are given equal information at the same time;

(i) when the operator is unable to identify a reasonable number of suitably qualified UK suppliers for his invitation to tender, he will consult the OSO before issuing enquiries;

(j) the enquiry documents require the potential bidders to estimate the value of the UK content of the goods and/or services to be supplied.

2 At the tender evaluation stage, the operator will ensure that:-

(a) anomalies or inequalities between the submissions and the enquiry documents are fully resolved relative to the short-listed bidders;

(b) delivery promises of all bidders are assessed for their reality in the light of past performance and an assessment of current performance;

(c) when costs are compared, account is taken of financial assistance available to buyers;

(d) the foreseeable impact of currency fluctuations and the effects of escalation clauses are taken into account.

3 When the operator has determined his decision for the award of contract, in the case of non-UK award he will inform OSO prior to notifying selected suppliers and will give OSO a reasonable time, in the circumstances applying, for representation and clarification. This procedure will be followed in the case of sub-contracts referred by main or sub-contractors to the operator for approval. Where the operator does not intend to call for prior approval of sub-contracts the procedure for adherence to the Memorandum of



Understanding and this Code of Practice will be agreed between the operator and OSO. Where this gives OSO access to the operator's contractors and sub-contractors this procedure will not diminish the direct and normal contractual relationship between the operator and his suppliers. The principle shall be adopted that following disclosure of prior information to OSO on intended awards no subsequent representation to the operator by a potential supplier, other than at the express request of the operator, shall be entertained.

4 To satisfy the OSO that full and fair opportunity is being given to UK suppliers operators will, on request, make available to officers of the OSO such information as they may reasonably require about:-

- (a) the programme of intended enquiries to industry necessary to implement the anticipated overall programme of exploration and/or development to the extent that this information has not already been made available to the Department of Energy. (The operators may supply this information in any format convenient to themselves provided it is sufficiently comprehensive to enable OSO to assess the potential opportunity for UK industry);
- (b) the specifications and tender documents at the earliest possible time and, prior to the issue of the documents to the suppliers, the list of suppliers to whom it is intended to issue invitations to tender;
- (c) the bid summaries so that when necessary and reasonable OSO may request sight of bid summaries and all relevant documents for examination;
- (d) the names of appropriate representatives within the operators' organisation with whom OSO can make contact should further discussions be required.

3 November 1975

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