International Energy Biweekly Review

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INTERNATIONAL ENERGY BIWEEKLY REVIEW

Overview

The strenth of Iran's commitment to an oil price freeze will have a crucial bearing on OPEC's decision on whether to raise 1978 crude oil prices. At this time, it is still uncertain how forcefully Iran will assert its support of a price freeze.

The Shah shifted his position while in Washington by pledging that Iran would actively work for a freeze when the cartel members meet in Caracas on 20 December. A staunch Iranian-Saudi Arabian coalition probably could successfully hold the price line, even though most OPEC states strongly favor an increase.

Tehran initially had planned to maintain a neutral position at Caracas and side with the majority. This would have led to an increase of 5 to 10 percent, since Riyadh previously indicated it would not stand alone in support of a price freeze. Shortly before the Shah's announcement, Saudi oil minister Yamani delivered a letter to the United Arab Emirates stating that Saudi Arabia would support a price freeze, unless this policy would cause a split among OPEC countries.

If Iran's commitment to a freeze is softer than the Shah's recent assurances suggest, then an increase in price is still likely. To push through a freeze, the Iranian delegation will have to stick to its stance beyond the opening rounds of negotiations at Caracas and resist pressure to reach an accomodation with the majority in later rounds.

The Shah's recent announcement has sparked little change in strategy among the proponents of a price hike. Those seeking an increase hope to mold a common front that would pressure Saudi Arabia and Iran to conform to the majority position. Both sides want to avoid a replay of the split that occurred last year at Doha.

The Shah's revised position probably has caused some cartel members to lower their expectations. Venezuelan oil minister Hernandez and his Indonesian counterpart

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recently met separately with Kuwaiti oil minister Kazimi and agreed to seek an 8-percent increase at Caracas. These countries reportedly are willing to implement such an increase in two stages—4 percent in January and 4 percent in July. Additional bargaining among Arab members of OPEC will take place at the OAPEC ministerial meeting scheduled for mid-December in Bahrain.

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Abu Dhabi reportedly will reduce its government-imposed oil production ceilings next year by about 250,000 b/d, more than 15 percent below current levels. This decision results from concerns of oil ministry officials—currently disputed by the operating companies—that technical constraints at important onshore and offshore fields limit levels of prudent oil output, at least in the near term. This ministry argument is buttressed by studies of independent reservoir engineering consultants. The government is also reacting to the lack of petroleum exploration in the past few years and the resulting net decline in oil reserves. We do not agree with the judgment in oil industry publications that these production restrictions are politically induced by the current market surplus. We will provide an in-depth technical analysis of this subject in a future issue. (Secret Noforn-Nocontract-Orcon)

OPEC PRICE POSITIONS

While the Shah of Iran was coming out for a freeze in 1978 crude oil prices during his Washington visit, representatives of Venezuela and Indonesia were reaching separate agreements with Kuwait to press for an 8-percent increase when the cartel oil ministers meet in Caracas on 20 December. Despite these moves, price positions remain flexible, and more maneuvering is expected before the ministers assemble.

Iran: From "Neutrality" to "Active" Support for a Freeze

Iran will play a pivotal role in the OPEC decision whether to raise crude oil prices on 1 January 1978. When the Shah recently announced that Iran would actively work for a price freeze, he still left himself a wide range of options. At one extreme, the Shah may instruct his delegation to initially support a freeze and then work out an accommodation with the majority in later rounds of negotiation. Or, Iran could back a price freeze to the hilt, using its political influence to win converts and indicating clearly that he will accept no compromise involving an increase. Given the strong feeling among most OPEC states in favor of an increase, a staunch Iranian-Saudi Arabian coalition will be necessary to hold the price line.

Before his Washington visit, the Shah had intended Iran to play a "neutral" role at Caracas. The Iranian representative would have deferred any price presentation until all other member countries made their preferences known; the Iranian delegation was then to have voted with the majority. This is equivalent to Iranian support for a price increase, since most members lean in that direction.

So far, we are not aware of any Iranian efforts to enlist further support for a price freeze within OPEC. Iranian oil officials had not been prebriefed on any shift in Tehran's position before the Shah's Washington visit, and no instructions or clarifications of the Shah's position have been discerned filtering down since the Shah's return. Consequently, we are still uncertain how forcefully Iran will press its support for a freeze on 1978 prices.

Saudi Arabia: Not Willing To Stand Alone

Riyadh is far more reluctant to risk a split on the pricing issue than it was at this time last year. While the Saudis favor a price freeze, their efforts to rally support are largely limited to an impromptu visit by oil minister Yamani to neighboring Kuwait,

Qatar, and the United Arab Emirates in early November. Yamani's message to the UAE was that Saudi Arabia will support an oil price freeze at Caracas, unless this policy would cause a split among OPEC countries.

Iran's shift came at an important time, probably reinforcing the Saudis' resolve to press for a price freeze. If Iran's support is softer than the Shah's recent pronouncements suggest, however, we believe that Riyadh also would accede to a small price increase.

UAE and Qatar: Support for the Saudis

Both the UAE and Qatar have told Riyadh that the Saudis have their support, whatever the final Saudi position. Both, however, apparently feel that they will not be faced with the choice of siding with a minority decision. After Yamani's visit, UAE oil minister Utayba said "we do not want a repetition of what occurred at Doha." Privately, Utayba admitted that he expects a 5- to 8-percent increase to be approved.

Venezuela: Rejecting a Freeze

While his expectations apparently were lowered slightly by Iran's new price stance, Venezuelan President Perez remains firmly committed to a price hike. Perez is confident, moreover, that Iran will not stand in the way of some increase at the Caracas meeting. When asked by the press for his reaction to the Shah's indication "that he is going to fight for prices to be frozen," Perez replied that is not what the Shah said. "The Shah often has said that he will not be a factor of controversy, that is to say, that his country will not be a factor of controversy in the next OPEC meeting. At least, that is what I have read."

The day after the Shah left Washington, President Perez predicted an increase in OPEC's 1978 prices of "no more than 8 percent and no less than 5 percent." Earlier, Venezuela had been calling for a 10-percent raise. Justifying the increase, which he considered "small" and "reasonable," Perez said "the purchasing power of the dollars we get from our oil has been substantially reduced during the last two years by world inflation, so the increase of price is only fair." Perez rejected a US plea to support a freeze.

To rally support for an increase, Perez sent oil minister Hernandez to the Mideast earlier this month. At a meeting with Kuwait's oil minister Kazimi, the two reportedly agreed to press for a two-part, 8-percent price increase—4 percent in January and 4 percent in July. Hernandez told the Kuwaitis that he had enlisted widespread support for this formula.

Kuwait: Wants To Compensate for Inflation

Kuwait has received three OPEC oil ministers this month—Yamani, Hernandez, and Indonesia's Sadli. Kuwait reportedly agreed with both Sadli and Hernandez to support an 8-percent increase. Kuwait considers its position as moderate, asking only to cover inflation and losses in the value of its foreign investments.

During the Yamani visit, which preceded the others, Kuwait reportedly told the Saudis that it would accept the "final" Saudi position, probably expecting it to be in line with the majority.

Other Cartel Members

Pressure for a price increase of at least 10 percent will come from the usual group of price hawks. Iraq's claim that a 23-percent raise is justified by inflation and rising costs of imports from consuming nations is unrealistic; this percentage obviously is being used as an opening wedge. Iraq has claimed agreement on pricing policy with Algeria, who supports a 10-percent increase. Libya also favors an increase of at least 10 percent.

Among the remaining OPEC members, Indonesia is worried that revenue requirements cannot be met without an increase of at least 8 percent. Suharto sent Sadli to the Mideast to encourage support for such a raise. Nigeria probably favors an increase but is taking a backseat in the bargaining. Gabon and Ecuador have no influence over the decision other than to add votes to the majority.

Outlook

OPEC states are still refraining from final commitments to particular price positions, primarily to smooth the way to a concensus at Caracas. There is an overriding interest in the prevention of a split. Although the Shah's shift boosts prospects for a price freeze, Iran will have to stand firm at Caracas if an oil price increase is to be avoided. (Secret Noforn-Nocontract-Orcon)

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MIDDLE EAST: REFINING AND PETROCHEMICAL EXPANSION

The prospect of refined and petrochemical products from Middle East countries flooding world markets has greatly receded over the past three years. Ambitious plans for export-oriented industries formulated after the 1973 oil price hikes have been reevaluated because of cost overruns and construction lags. While expansion of refining and petrochemical capacity will be substantial during the next five years, it

will nevertheless represent only a little more than one-half of initially planned objectives. A review of projects in 12 Middle East countries indicates that at a maximum the region's refining capacity will increase by nearly 3 million b/d between 1976 and 1982, reaching 7 percent of projected world capacity. Petrochemical capacity will not exceed 4 to 5 percent of the projected world total.

Obstacles to Development

The impetus for moving into broad processing of hydrocarbons came with the quadrupling of oil prices in 1973/74. Middle East oil producers saw the jump in revenues as an opportunity to use surplus funds for the acquisition of advanced technology and to gain further value added from their resources. They also intended to make productive use of gas associated with crude oil production rather than waste it by flaring. International companies encouraged these plans, competing to offer technology and to take part in joint ventures. The projects were appealing to Western companies because they expected the oil producers to offer cheap feedstocks and to finance a large share of construction.

Perhaps the greatest impediment to these plans, however, was a general failure to anticipate the problems and costs of rapid industrialization in developing countries. A good deal of expensive direct supporting facilities such as desalination plants, electric power, ports, roads, and local repair shops had to be built from scratch. Simultaneous demand for project designs taxed the relatively few engineering firms qualified to handle such complex industries. The world inflationary spiral was compounded in the region by inability to assimilate imports, low labor productivity, and competition for foreign labor. Under these conditions, construction costs for a given project typically turned out to be double what a comparable facility would cost in the United States.

All of the Middle East oil states have had second thoughts about their plans to expand oil refinery and petrochemical capacity. In almost all cases construction plans have been stretched out and in at least some instances planned projects may eventually be canceled altogether. As a result even revised projections of how much capacity may come on stream over the next five years are probably on the high side.

Refineries

Based on crude throughput, new refinery capacity likely to be put in operation during 1977-82 will amount to at most 2.9 million b/d, including expansion of existing refineries. Allowing for growth in domestic consumption, export capability of the 12 countries will increase from 1.2 million b/d in 1976 to roughly 3 million b/d in 1982.

Oil Refinery Expansion

Thousand b/d

	Capacity Yearend 1976	Additions					
		1977	1978	1979	1980	1981	1982
Total	**3,123**	**245**	**224**	**1,040**	**250**	**620**	**500**
Abu Dhabi	15	0	0	0	0	120	0
Algeria	123	0	0	380	0	0	0
Bahrain	250	0	0	0	0	0	0
Dubai	0	0	0	0	0	200	0
Egypt	235	0	0	0	0	0	0
Iran	781	245	40	200	0	0	0
Iraq	169	0	0	70	0	300	0
Kuwait	685	0	0	0	0	0	0
Libya	135	0	0	220	0	0	0
Qatar	9	0	0	0	150	0	0
Saudi Arabia	604	0	0	170	100	0	500
Syria	117	0	184	0	0	0	0

Reported construction schedules show a bunching of new capacity in 1979, but some slippage is probable.

The schedule for 1980-82 is considerably more uncertain. Based on available information, for example, construction of planned refineries in Abu Dhabi and Dubai has not even begun. Neither has construction started on two Saudi Arabian refineries planned for 1982, although site preparation is under way and design contracts have been let. If completion of these facilities is delayed, total capacity additions would amount to only around 2 million b/d by 1982.

Petrochemicals

Most of the Middle East projects include plans for downstream processing plants that will transform ammonia into fertilizer and ethylene into plastics, artificial fibers, and synthetic rubber.

As in the case of refinery construction, deviation from targeted schedules is highly probable, especially in the last two years of the period under review. At a maximum, some 3.8 million tons of new ammonia capacity will be put on stream, accompanied by about 2.4 million tons of ethylene. The grandiose Saudi Arabian development plan calls for five petrochemical complexes, of which it is estimated only one ammonia and one ethylene facility will actually be completed by 1982.

Petrochemicals Capacity Expansion

Thousand Tons

	Capacity Yearend 1976	Additions 1977	1978	1979	1980	1981	1982
Ammonia	**1,742**	**660**	**960**	**1,160**	**160**	**600**	**300**
Algeria	0	330	330	0	0	0	0
Egypt	260	0	330	100	0	0	0
Iran	215	0	0	400	160	0	0
Iraq	84	0	0	660	0	0	0
Kuwait	660	0	0	0	0	0	300
Libya	0	330	0	0	0	0	0
Qatar	270	0	300	0	0	0	0
Saudi Arabia	200	0	0	0	0	600	0
Syria	53	0	0	0	0	0	0
Ethylene	**12**	**0**	**400**	**770**	**300**	**630**	**350**
Algeria	0	0	0	140	0	0	0
Iran	12	0	0	0	300	0	0
Iraq	0	0	0	0	0	130	0
Kuwait	0	0	0	0	0	0	350
Libya	0	0	400	330	0	0	0
Qatar	0	0	0	300	0	0	0
Saudi Arabia	0	0	0	0	0	500	0

Assessing the market potential for these new facilities is far more tenuous than for oil refinery products. In general, the more broadly based economies of Egypt, Iran, and Iraq will consume all or most of their domestic production. Kuwait, Qatar, and Saudi Arabia, however, will definitely be looking at export markets for their products.

World Context

An examination of projects already under way or in advanced stages of planning indicates that the region will increase moderately its share of world capacity by 1982. Using rough forecasts of growth in capacity elsewhere, Middle East refining capacity under the most optimistic conditions will increase from 4 percent of the world's total last year to about 6.7 percent in 1982; petrochemicals will make up less than 4 to 5 percent of total capacity.

Looking at the Persian Gulf alone, the impact of capacity growth is even less pronounced. Assuming that Saudi Arabia and other Gulf countries complete 2.1 million b/d of refinery capacity expansion, their share of world capacity will increase from 3.4 percent in 1976 to 5.2 percent in 1982. Similarly, ammonia capacity will

Middle East Shares of World Capacity

	World	Middle East	Percent
	Thousand b/d		
Refining			
1976	74,800	3,123	4.2
1982	89,000	6,002	6.7
	Thousand Tons		
Ammonia			
1976	74,000	1,742	2.4
1982	122,000	5,582	4.6
Ethylene			
1976	36,000	12	Negl
1982	66,000	2,462	3.7

grow from 1.9 percent to 3.2 percent and ethylene from a negligible amount to 2.4 percent.

Further into the 1980s, this situation could change if all projects currently on the books are built. Given the problems encountered thus far, however, it appears likely that the oil producers will adopt a more measured pace of expansion that will extend completion of their programs into the 1990s.

Pressure on Western Partners

Many of the refinery and petrochemical projects under construction or planned in OPEC countries involve some capital participation on the part of Western firms. In several cases, however, foreign companies are going ahead rather reluctantly because of the high costs and uncertainty over marketing prospects. Capital investment of the Saudi petrochemical projects, for example, runs to about $1 billion each, double the cost in the United States. Despite Saudi long-term loans at relatively favorable interest rates, the foreign partners see little chance of turning out competitively priced products without heavy government subsidy of feedstocks as well. These subsidies, if provided, could support "dumping" charges once marketing begins.

Recognizing this problem, the Saudis have been pressuring Japanese firms to carry through on earlier project commitments, using the promise of long-term guaranteed crude supplies as an incentive. As early as 1973 a leading Japanese conglomerate—Mitsubishi Corporation—had proposed building a large integrated complex to include refining, basic feedstock, and downstream products. To date the

company has not submitted a firm design tender, on grounds that end-products from Saudi facilities would be in competition with other Mitsubishi-owned production lines in the Far East. The Saudis are disturbed by Japanese delaying tactics and their unwillingness to take a larger role in costly Saudi development programs. In the interim, the Saudis have obtained design tenders from US corporations for two refining and four petrochemical projects.

A parallel pitch by OPEC as a group may be shaping up to link crude supplies with the sale of petrochemical products. On two recent occasions, OPEC Secretary General Ali Jaidah publicly raised this possibility. His theme in essence was that "security of oil supply can only be real and enduring" if industrial countries accommodate their markets to import OPEC downstream products. In making these arguments, the OPEC countries realize that unless expansion plans worldwide are substantially reduced, refinery and petrochemical plant capacity will exceed world demand by a wide margin through the early 1980s. (Secret Noforn-Nocontract)

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OPEC PARTICIPATION IN DOWNSTREAM PETROLEUM OPERATIONS

Emphasizing an increasingly favorite OPEC theme, OPEC Secretary General Ali Jaidah recently warned a West German audience that the willingness of Western Europe to export advanced technology would play an important part in shaping OPEC's future oil policies.

On Economic Relations

"Planning for future energy needs can only be meaningful if the OPEC area, as the main exporter of petroleum to Europe, the United States, and Japan, is accepted as a positive partner and not regarded as a hostile group which ought to be dismantled." Jaidah asserted "perhaps the consuming countries feel that their obligations are terminated by payment of the monetary price of OPEC oil and gas. In this connection, it is my feeling that we should be thinking less in terms of the dollar value of our oil, and more and more in terms of the material commitment by the consumers to our transformation. . . . It is to Western Europe, more than elsewhere, that we look for economic cooperation, educational training, manpower development, technological transfers and social improvement. . . . We believe that Europe, having largely overcome the debilitating effects of the recent recession, should now feel itself in the position to make good the promise to carry out meaningful and effective transfer of appropriate technology in a fairer international division of labor."

Jaidah said OPEC is particularly interested in moving into downstream petroleum operations as an initial step in broadening its economic base. The Secretary General accused Western nations of trying to block OPEC's entrance into these areas, and resisting competition from OPEC petroleum products in Western markets. "It is to oil that we naturally look for the means with which our member countries can diversify their economies. . . . The first and most natural step in our efforts towards industrialization is to integrate the oil sectors with the rest of our economies and use this sector as an engine of structural change . . . but there is an alarming unwillingness [of developed countries] to cooperate in refining and petrochemicals for export purposes, on a fair and equitable basis. Total OPEC member countries' share in world refining is only 6 percent—that is, 4.6 million b/d. We are told that there is already a surplus in refining and petrochemical plants, but we see that several countries in Europe and elsewhere are building new plants." Jaidah also charged that Europe uses EC tariffs on oil products, patent restrictions, and other institutional barriers to keep OPEC out of the market.

OPEC's overriding objective in diversifying is to prepare for the period when oil exports begin to dwindle. "If all we get for our oil, when it is exhausted, are bank accounts and a few losing projects, that would be tragic indeed." Jaidah noted that OPEC states will want to share in the supply of new energy sources, including nuclear and solar power. OPEC feels that its willingness to deplete its own petroleum resources now to satisfy world energy requirements entitles its members to access to the technology for energy alternatives in the future.

Jaidah made it clear that OPEC intends to use its oil leverage to achieve its economic and technological goals. "On our side, we have to reflect upon our strategies regarding supply and prices of oil."

On Oil Prices and Supply

Jaidah argued "the price of oil ought to be measured by the degree of development and diversification in our economies and the acceptance by the consumers of non-oil exports from our countries." The consuming countries need to accept "a view of prices which is rational and designed to achieve optimal allocation of exhaustible energy resources."

Jaidah complained that while "we recognize the need for stable supplies within a commercial context . . . security of supply seems to be taken for granted by consuming countries without any real collateral." He called for "some real efforts for change. Security of oil supply can only be real and enduring if consumers succeed in making

our economies dependent on them as suppliers for development goods and eventually markets for our non-oil exports. Interdependence is the only guarantee of real security of supply in both directions. . . . But unless we reach a fairer international division of labor, frictions will arise."

Jaidah was confident that OPEC's leverage will continue to increase as petroleum supplies tighten. He warned that despite the availability of North Sea and Alaskan crude, "the next two or three years will not witness a decline in demand for OPEC oil. The most likely eventuality is that a global shortage will be slightly delayed and some OPEC countries will be relieved from the pressure to produce at levels higher than their needs warrant." Jaidah foresees an "ever-increasing gap in world energy demand from its presently known reserves" after the next four or five years, which he feels OPEC should not be expected to fill. "Our own estimates show that existing reserves, plus likely additional reserves, might enable us to reach production levels which are not very much in excess of 40 million b/d." (Current production capacity is 37.5 million b/d.) According to Jaidah, the intervening "breathing space" should be a time of close cooperation between consuming and producing nations in planning for future energy needs, and in financing and researching additional energy resources, both petroleum and non-petroleum. (Unclassified)

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OIL RESERVES OF EXPORTING COUNTRIES AND THE TIME HORIZON OF THEIR DEPLETION

The OPEC Secretariat is examining optimum strategies for rationally producing the oil reserves of its member countries to maximize the ultimate volume of oil recovery. Many oil exporting countries are becoming increasingly reluctant to expand daily productive capacity to its full potential if this development jeopardizes maximum recovery. Reproduced below is an article that appeared in the OAPEC Quarterly Journal Oil and Arab Cooperation *(Fall 1977) addressing this issue. The author Adnan Janabi is a senior economic analyst in OPEC and the former director in the Economic Department of the Iraqi Petroleum Ministry.*

Interest has grown in the problem of the depletion of resources in general and that of oil resources in particular. Despite this wide-ranging interest, an important gap has been left unfilled in the theoretical frameworks presented by the science of economics.

The past policies of the major oil companies on production cannot be considered as optimal for several reasons, mainly because the companies' income from a unit of

production was fairly steadly while their discount rate for time in most producing countries was very high; thus their preference was always for early depletion.

Producing countries have been playing an increasing role in production decisions. Despite this new situation, exporting countries still generally tend to respond to demand rather than act upon it. Price decisions are not geared to influence total consumption. The most important determinant of depletion policies in exporting countries can therefore be traced back to the level of economic activity in consuming countries.

The depletion of oil reserves is governed by rates of production of what are called "proven reserves." In the final analysis, the critical factor for the examination of the depletion of reserves is not presently known reserves but "probable reserves," reserves that are ultimately recoverable. Improved recovery techniques and new discoveries are bound to increase presently "proven reserves" over time.

Efficient production policies must not allow the physical waste which results from excessively speedy depletion. Maximum Efficient Recovery (MER) determines the upper limit of any rational depletion policy.

Empirical examination of the production policies of oil-exporting countries shows that they fall into two broad groups. The first group have little or no opportunity to increase their production beyond present levels if MER curves are to be respected. The second group still have the potential to tailor their production policies according to their future requirements and considerations relating to conservation. Needless to say, increased reserves would extend the life span of production plotted in the present paper. But such extensions should be viewed as a contribution to the supply of future needs, not as an opportunity to increase production rates.

Venezuela has already decided to bring down its production from 3.8 million b/d in 1970 to around 2 million b/d. This reduction may be viewed as having been forced by circumstances rather than as a preconceived depletion strategy. On the other hand, Kuwait's decision to produce a maximum of about 3 million b/d (while producing far less in practice) is a clear indication of a depletion policy based on considerations other than imminent natural decline. Since 1970, a combination of reasons has prompted Libya to bring down its production level, putting an end to unsound production practices of the companies, and going further to institute some action to prolong the life span of its reserves.

Venezuela, Indonesia, Algeria, Nigeria, and Iran are faced with two problems as a result of past production policies. First, they cannot increase their present production levels without doing damage to the life span of their reserves. Second, problems might arise in the long run in satisfying their indigenous energy requirements. Iraq, Saudi

Arabia, Abu Dhabi, Libya, and Kuwait still have the opportunity to shape their production policies, in varying degrees, to take into account their future requirements and to evolve conservation strategies in the light of their national interests.

The time horizon of the depletion of oil resources of the exporting countries is not very long, and would be shortened further by the absence of long-term depletion strategies. Some of the oil-exporting countries may face a crisis in meeting their internal energy requirements before long.

It is evident that the pursuit of rational production policies necessitates reduced or stabilized production levels in all the cases mentioned, although upward pressure on prices would naturally be created. Regarding the time horizon of depletion, however, the development would be welcome, for it would enable the exporting countries to raise their income without resorting to increased production rates. (Unclassified)

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SOVIETS MOVE TOWARD TERTIARY OIL RECOVERY

The USSR is taking steps to activate a high-priority program of enhanced recovery to increase oil yields from older fields. In early November the Soviets signed a $24.5 million contract with an Italian firm, Pressindustria, to build the world's largest plant for producing nonionic surfactants from ethylene-oxide for use in tertiary oil recovery. This plant, which may be built in West Siberia, will have an annual output of 250,000 tons of surfactant but probably will not be on stream before the early 1980s.

Because of the lack of exploration success in recent years and the high cost and difficulty of developing oil reserves in remote regions, the USSR plans to use enhanced recovery techniques intensively to recover an additional 10 to 12 percent of the original oil in place from fields currently in production or under development. The Soviets have only limited experience with most enhanced recovery techniques other than waterflooding, although they have tried every major secondary and tertiary recovery method on an experimental or pilot basis in at least one oil field. A commercial-scale effort has been stalled by persistent shortages of the necessary chemicals, equipment, and trained personnel.

During the past year the Soviets have made several attempts to obtain technology and equipment from the West for enhanced oil recovery projects. In addition to the surfactant plant from Italy, they have discussed the purchase of a 45,000-metric-ton/year surfactant plant with a West German firm. This plant would be installed in the Urals and would be used to support surfactant flooding projects in that area. The

Soviets also have attempted to obtain US licensing rights to a process for producing petroleum-based feedstocks for surfactants; negotiations for a plant using this process are under way with a West German firm. The USSR is also discussing the installation of two carbon dioxide (CO_2) plants with West German and UK companies. These plants, with combined capacities of about 2.5 million tons per year, would be used for miscible flooding projects.

Using surfactants to enhance oil recovery is expensive and time consuming and will not yield the volumes of oil required to solve the long-term problems that we foresee in the Soviet oil industry. For example, use of 250,000 tons of surfactants in a tertiary recovery operation could yield an additional 63,000 b/d to 215,000 b/d of oil, depending on the amount of surfactant required for the individual reservoir. Including only the amortization costs of the plant to produce the surfactants, each barrel of oil recovered would cost from $4 to $14.

Technology Note

Micellar flooding, also known as surfactant flooding or microemulsion flooding, is one of several enhanced oil recovery techniques to get more oil out of reservoirs than can be obtained by conventional primary and secondary methods. In this technique, a two-step process is normally used to yield more oil. First, a slug of surfactant (petroleum sulfonate) and an alcohol (cosurfactant) is injected to lower interfacial tension. Next comes a large slug of water containing a high molecular weight polymer. This water-polymer slug pushes the chemicals through the field and improves mobility and sweep efficiency.

Each reservoir has unique properties and the amount and the type of polymer, surfactant, and alcohol used for the micellar slug will vary depending on the specific properties of the fluid and rock involved. The amount of chemicals for the surfactant slug alone can range from 3 to 11 kilograms per barrel of oil recovered. The polymer-water slug could take from 0.2 to 0.5 kilograms of polymer, depending on the reservoir characteristics. (Confidential)

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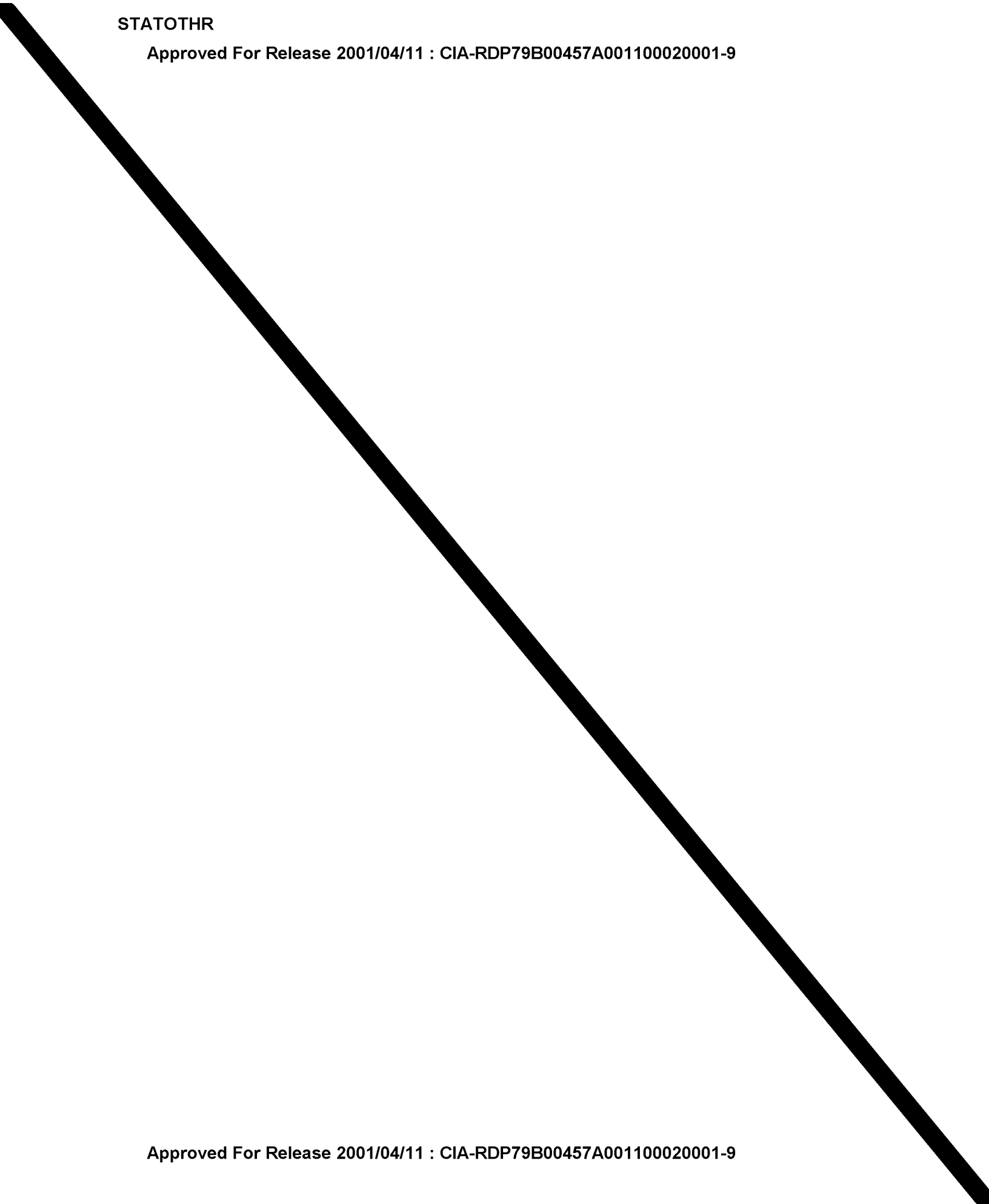
ISRAELIS FIND OIL IN GULF OF SUEZ

Announcement of a promising oil discovery about 30 kilometers southeast of At Tur along the eastern shore of the Gulf of Suez was made on 25 November 1977. An Israeli drilling rig has been working in this area for almost a year without any apparent success until last week. The new well is reported to be flowing at about 2,000 to 4,500 b/d from 1,680-meter depths.



The encouraging production test and the depth suggest that the Israelis may have tapped a commercial oil deposit. Although it is premature to speculate on the size of the reserves, high-quality offshore reservoirs have been found by the Egyptians at El Morgan, July, and Ramadan about 50 kilometers to the northwest. More delineation drilling and production testing will be required before development plans unfold. The Israeli find will almost certainly encourage Egypt's interest in a peace settlement that would allow drilling in 16 or so additional structures on the Israeli side of the median line in the Gulf of Suez. (Confidential)

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OPEC OIL EARNINGS: IMPACT OF EXCHANGE RATE FLUCTUATIONS

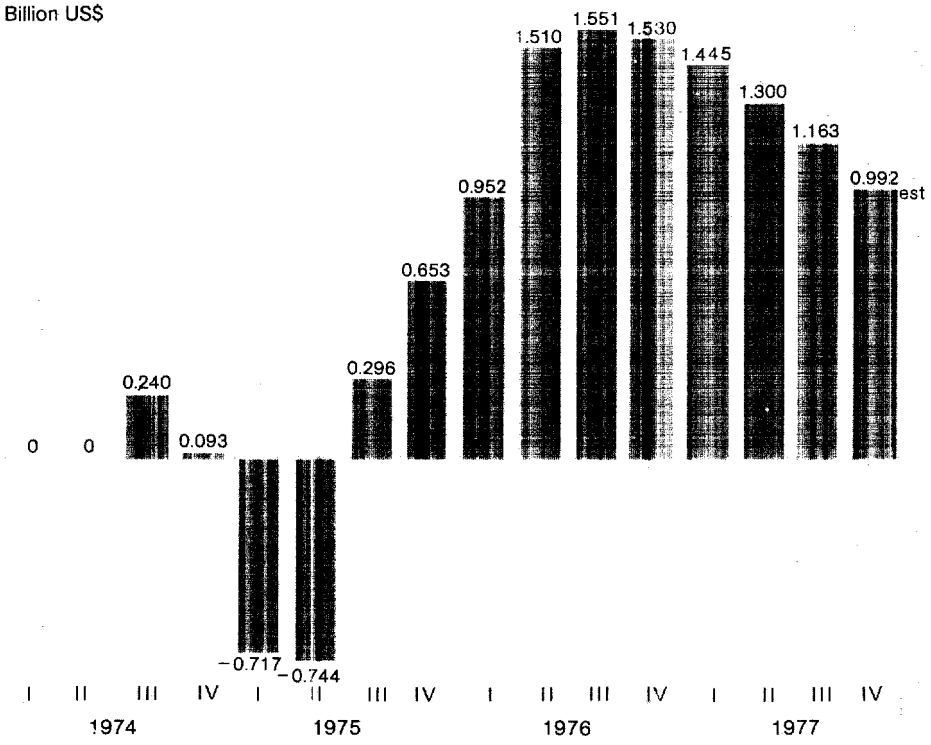
At this time, we do not think OPEC will switch from US dollar-denominated oil prices. The decline in the value of the dollar since the last OPEC meeting in December 1976 has again raised concern among OPEC countries over the declining real value of their oil earnings, which are denominated in dollars. Deliberations at the upcoming December meeting in Caracas will be influenced by this issue, but most OPEC members realize that pricing oil in dollars continues to work to their advantage. The OPEC Economic Commission Board has calculated that losses due to the declining value of the dollar in the last year have been minimal; the oil ministers are unlikely to move to a new unit of oil pricing in the near future.

From time to time various OPEC members have questioned pricing oil in dollars, sometimes advocating pricing in IMF Special Drawing Rights (SDRs) or some other basket of currencies. We used three methods to measure whether OPEC members have gained or lost from the dollar pricing of oil: by comparing the dollar's value relative to (a) the SDR, (b) a group of major currencies weighted by the value of ***OPEC imports*** from each country, and (c) the same group of major currencies weighted by the value of ***OPEC imports and foreign investments*** in each currency.

SDR Pricing

According to press reports, OPEC concern over erosion of real export earnings has rekindled interest in alternative oil pricing schemes. For example, Shaykh Ali Khalifa, Under Secretary to the Kuwaiti Acting Oil Minister, recently discussed preserving the real value of oil earnings by setting oil prices in SDRs. OPEC members have not discussed any specific alternative basket of currencies besides the SDR group. Since members have different trading patterns with the major developed countries, they would have difficulty agreeing on another currency mix.

OPEC: Net Revenue Accrued from Dollar Prices Relative to SDR Denominated Prices[1]



1. Net revenues are obtained by multiplying gross revenues by the changes in the SDR per US$ index based on 1973 parity. 574577

The dollar has declined 1.4 percent against the SDR since the end of 1976, when most OPEC members last raised oil prices. Despite this decline, the value of the US dollar relative to the SDR is still nearly 3 percent above its 1973 level. Based on the dollar-SDR parity of 1973, the dollar fell below its base period level only between December 1974 and July 1975.

Over the last four years, OPEC revenues from dollar oil prices have far exceeded the potential revenues that would have been generated through an SDR pricing system. Since mid-1974, when the dollar began to float against the SDR, cumulative dollar revenues have been more than $10 billion above the amount that would have been received under an SDR pricing scheme.

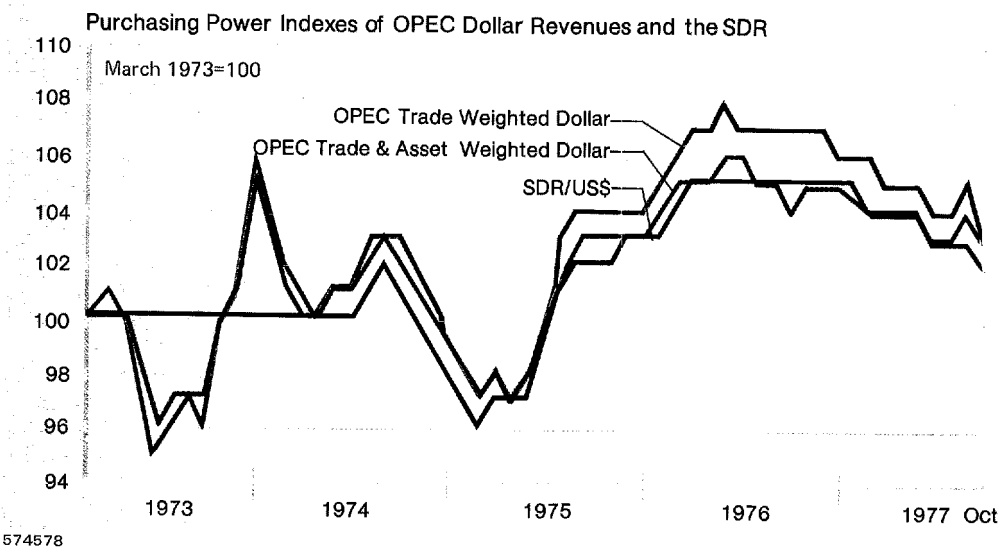
Exchange Rate Movements

Following the abandonment of the fixed exchange rate system in March 1973, the value of major currencies has been determined largely by market forces. In terms

of dollars, OPEC countries pay higher real prices for goods imported from countries whose currencies appreciate against the dollar and pay lower real prices for imports from countries with depreciating currencies. Exchange rate movements have no effect on OPEC imports from the United States, which are also in dollars. Since December 1976, appreciation of the yen, pound, and mark has increased the real price of imports from Japan, the United Kingdom, and West Germany to OPEC members in terms of their dollar-denominated exports. On the other hand, the real prices of imports from Australia, Canada, Denmark, Norway, Spain, and Sweden have fallen because their currencies have lost value relative to the US dollar.

The Purchasing Power of OPEC Oil Earnings

In 1977 the rapid appreciation of the yen and the continuing strength of the West German mark lowered the purchasing power index for the dollar, as weighted by ***OPEC imports***, by about 3.5 percent. Nonetheless, at the end of October, the index stood at 3 percent above the March 1973 level.* By the end of 1976 the dollar purchasing power index had risen by nearly 7 percent over its March 1973 level. Since oil prices quadrupled in 1973/1974, dollar-denominated oil prices have generated a purchasing power gain for OPEC countries,except for the first six months of 1975.



*The purchasing power index of dollar revenues received by OPEC countries is a geometric average of the indexes for the currencies of 17 major industrial nations relative to the US dollar, weighted by 1976 OPEC imports from the group. The nations are Australia, Austria, Belgium, Canada, Denmark, France, Italy, Japan, Netherlands, Norway, South Africa, Spain, Sweden, Switzerland, United Kingdom, United States, and West Germany. These countries supply more than 80 percent of OPEC imports.

The purchasing power index of dollar revenues weighted by ***OPEC trade and foreign investment flows*** for 1976 shows less variation resulting from exchange rate movements; this is attributable to the predominance of dollar-denominated financial assets in the OPEC investment portfolio. From total export earnings of $123 billion in 1976, OPEC spent 77 percent on imports of goods and services and the remainder on foreign-currency-denominated assets. This year, the trade and asset weighted index has fallen 3 percent, slightly less than the index weighted by trade alone. At the end of October, the trade and asset weighted index stood 2 percent above its March 1973 level.

Prospects

The OPEC oil ministers meeting scheduled for 20 December will focus on the issue of changing the price of oil. There is little indication that the ministers will seriously consider switching from dollar-denominated oil prices. Even though reports indicate that Kuwait has informed Saudi Arabia of a growing concern over the erosion of real income from currency movements, the impact of world inflation on OPEC earnings still appears to be the primary monetary issue.

The practice of basing oil prices in dollars will probably continue to prove superior to SDR pricing, from the OPEC point of view. Whenever the dollar weakens against other major currencies, however, the issue will reappear. (Confidential)

* * * * *

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National
Foreign
Assessment
Center

International Energy Biweekly Statistical Review

30 November 1977

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STATISTICAL REVIEW

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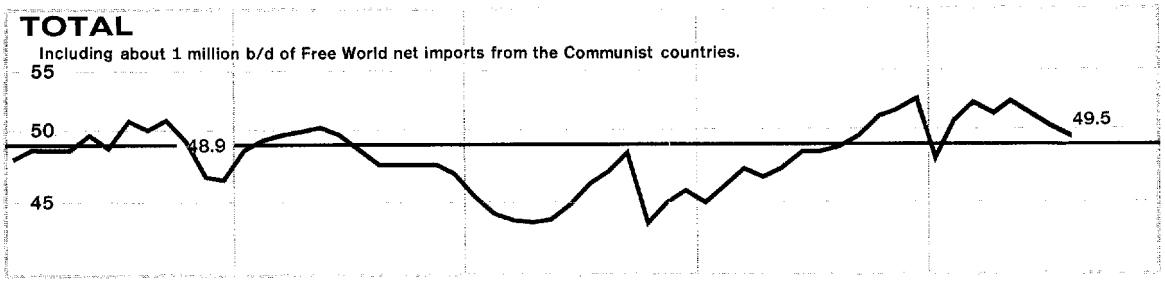
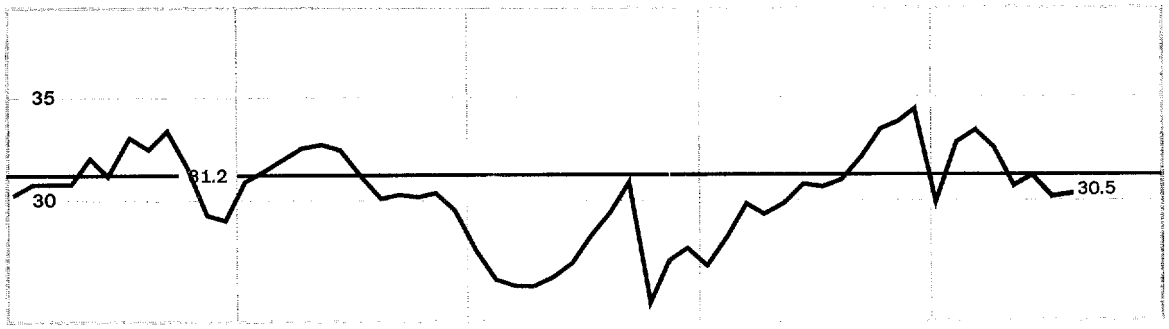
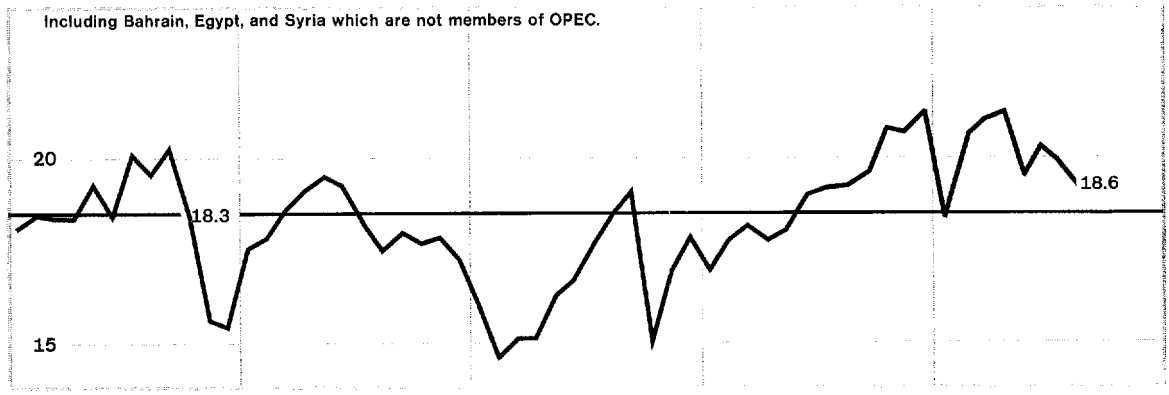
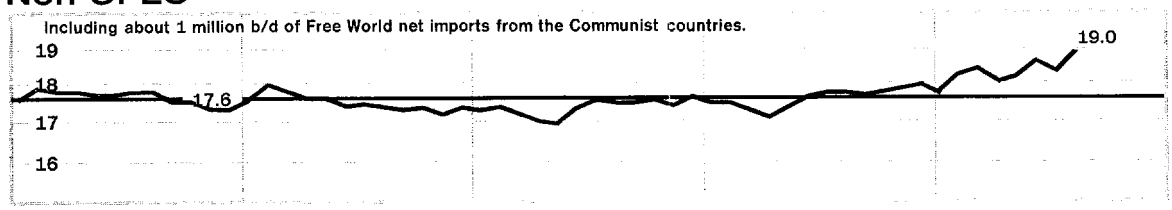
FREE WORLD OIL PRODUCTION[1] MILLION B/D

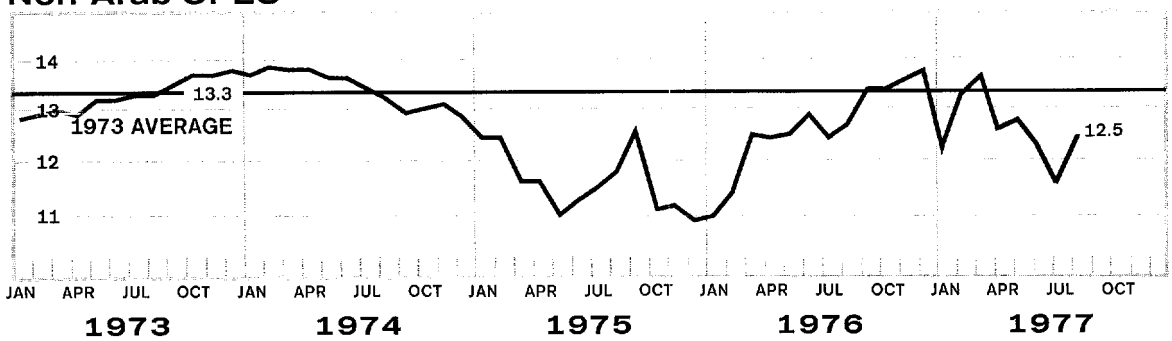
Semilogarithmic Scale











[1]Including natural gas liquids

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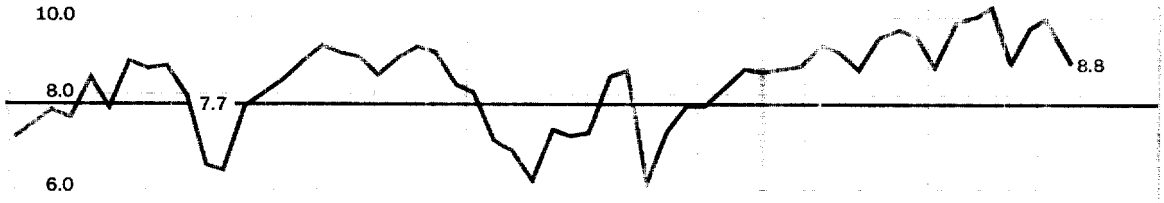
OAPEC OIL PRODUCTION MILLION B/D

Saudi Arabia

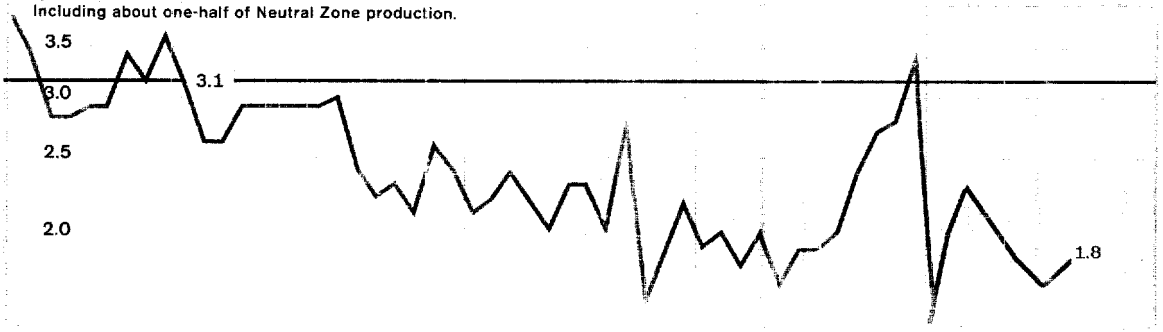
Semilogarithmic Scale

Including about one-half of Neutral Zone production.

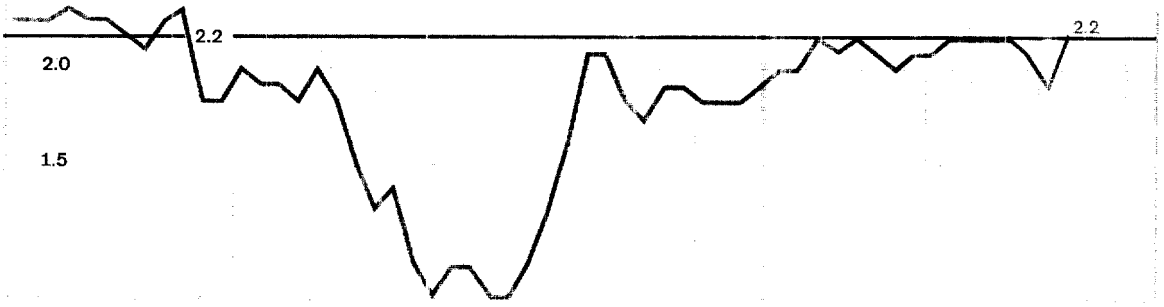


Kuwait

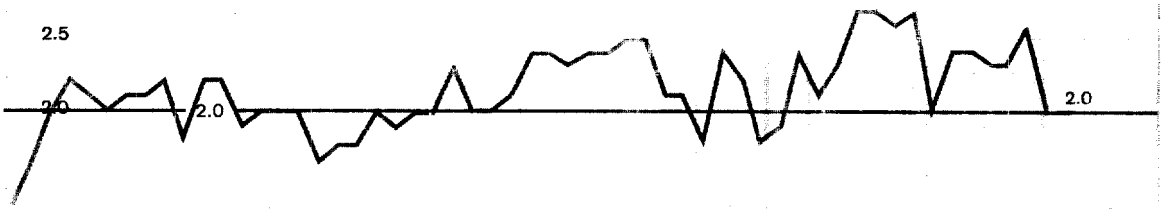
Including about one-half of Neutral Zone production.



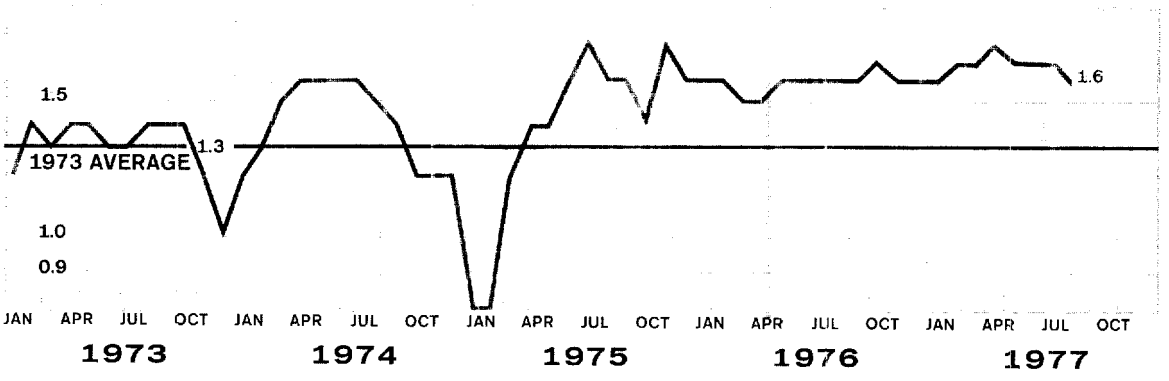
Libya



Iraq



Abu Dhabi



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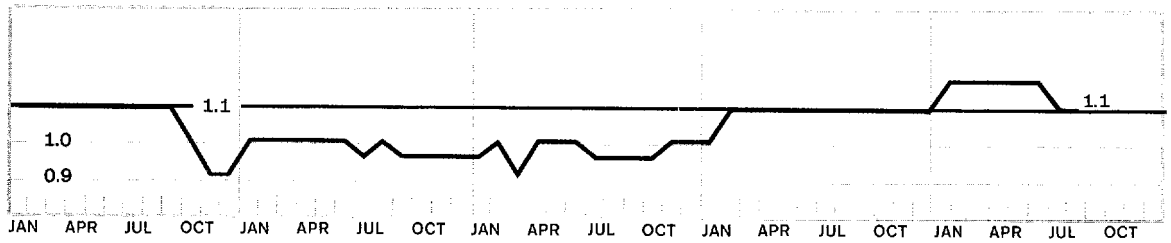
Algeria

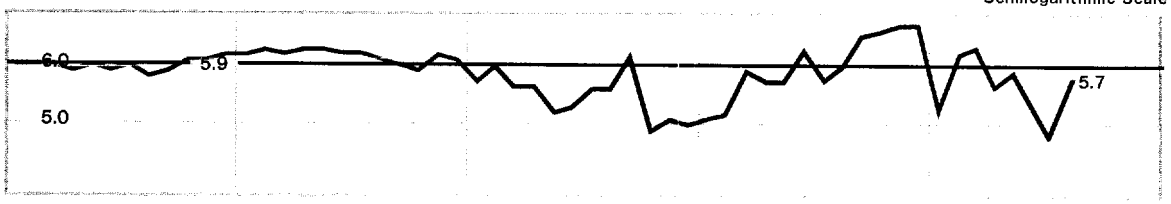


[1]Major producers

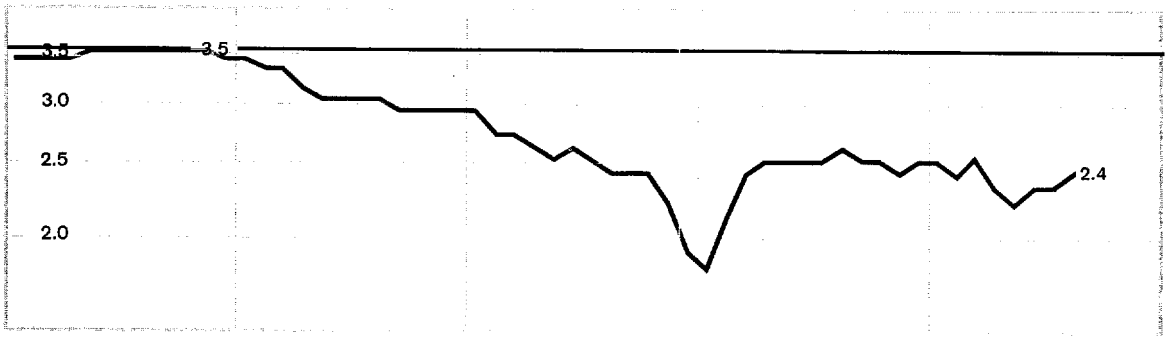
NON-ARAB OPEC OIL PRODUCTION[1] MILLION B/D

Iran

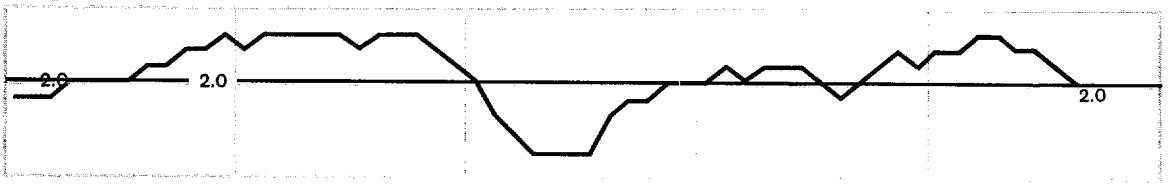
Semilogarithmic Scale



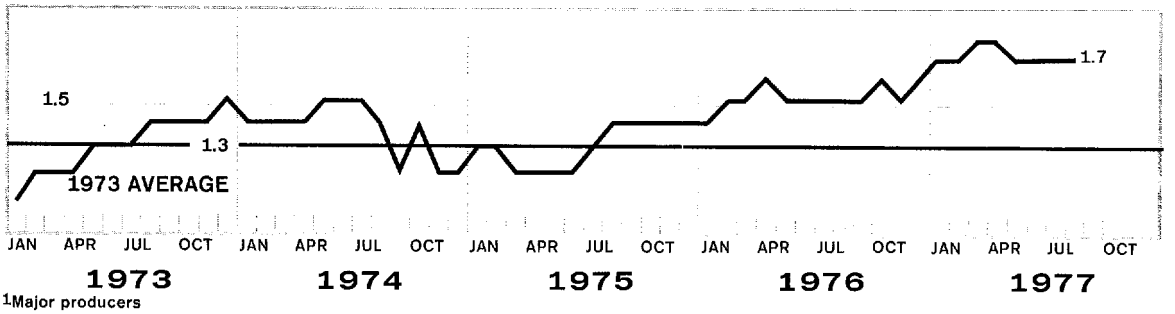
Venezuela



Nigeria



Indonesia



[1]Major producers

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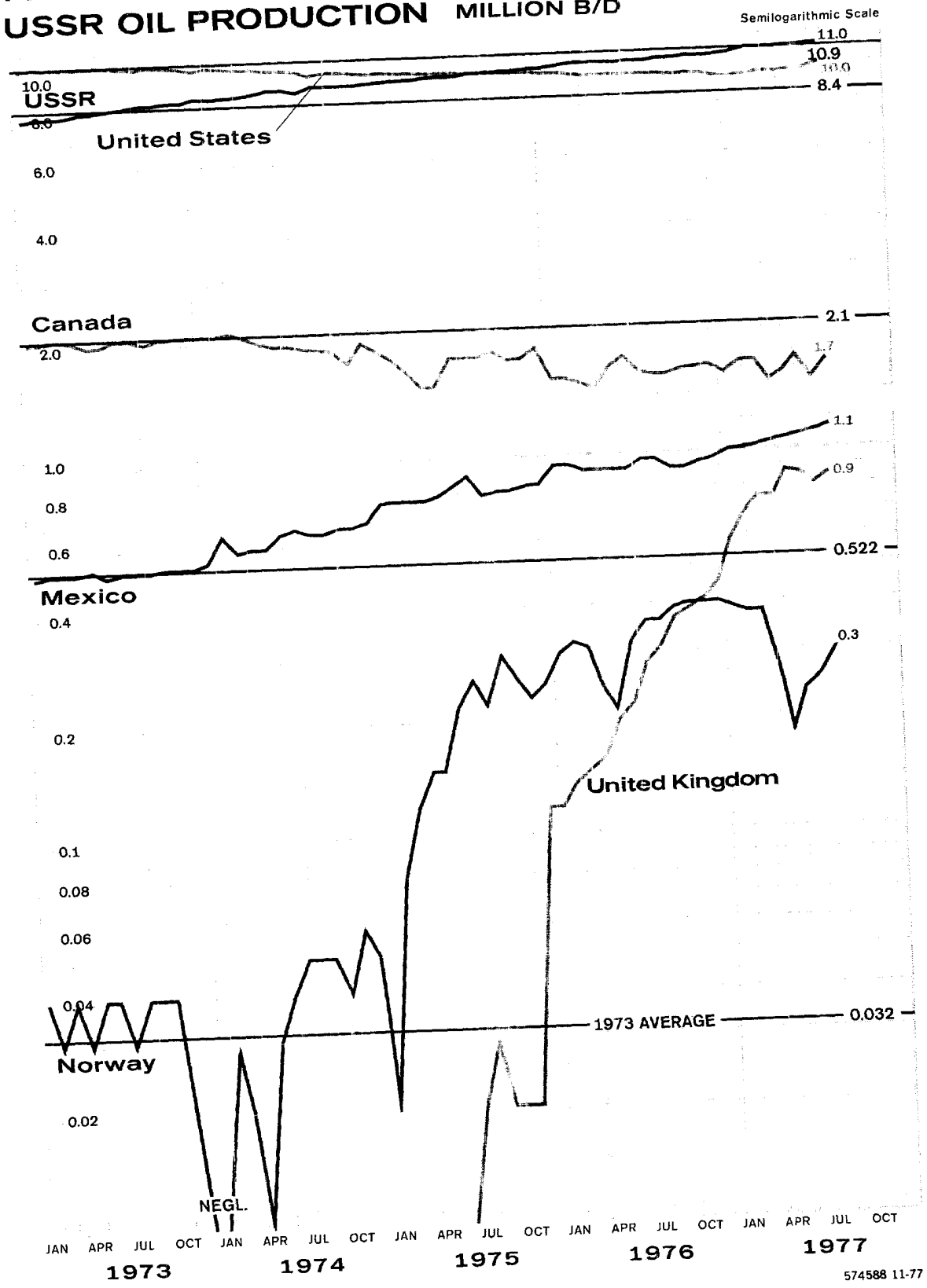
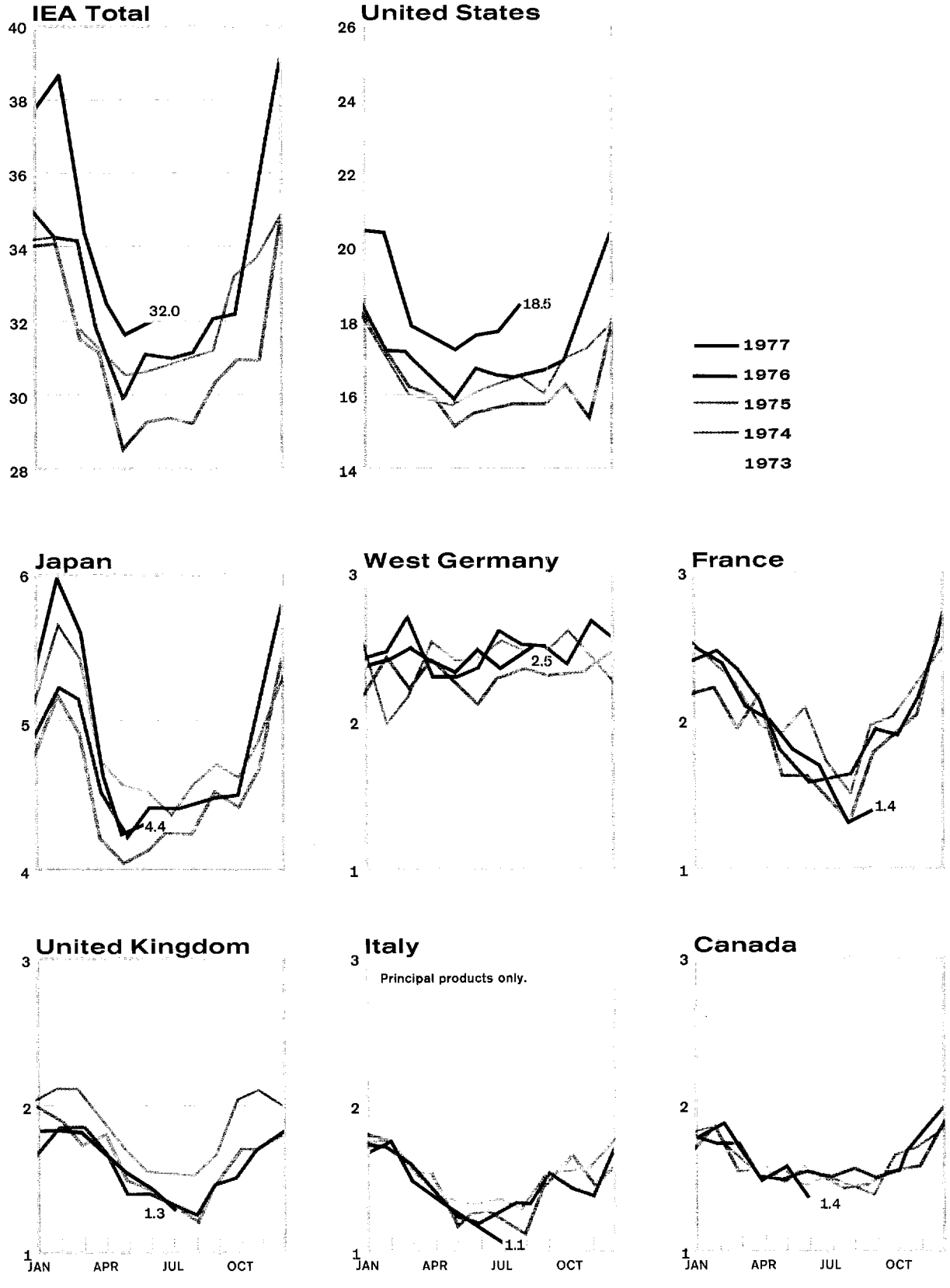
FREE WORLD AND USSR OIL PRODUCTION

MILLION B/D



INLAND OIL CONSUMPTION[1] MILLION B/D



[1]Except for the United States, excluding bunkers, refinery fuel, and losses.

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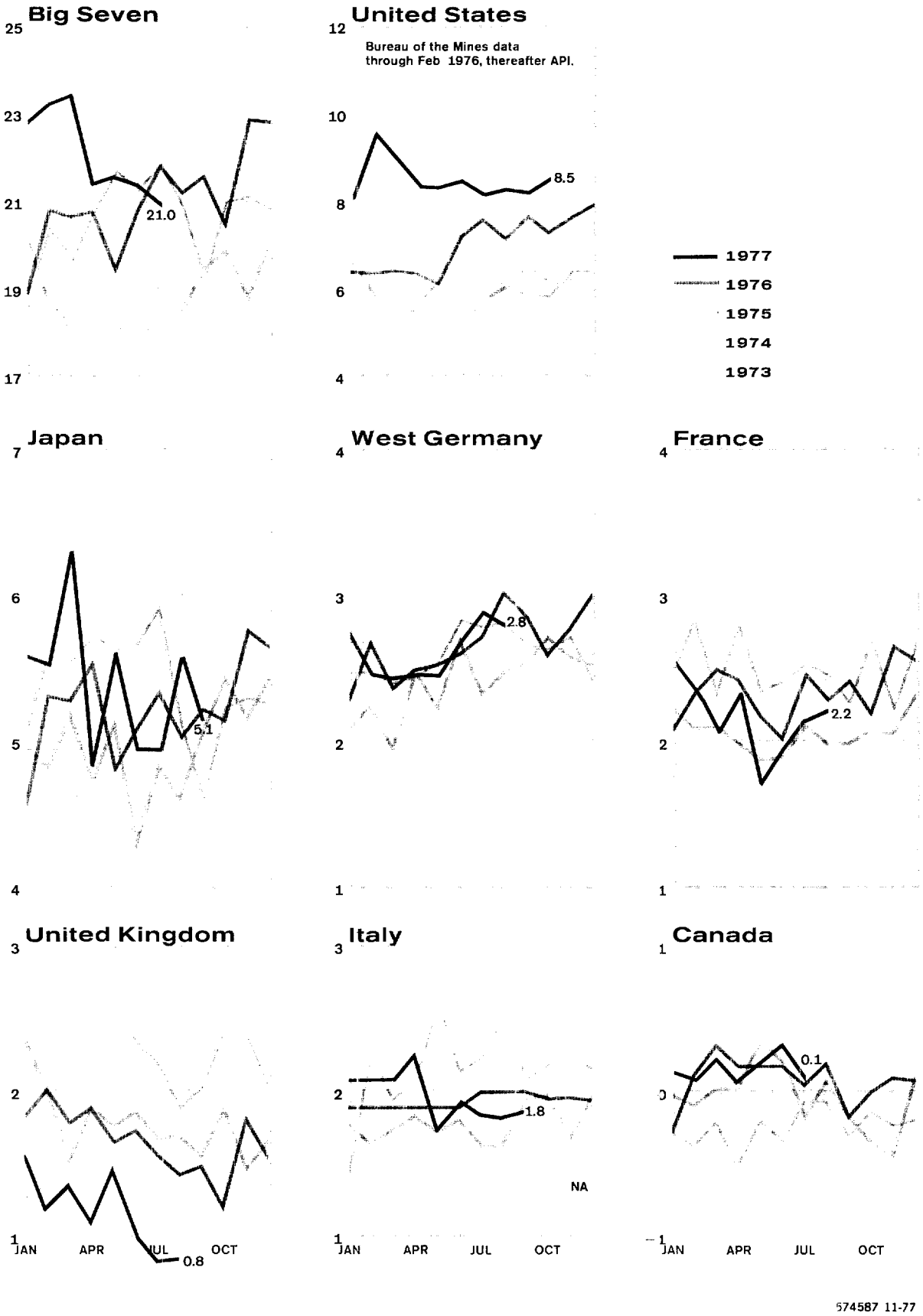
NET OIL IMPORTS MILLION B/D



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World Crude Oil Production, Excluding Natural Gas Liquids

Thousand b/d

					1977				
								Preliminary	
	1973	1974	1975	1976	1st Qtr	2d Qtr	Jul	Aug	Sep
World	**55,755**	**55,875**	**52,990**	**57,350**	**59,130**	**59,200**	**57,910**	**58,700**	
Free World	**45,850**	**45,145**	**41,470**	**45,110**	**46,520**	**46,400**	**45,000**	**45,750**	
Western hemisphere	16,145	15,290	14,135	13,820	13,850	13,740	13,860	14,400	
United States [1]	9,210	8,770	8,370	8,120	7,960	8,040	8,190	8,460	8,650
Venezuela	3,365	2,975	2,345	2,290	2,350	2,170	2,200	2,280	
Canada [2]	1,800	1,695	1,460	1,300	1,320	1,280	1,130	1,320	1,210
Mexico [3]	465	580	720	850	910	980	1,050	1,050	
Argentina	420	410	390	390	430	430	450	450	
Ecuador	210	175	160	190	200	170	150	190	140
Other	675	685	690	680	680	670	690	650	
Eastern hemisphere	29,705	29,855	27,335	31,290	32,670	32,660	31,140	31,350	
Western Europe	370	380	550	850	1,290	1,320	1,300	1,410	
Norway	30	35	190	280	340	200	220	270	
United Kingdom	Negl.	Negl.	20	240	630	800	770	820	
Other	340	345	340	330	320	320	310	320	
Middle East	21,215	21,855	19,590	22,180	22,300	22,140	21,110	21,020	
Saudi Arabia [4]	7,595	8,480	7,075	8,580	9,310	9,400	9,800	8,620	8,660
Iran	5,860	6,020	5,350	5,900	5,790	5,420	4,710	5,660	5,970
Kuwait [4]	3,020	2,545	2,085	2,150	1,850	1,850	1,630	1,790	2,250
Iraq	2,020	1,970	2,260	2,420	2,230	2,330	1,900	1,900	2,100
United Arab Emirates	1,535	1,680	1,665	1,940	2,010	2,070	2,050	1,930	
Abu Dhabi	1,305	1,410	1,370	1,590	1,660	1,720	1,720	1,600	1,650
Dubai	230	240	255	310	320	320	310	310	
Sharjah	0	30	40	40	40	30	20	20	
Qatar	570	520	440	490	420	410	390	500	340
Oman	295	290	340	370	370	350	330	330	
Syria	100	120	185	200	200	190	180	180	
Other	220	230	190	130	120	120	120	110	
Africa	5,900	5,370	4,980	5,790	6,330	6,420	5,940	6,140	
Nigeria	2,055	2,255	1,785	2,070	2,220	2,240	2,060	2,020	
Libya	2,175	1,520	1,480	1,930	2,130	2,150	1,890	2,130	
Algeria	1,070	960	960	990	1,070	1,060	1,000	1,000	
Gabon	150	200	225	220	220	220	230	230	230
Egypt	165	145	250	330	370	430	440	440	
Angola/Cabinda	160	170	140	110	170	160	160	160	
Other	125	120	140	140	150	160	160	160	
Asia-Pacific	2,220	2,250	2,215	2,470	2,750	2,780	2,790	2,780	
Australia	370	390	410	420	430	430	440	440	
Indonesia	1,340	1,375	1,305	1,500	1,690	1,700	1,690	1,680	1,670
Malaysia-Brunei	320	290	300	330	380	400	410	410	
Other	190	195	200	220	250	250	250	250	
Communist Countries	**9,905**	**10,730**	**11,520**	**12,240**	**12,610**	**12,800**	**12,910**	**12,950**	
USSR	8,420	9,020	9,630	10,170	10,510	10,660	10,740	10,780	
China	1,090	1,310	1,490	1,670	1,700	1,740	1,770	1,770	
Romania	285	290	290	290	290	290	290	290	
Other	110	110	110	110	110	110	110	110	

[1] Natural gas liquids amounted to an estimated 1.6 million b/d in Sep.
[2] Natural gas liquids amounted to an estimated 340,000 b/d in Sep.
[3] Natural gas liquids amounted to an estimated 95,000 b/d in Aug.
[4] Including about one-half of Neutral Zone crude oil production, which amounted to about 320,000 b/d in Sep.

Free World Crude Oil Production, Including Natural Gas Liquids

Thousand b/d

	1973	1974	1975	1976	1977 1st Qtr	1977 2d Qtr	1977 Jul	1977 Aug	1977 Sep
Free World [1]	**48,975**	**48,565**	**44,970**	**48,945**	**50,260**	**50,150**	**48,830**	**49,610**	
Non-OPEC Producers [1]	**17,665**	**17,505**	**17,425**	**17,780**	**18,190**	**18,360**	**18,420**	**18,990**	
United States	10,950	10,460	10,000	9,725	9,540	9,620	9,770	10,040	10,230
Canada	2,120	2,005	1,770	1,620	1,660	1,620	1,470	1,660	1,550
United Kingdom	Negl.	Negl.	25	285	680	850	820	870	
Norway	30	35	195	300	375	235	255	305	
Mexico	535	660	800	935	995	1,055	1,095	1,145	
Other [2]	3,530	3,545	3,735	3,815	4,040	4,080	4,110	4,070	
OPEC	**31,310**	**31,060**	**27,545**	**31,165**	**32,070**	**31,790**	**30,410**	**30,620**	**31,390**
Saudi Arabia [3]	7,685	8,610	7,215	8,760	9,510	9,600	10,000	8,830	8,890
Kuwait [3]	3,080	2,595	2,135	2,200	1,910	1,910	1,690	1,850	2,340
Libya	2,210	1,540	1,510	1,970	2,165	2,185	1,925	2,165	2,065
Iraq	2,020	1,970	2,260	2,415	2,235	2,335	2,005	2,005	2,305
United Arab Emirates	1,535	1,680	1,665	1,935	2,020	2,080	2,060	1,940	2,000
Abu Dhabi	1,305	1,410	1,370	1,585	1,670	1,730	1,730	1,610	1,660
Dubai	230	240	255	310	310	320	310	310	320
Sharjah	0	30	40	40	40	30	20	20	20
Algeria	1,100	1,010	1,020	1,075	1,170	1,160	1,100	1,100	1,050
Qatar	570	525	450	505	430	420	400	510	350
Iran	5,900	6,065	5,395	5,930	5,840	5,470	4,760	5,710	6,020
Venezuela	3,455	3,060	2,420	2,370	2,430	2,250	2,310	2,360	2,440
Nigeria	2,055	2,255	1,785	2,070	2,220	2,240	2,060	2,020	1,860
Indonesia	1,340	1,375	1,305	1,525	1,720	1,730	1,720	1,710	1,700
Gabon	150	200	225	225	220	220	230	230	230
Ecuador	210	175	160	185	200	190	150	190	140

[1] Free World and Non-OPEC Producers totals include net Communist imports of about 500,000 b/d in 1973, 800,000 b/d in 1974, 900,000 b/d in 1975, 1,100,000 b/d in 1976, and 900,000 b/d in 1977.

[2] Including Bahrain, Egypt, and Syria.

[3] Including about one-half of Neutral Zone production.

World Natural Gas Liquids (NGL) Production [1]

Thousand b/d

	1973	1974	1975	1976	1977
World	**2,845**	**2,860**	**2,855**	**2,995**	**3,095**
Free World	**2,625**	**2,620**	**2,600**	**2,730**	**2,820**
OPEC	**345**	**385**	**410**	**515**	**580**
Non-OPEC	**2,280**	**2,235**	**2,190**	**2,215**	**2,240**
Western Hemisphere	2,275	2,220	2,150	2,140	2,150
United States	1,740	1,690	1,630	1,605	1,580
Venezuela	90	85	75	75	80
Canada	320	310	310	320	340
Mexico	70	80	80	85	95
Other	55	55	55	55	55
Eastern Hemisphere	350	400	450	590	670
Western Europe	35	35	45	95	120
Norway	0	0	5	20	35
United Kingdom	0	0	15	40	50
Other	35	35	35	35	35
Middle East	190	230	245	295	335
Saudi Arabia	90	130	140	185	200
Iran	40	45	45	45	50
Kuwait	60	50	50	55	60
Qatar	0	5	10	10	10
Abu Dhabi	0	0	0	0	10
Iraq	0	0	0	0	5
Africa	65	70	90	125	135
Libya	35	20	30	35	35
Algeria	30	50	60	90	100
Asia-Pacific	60	65	70	95	110
Australia	50	50	50	55	60
Indonesia	0	0	0	20	30
Other	10	15	20	20	20
Communist Countries	**220**	**240**	**255**	**265**	**275**
USSR	210	230	240	250	260
China	N.A.	N.A.	N.A.	N.A.	N.A.
Other	10	10	15	15	15

[1] Estimated.

OAPEC [1] and OPEC [2] Countries: Crude Oil Production

Thousand b/d

					1977				
								Preliminary	
	1973	1974	1975	1976	1st Qtr	2d Qtr	Jul	Aug	Sep
Total OAPEC (thousand b/d)	**18,090**	**17,735**	**16,165**	**18,730**	**19,300**	**19,600**	**19,110**	**18,320**	
% change from Sep 1973 [3]		−11	−19	−7	−4	−2	−5	−9	
% change from Dec 1976 [4]					−8	−7	−9	−13	
Total OPEC (thousand b/d)	**30,965**	**30,675**	**27,135**	**30,655**	**31,490**	**31,210**	**29,830**	**30,040**	**30,980**
% change from Sep 1973 [3]		−7	−18	−7	−4	−5	−9	−9	−6
% change from Dec 1976 [4]					−8	−8	−12	−12	−9

[1] The members of the Organization of Arab Petroleum Exporting Countries are Abu Dhabi, Algeria, Bahrain, Egypt, Iraq, Kuwait, Libya, Qatar, Saudi Arabia, and Syria.

[2] The membership of the Organization of Petroleum Exporting Countries consists of OAPEC members (excluding Bahrain, Egypt, and Syria), plus Dubai, Ecuador, Gabon, Indonesia, Iran, Nigeria, Sharjah, and Venezuela.

[3] In Sep 1973, the pre-crisis level of output, OAPEC countries produced 20,038 b/d and OPEC countries 32,956 b/d.

[4] In Dec 1976, the post-crisis peak of output, OAPEC countries produced 21,060 b/d and OPEC countries 34,070 b/d.

OAPEC and OPEC Countries: Crude Oil Production Capacity

Thousand b/d

	Estimated Productive Capacity [1]	Underutilization of Productive Capacity	
		Aug	Sep
Saudi Arabia [2]	10,500	1,870	1,810
Kuwait [2]	3,500	1,710	1,220
Libya	2,500	370	470
Iraq	3,000	1,000	700
Abu Dhabi	2,000	400	350
Algeria	1,080	80	130
Qatar	700	200	360
Egypt	450	10	
Syria	200	20	20
Bahrain	60	10	10
Total OAPEC	**23,990**	**5,670**	
Iran	6,700	1,040	730
Venezuela	2,600	320	240
Nigeria	2,300	280	270
Indonesia	1,800	120	130
Dubai	340	30	20
Gabon	250	20	20
Ecuador	225	35	85
Sharjah	50	30	30
Total OPEC [3]	**37,545**	**7,505**	**6,565**

[1] Estimated at maximum efficient rate (MER) of production. In some cases output can exceed the MER for short periods of time without damaging the fields.

[2] Including about one-half of Neutral Zone capacity production.

[3] OAPEC members (excluding Bahrain, Egypt, and Syria), plus the other countries shown.

A Note on Petroleum Reserves

Any estimate of oil and natural gas reserves must be treated as rough approximation. Few countries publish official reserve estimates, and there is no consistent rigorous definition of reserves. Moreover, the volume of oil and/or gas in place, even in a well-delineated field, can never be precisely accurate; estimates of commercially recoverable oil and natural gas are usually made not by reference to existing technology but by reference to the production system currently in use, and even this can provide only an approximation. Assessments of proved reserves therefore do not mean absolute world availability; they are only an indication of the quantity of oil that is technically and economically feasible to extract with current techniques at current prices.

CIA's reserve figures are for *proved and probable* reserves and are based on the best available published information and on our own judgemental analysis in cases where we have unique information. CIA uses the restrictive definition of *probable* reserves (as differentiated from *possible* reserves) common in the industry. Our *proved and probable* figure does not differ greatly from the *proved* figure in many cases, such as Venezuela, Iran, and Libya. In these countries, extensive exploration has taken place and extentions of known fields are considered unlikely. In other cases—such as Saudi Arabia, Mexico, and the United Kingdom—differences between *proved* and *proved and probable* reserves are considerably larger.

Estimated Proved and Probable Petroleum Reserves

Area and Country	Crude Oil Billion Barrels	Natural Gas Trillion Cubic Feet
World	**665**	**2,626** [1]
Free World	**600**	**1,764**
Western Hemisphere	96	426
United States [2]	39	219
Mexico	25	43
Venezuela	14	43
Canada [2]	8	71
Ecuador	2	11
Argentina	2	11
Brazil	1	7
Colombia	1	7
Peru	2	7
Trinidad and Tobago	2	7
Eastern Hemisphere	504	1,338
Middle East	392	845
Saudi Arabia	158	106
Kuwait	71	35
Iran [3]	60	600
Iraq	36	35
United Arab Emirates	34	35
Neutral Zone	17	7
Qatar	7	18
Oman	6	3
Syria	2	3
Other	1	3
Africa	59	211
Libya	25	25
Nigeria	19	46
Algeria	7	127
Egypt	4	3
Gabon	1	Negl.
Angola-Cabinda	1	Negl.
Tunisia	1	7
Other	1	3
Western Europe	31	177
United Kingdom	20	46
Norway	8	25
Netherlands	Negl.	71
Spain	1	Negl.
Other	2	35
Asia-Pacific	22	105
Indonesia	14	21
Brunei	2	11
Malaysia	2	14
Australia	2	35
India	2	3
Pakistan	Negl.	21
Communist Countries	**65**	**862**
USSR	40	812
China	20	25
Other	5	25

[1] Equivalent to 470 billion barrels of oil.

[2] Including Arctic gas deposits and natural gas liquids.

[3] Including recent discoveries.

Estimated Imports of Crude Oil and Refined Products
1976

Thousand b/d

	US [1]	Japan	Canada	Western Europe	West Germany	France	UK	Italy	Netherlands	Belgium/Luxembourg	Spain	Other Western Europe
Algeria	437	2	14	443	213	94	19	70	3	3	28	13
Bahrain	3	32	0	8	1	0	6	0	1	0	0	0
Egypt	17	1	2	141	1	13	8	0	11	1	0	107
Iraq	38	128	33	1,222	35	327	105	318	34	1	87	315
Kuwait	9	450	6	702	38	86	229	13	111	8	58	159
Libya	532	41	25	1,135	424	63	57	237	12	0	89	253
Qatar	69	6	0	300	24	58	94	22	50	0	0	52
Saudi Arabia	1,371	1,719	122	3,445	379	877	370	516	354	293	376	280
Syria	1	0	0	107	23	53	3	0	0	28	0	0
United Arab Emirates	319	530	16	789	138	234	74	20	115	26	0	182
Total OAPEC	**2,796**	**2,909**	**218**	**8,292**	**1,276**	**1,805**	**965**	**1,196**	**691**	**360**	**638**	**1,361**
Ecuador	63	0	2	0	0	0	0	0	0	0	0	0
Gabon	46	0	12	65	11	29	1	0	3	0	21	0
Indonesia	573	613	0	7	3	0	0	0	0	0	0	4
Iran	548	974	162	2,440	383	291	399	290	327	73	179	498
Nigeria	1,124	17	36	723	181	155	76	16	195	30	0	70
Venezuela	985	6	302	238	38	36	41	26	11	3	23	60
Total OPEC [2]	**6,114**	**4,486**	**730**	**11,509**	**1,867**	**2,250**	**1,465**	**1,528**	**1,215**	**437**	**861**	**1,886**
Canada	599	0	0	6	0	0	0	0	0	0	0	6
Mexico	91	0	0	Negl.	0	0	0	0	0	0	0	Negl.
Other	470	716	24	1,757 [3,4]	917	282	570	740	208	288	123	897
Total	**7,295**	**5,235**	**756**	**13,528**	**2,809**	**2,598**	**2,052**	**2,268**	**1,435**	**754**	**984**	**2,896**

[1] Products traced to source of crude oil.
[2] OAPEC members excluding Bahrain, Egypt, and Syria plus other countries shown.
[3] Because of intra-European trade, components do not add to the totals shown.
[4] Other and unknown.

Selected Developed Countries: Crude Oil Imports, by Source

Thousand b/d

	Sep 1973 (Pre-Crisis Level)	1974	1975	1976	1977 1st Qtr	1977 Apr	1977 May	Percent of Total Sep 1973	Percent of Total May 1977
United States									
Algeria	124	180	264	408	527	654	381	3.6	5.6
Egypt	0	9	5	17	12	16	82	0	1.2
Iraq	17	0	2	26	28	52	168	0.5	2.5
Kuwait	44	5	4	1	64	67	51	1.3	0.7
Libya	153	4	223	444	641	776	749	4.4	11.0
Qatar	41	17	18	24	39	34	94	1.2	1.4
Saudi Arabia	599	438	701	1,222	1,371	1,429	1,716	17.3	25.2
United Arab Emirates [1]	88	69	117	255	336	324	237	2.5	3.5
Other [2]	0	0	0	0	5	0	0	0	0
Total OAPEC	**1,066**	**722**	**1,334**	**2,397**	**3,024**	**3,352**	**3,478**	**30.7**	**51.0**
Ecuador	33	42	57	51	51	53	77	0.9	1.1
Gabon	0	23	27	26	37	26	42	0	0.6
Indonesia	249	284	379	536	565	474	480	7.2	7.0
Iran	205	463	278	298	518	517	535	5.9	7.8
Nigeria	409	697	746	1,014	1,278	1,238	1,060	11.8	15.5
Venezuela	405	319	395	241	173	285	251	11.7	3.7
Total OPEC [3]	**2,367**	**2,541**	**3,211**	**4,546**	**5,628**	**5,929**	**5,841**	**68.2**	**85.6**
Canada	998	791	600	371	282	313	248	28.8	3.6
Mexico	8	2	70	87	144	145	174	0.2	2.6
UK	0	0	Negl.	13	86	35	50	0	0.7
Norway	0	1	12	35	54	0	59	0	0.9
Other	98	133	207	218	308	347	367	2.8	5.4
Total	**3,471**	**3,477**	**4,105**	**5,287**	**6,520**	**6,785**	**6,821**	**100.0**	**100.0**

Thousand b/d

	Sep 1973 (Pre-Crisis Level)	1974	1975	1976	1977 1st Qtr	1977 2d Qtr	1977 Jul	Percent of Total Sep 1973	Percent of Total Jul 1977
Canada									
Algeria	0	12	Negl.	0	0	0	0	0	0
Egypt	0	0	0	0	0	0	0	0	0
Iraq	23	10	31	29	17	6	36	2.4	5.9
Kuwait	0	25	29	2	0	0	0	0	0
Libya	56	9	9	20	0	0	0	6.0	0
Qatar	0	0	2	0	0	0	0	0	0
Saudi Arabia	82	91	165	109	188	168	145	8.7	23.6
United Arab Emirates [1]	49	24	46	57	4	11	1	5.2	0.2
Other [2]	0	0	0	0	0	0	0	0	0
Total OAPEC	**210**	**171**	**282**	**217**	**209**	**185**	**182**	**22.3**	**29.6**
Ecuador	13	6	1	0	0	0	0	1.4	0
Gabon	0	0	3	0	0	0	0	0	0
Indonesia	0	0	0	0	0	0	0	0	0
Iran	149	199	202	157	145	126	94	15.9	15.3
Nigeria	39	14	17	28	11	7	0	4.1	0
Venezuela	485	351	265	269	263	262	215	51.6	35.0
Total OPEC [3]	**896**	**741**	**770**	**671**	**628**	**580**	**491**	**95.3**	**80.0**
Other	44	79	54	49	83	109	123	4.7	20.0
Total	**940**	**820**	**824**	**720**	**711**	**689**	**614**	**100.0**	**100.0**

Selected Developed Countries: Crude Oil Imports, by Source
(Continued)

Thousand b/d

	Sep 1973 (Pre-Crisis Level)	1974	1975	1976	1977 1st Qtr	1977 2d Qtr	1977 Jul	1977 Aug	1977 Sep	Percent of Total Sep 1973	Percent of Total Sep 1977
Japan											
Algeria	0	5	6	0	0	4	0	11	0	0	0
Egypt	0	2	0	Negl.	0	0	0	0	0	0	0
Iraq	0	40	92	127	162	162	318	132	59	0	1.3
Kuwait	488	479	416	342	350	399	255	403	513	10.0	11.5
Libya	31	70	59	41	11	35	13	21	13	0.6	0.3
Qatar	0	6	3	2	28	21	0	51	30	0	0.7
Saudi Arabia	1,148	1,304	1,355	1,572	1,846	1,429	1,445	1,723	1,407	23.5	31.6
United Arab Emirates [1]	511	533	408	530	586	494	486	579	493	10.5	11.1
Other [2]	0	0	0	0	0	0	0	0	0	0	0
Total OAPEC	**2,181**	**2,439**	**2,339**	**2,614**	**2,983**	**2,544**	**2,517**	**2,920**	**2,515**	**44.7**	**56.5**
Ecuador	0	0	0	0	0	0	0	0	0	0	0
Gabon	0	0	0	0	0	0	0	0	0	0	0
Indonesia	638	671	518	553	669	665	628	706	654	13.1	14.7
Iran	1,554	1,222	1,147	928	957	771	666	824	729	31.9	16.4
Nigeria	101	87	71	17	0	0	0	0	0	2.1	0
Venezuela	7	9	5	6	7	7	7	0	10	0.1	0.2
Total OPEC [3]	**4,481**	**4,426**	**4,080**	**4,118**	**4,616**	**3,987**	**3,818**	**4,450**	**3,908**	**91.9**	**87.8**
Other	397	370	459	483	568	485	580	490	542	8.1	12.2
Total	**4,878**	**4,798**	**4,539**	**4,601**	**5,184**	**4,472**	**4,398**	**4,940**	**4,450**	**100.0**	**100.0**

Thousand b/d

	Sep 1973 (Pre-Crisis Level)	1974	1975	1976	1977 1st Qtr	1977 2nd Qtr	1977 Jul	1977 Aug	Percent of Total Sep 1973	Percent of Total Aug 1977
United Kingdom										
Abu Dhabi	28	86	47	29	35	44	45	41	1.5	3.2
Algeria	46	10	29	18	14	8	12	12	2.4	1.0
Egypt	0	5	16	3	0	11	37	0	0	0
Iraq	67	64	52	105	114	110	50	80	3.5	6.3
Kuwait	293	343	218	229	181	217	183	147	15.3	11.6
Libya	98	175	53	45	20	50	62	32	5.1	2.5
Qatar	73	96	77	94	78	24	34	20	3.8	1.6
Saudi Arabia	530	712	444	370	405	457	361	275	27.6	21.8
Other [2]	0	0	16	3	0	0	0	0	0	0
Total OAPEC	**1,135**	**1,491**	**952**	**896**	**847**	**921**	**784**	**607**	**59.2**	**48.1**
Dubai	48	26	30	45	36	36	14	74	2.5	5.9
Ecuador	0	0	0	0	0	0	0	0	0	0
Gabon	0	14	0	0	0	0	0	0	0	0
Indonesia	0	0	0	0	0	0	0	0	0	0
Iran	317	290	351	398	414	269	145	243	16.5	19.2
Nigeria	188	158	117	76	70	13	16	18	9.8	1.4
Sharjah	0	0	0	0	0	0	0	0	0	0
Venezuela	66	66	64	29	16	22	18	33	3.4	2.6
Total OPEC [3]	**1,754**	**2,040**	**1,482**	**1,438**	**1,383**	**1,250**	**940**	**975**	**91.5**	**77.2**
Other	163	226	261	326	263	240	170	288	8.5	22.8
Total	**1,917**	**2,271**	**1,775**	**1,770**	**1,646**	**1,501**	**1,147**	**1,263**	**100.0**	**100.0**

Selected Developed Countries: Crude Oil Imports, by Source
(Continued)

Thousand b/d

	Sep 1973 (Pre-Crisis Level)	1974	1975	1976	1977 1st Qtr	1977 2d Qtr	1977 Jul	Percent of Total Sep 1973	Percent of Total Jul 1977
West Germany									
Algeria	239	201	204	210	227	164	215	10.4	10.5
Egypt	0	0	4	0	0	0	0	0	0
Iraq	43	73	28	35	31	21	0	1.9	0
Kuwait	102	82	54	25	24	16	0	4.4	0
Libya	418	320	296	421	470	354	408	18.2	20.0
Qatar	18	20	25	24	18	24	0	0.8	0
Saudi Arabia	710	514	371	378	376	404	545	30.9	26.7
United Arab Emirates [1]	162	169	158	125	155	156	140	7.1	6.9
Other [2]	26	19	16	25	22	25	26	1.1	1.3
Total OAPEC	**1,718**	**1,398**	**1,156**	**1,243**	**1,318**	**1,164**	**1,334**	**74.8**	**65.3**
Ecuador	0	0	0	0	0	0	0	0	0
Gabon	32	19	21	11	7	10	0	1.4	0
Indonesia	0	0	0	4	25	8	1	0	Negl.
Iran	248	265	284	380	338	319	288	10.8	14.1
Nigeria	168	241	202	181	162	177	227	7.3	11.1
Venezuela	42	38	43	28	16	18	31	1.8	1.5
Total OPEC [3]	**2,182**	**1,942**	**1,686**	**1,822**	**1,844**	**1,671**	**1,855**	**95.0**	**90.8**
UK	0	0	0	14	52	66	51	0	2.5
Norway	Negl.	3	12	23	38	12	27	0	1.3
Other	89	86	89	95	62	81	83	3.9	4.1
Total	**2,297**	**2,050**	**1,807**	**1,979**	**2,018**	**1,855**	**2,042**	**100.0**	**100.0**

Thousand b/d

	Sep 1973 (Pre-Crisis Level)	1974	1975	1976	1977 1st Qtr	1977 2d Qtr	1977 Jul	1977 Aug	Percent of Total Sep 1973	Percent of Total Aug 1977
France										
Abu Dhabi	249	268	210	202	186	214	158	147	9.0	6.2
Algeria	227	181	118	95	99	92	81	107	8.2	4.5
Egypt	1	0	4	13	11	8	0	0	Negl.	0
Iraq	375	330	240	335	379	274	436	447	13.6	18.9
Kuwait	316	246	134	86	103	57	84	59	11.4	2.5
Libya	131	74	44	62	38	42	74	46	4.7	1.9
Qatar	69	70	47	58	84	35	59	60	2.5	2.5
Saudi Arabia	623	842	669	870	832	813	834	987	22.5	41.8
Other [2]	12	10	41	60	49	60	60	18	0.4	0.8
Total OAPEC	**2,003**	**2,021**	**1,507**	**1,781**	**1,781**	**1,595**	**1,786**	**1,871**	**72.5**	**79.3**
Dubai	27	36	43	33	52	31	41	62	1.0	2.6
Ecuador	0	0	0	0	0	0	0	0	0	0
Gabon	33	43	27	29	53	44	42	36	1.2	1.5
Indonesia	0	0	0	0	0	0	0	0	0	0
Iran	216	174	266	294	336	197	102	85	7.8	3.6
Nigeria	253	208	175	150	127	160	168	150	9.2	6.4
Sharjah	0	0	0	0	0	0	0	0	0	0
Venezuela	36	28	15	16	10	14	17	31	1.3	1.3
Total OPEC [3]	**2,555**	**2,500**	**1,988**	**2,230**	**2,299**	**1,973**	**2,096**	**2,217**	**92.4**	**93.9**
UK	0	0	0	7	0	28	37	31	0	1.3
Norway	0	2	18	46	0	22	17	14	0	0.6
Other	196	92	69	61	113	91	79	80	7.1	3.4
Total	**2,764 [4]**	**2,604**	**2,120**	**2,417**	**2,472**	**2,182**	**2,289**	**2,360**	**100.0**	**100.0**

Selected Developed Countries: Crude Oil Imports, by Source
(Continued)

	Thousand b/d						Percent of Total	
	4th Qtr 1973 (Pre-Crisis Level)	1974	1975	1976	1977 1st Qtr	1977 2d Qtr	4th Qtr 1973	2d Qtr 1977
Italy								
Algeria	61	49	77	51	22	20	2.4	0.9
Egypt	0	0	0	0	0	0	0	0
Iraq	383	269	374	312	331	327	15.2	15.0
Kuwait	212	130	82	47	167	114		5.3
Libya	597	478	260	340	302	328	23.7	15.0
Qatar	21	57	26	26	24	20	0.8	0.9
Saudi Arabia	692	824	527	545	605	694	27.5	31.8
United Arab Emirates [1]	0	13	33	50	99	34	0	1.6
Other [2]	0	0	0	0	0	0	0	0
Total OAPEC	**1,966**	**1,820**	**1,379**	**1,371**	**1,550**	**1,537**	**78.2**	**70.5**
Ecuador	0	0	0	0	0	0	0	0
Gabon	3	10	6	1	10	0	0.1	0
Indonesia	0	0	0	0	0	0	0	0
Iran	277	301	258	292	250	296	11.0	13.6
Nigeria	9	63	7	7	10	18	0.4	0.8
Venezuela	18	13	20	16	12	34	0.7	1.6
Total OPEC [3]	**2,273**	**2,207**	**1,670**	**1,687**	**1,832**	**1,885**	**90.4**	**86.5**
UK	0	0	0	13	4	0	0	0
Norway	0	0	0	0	0	0	0	0
Other [5]	241	190	271	371	348	295	9.6	13.5
Total	**2,514**	**2,397**	**1,941**	**2,071**	**2,184**	**2,180**	**100.0**	**100.0**

[1] Including oil imports from Abu Dhabi and possibly from Dubai and Sharjah, which are not members of OAPEC.
[2] Including, when applicable, Bahrain and Syria.
[3] Consisting of OAPEC members (excluding Bahrain, Egypt, and Syria) plus the other countries shown.
[4] Estimated.
[5] Including data that cannot be distributed by area of origin.

Selected Developed Countries: Trends in Oil Trade

Thousand b/d

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
United States [1]													
1973													
Crude imports	2,732	2,873	3,162	3,049	3,215	3,220	3,501	3,598	3,471	3,740	3,452	2,891	3,244
Product imports	3,079	3,501	3,413	2,551	2,603	2,659	2,671	2,918	2,903	2,785	3,412	3,055	3,012
Total imports	5,811	6,374	6,575	5,600	5,818	5,879	6,172	6,506	6,374	6,525	6,864	5,946	6,256
Exports	210	260	224	275	237	215	240	217	242	221	202	227	231
Net imports	5,601	6,114	6,351	5,325	5,581	5,664	5,932	6,289	6,132	6,304	6,662	5,719	6,025
1974													
Crude imports	2,382	2,248	2,462	3,267	3,908	3,925	4,091	3,924	3,797	3,810	3,958	3,869	3,477
Product imports	2,973	2,973	2,753	2,703	2,580	2,493	2,397	2,434	2,225	2,320	2,704	2,853	2,611
Total imports	5,355	5,221	5,215	5,970	6,488	6,418	6,488	6,358	6,022	6,130	6,662	6,722	6,088
Exports	207	203	196	243	247	238	253	247	171	221	186	231	220
Net imports	5,148	5,018	5,019	5,727	6,241	6,180	6,235	6,111	5,851	5,909	6,476	6,491	5,868
1975													
Crude imports	4,029	3,828	3,656	3,378	3,486	3,905	4,192	4,581	4,689	4,389	4,623	4,476	4,105
Product imports	2,832	2,348	2,074	1,662	1,728	1,502	1,767	1,717	2,115	1,940	1,796	1,949	1,951
Total imports	6,861	6,176	5,730	5,040	5,214	5,407	5,959	6,298	6,804	6,329	6,419	6,425	6,056
Exports	228	248	213	190	202	224	186	205	205	187	166	262	209
Net imports	6,633	5,928	5,517	4,850	5,012	5,183	5,773	6,095	6,599	6,142	6,253	6,163	5,847
1976													
Crude imports	4,594	4,208	4,738	4,790	4,669	5,621	5,792	5,556	5,875	5,699	5,955	5,925	5,287
Product imports	2,016	2,423	1,946	1,805	1,654	1,858	2,099	1,826	2,038	1,808	2,115	2,353	2,008
Total imports	6,610	6,631	6,684	6,595	6,323	7,479	7,891	7,382	7,913	7,507	8,070	8,278	7,295
Exports	156	241	185	222	180	213	242	220	196	198	348	309	226
Net imports	6,454	6,390	6,499	6,373	6,143	7,266	7,649	7,162	7,717	7,309	7,720	7,969	7,069
1977													
Crude imports	6,288	6,652	6,633	6,785	6,821	6,947	6,656	6,572	6,580				
Product imports	2,594	3,278	2,529	1,886	1,754	1,855	1,800	2,010	2,170				
Total imports	8,882	9,930	9,162	8,671	8,575	8,802	8,456	8,582	8,750				
Exports	192	234	207	223	288	256	212	228	214				
Net imports	8,690	9,696	8,955	8,448	8,287	8,546	8,244	8,354	8,536				
Canada													
1973													
Crude imports	945	975	932	772	930	741	1,058	937	940	799	934	802	897
Product imports	163	93	55	37	119	121	122	153	105	132	140	149	130
Total imports	1,108	1,068	987	809	1,049	862	1,180	1,090	1,045	931	1,074	951	1,027
Exports	1,357	1,500	1,364	1,472	1,495	1,446	1,162	1,298	1,300	1,363	1,357	1,237	1,364
Net imports	−249	−432	−377	−663	−446	−584	18	−208	−255	−432	−283	−322	−337
1974													
Crude imports	822	988	717	718	971	763	816	817	672	787	798	721	820
Product imports	96	44	142	33	114	125	89	104	58	75	87	74	83
Total imports	918	1,032	859	751	1,085	888	905	921	730	862	885	795	903
Exports	1,180	1,402	1,056	1,266	1,270	1,220	956	978	1,026	988	1,110	981	1,086
Net imports	−262	−370	−197	−515	−185	−332	−51	−57	−296	−126	−225	−186	−183
1975													
Crude imports	1,052	915	849	804	1,067	850	678	946	716	516	562	929	824
Product imports	48	68	27	46	56	56	48	50	40	57	26	27	41
Total imports	1,100	983	876	850	1,123	906	726	996	756	573	588	956	865
Exports	1,122	1,068	834	815	745	702	893	908	936	921	1,017	848	899
Net imports	−22	−85	42	35	378	204	−167	98	−180	−348	−429	108	−34
1976													
Crude imports	738	783	870	802	793	832	825	728	409	565	690	596	720
Product imports	21	26	30	16	45	45	43	54	23	60	50	20	36
Total imports	759	809	900	818	838	877	868	782	432	625	740	616	756
Exports	1,029	669	569	636	650	676	815	571	603	605	625	612	646
Net imports	−270	140	331	182	188	201	53	211	−171	20	115	4	110
1977													
Crude imports	729	645	752	585	679	802	614						
Product imports	28	25	27	19	49	60	37						
Total imports	757	670	779	604	728	862	651						
Exports	611	568	522	526	515	506	523						
Net imports	146	102	257	78	213	356	128						
Japan													
1973													
Crude imports	4,662	4,775	4,830	4,864	4,918	5,043	4,697	5,550	4,878	5,483	5,029	5,139	4,992
Product imports	640	803	650	542	664	640	523	507	443	592	533	486	584
Total imports	5,302	5,578	5,480	5,406	5,582	5,683	5,220	6,057	5,321	6,075	5,562	5,625	5,576
Exports	11	33	23	28	19	13	39	31	21	25	13	25	24
Net imports	5,291	5,545	5,457	5,378	5,563	5,670	5,181	6,026	5,300	6,050	5,549	5,600	5,552
1974													
Crude imports	4,467	5,008	4,886	5,120	4,794	4,878	5,204	4,601	4,214	4,763	4,818	4,834	4,798
Product imports	648	671	684	625	858	823	755	624	531	529	569	597	662
Total imports	5,115	5,679	5,570	5,745	5,652	5,701	5,959	5,225	4,745	5,292	5,387	5,431	5,460
Exports	14	25	16	20	24	17	25	98	135	46	79	179	56
Net imports	5,101	5,654	5,554	5,725	5,628	5,684	5,934	5,132	4,610	5,246	5,308	5,252	5,404

Selected Developed Countries: Trends in Oil Trade
(Continued)

Thousand b/d

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
Japan (Continued)													
1975													
Crude imports	4,581	4,502	4,773	4,304	4,765	3,956	4,401	4,120	4,637	4,928	4,611	4,880	4,539
Product imports	471	367	466	445	439	361	487	489	461	518	545	574	469
Total imports	5,052	4,869	5,239	4,749	5,204	4,317	4,888	4,609	5,098	5,446	5,156	5,454	5,008
Exports	80	52	40	38	61	40	42	17	5	7	5	6	32
Net imports	4,972	4,817	5,199	4,711	5,143	4,277	4,846	4,592	5,093	5,439	5,151	5,448	4,976
1976													
Crude imports	3,901	4,683	4,586	4,989	4,217	4,469	4,690	4,391	4,492	4,642	5,165	5,019	4,601
Product imports	699	649	704	563	593	637	669	651	747	504	615	634	634
Total imports	4,600	5,332	5,290	5,552	4,810	5,106	5,359	5,042	5,239	5,146	5,780	5,653	5,235
Exports	3	5	9	4	4	5	5	6	9	4	9	6	6
Net imports	4,597	5,327	5,281	5,548	4,806	5,101	5,354	5,036	5,230	5,142	5,771	5,647	5,229
1977													
Crude imports	5,023	4,857	5,671	4,210	4,955	4,234	4,398	4,940	4,450				
Product imports	584	686	665	632	682	729	561	644	705				
Total imports	5,607	5,543	6,336	4,842	5,637	4,963	4,959	5,584	5,155				
Exports	7	8	8	6	4	11	8	5	7				
Net imports	5,600	5,535	6,328	4,836	5,633	4,952	4,951	5,579	5,148				
France													
1973													
Crude imports	2,897	2,699	2,955	2,728	2,540	2,676	2,288	2,791	2,764	2,797	3,053	2,549	2,728
Product imports	137	174	148	142	176	128	138	169	139	171	126	117	147
Total imports	3,034	2,873	3,103	2,870	2,716	2,804	2,426	2,960	2,903	2,968	3,179	2,666	2,875
Exports	255	260	232	226	317	290	246	307	307	261	253	279	269
Net imports	2,779	2,613	2,871	2,644	2,399	2,514	2,180	2,653	2,596	2,707	2,926	2,387	2,606
1974													
Crude imports	2,686	2,942	2,508	2,990	2,476	2,555	2,580	2,529	2,274	2,725	2,322	2,686	2,604
Product imports	80	121	80	121	144	98	180	152	188	157	134	200	138
Total imports	2,766	3,063	2,588	3,111	2,620	2,653	2,760	2,681	2,462	2,882	2,456	2,886	2,742
Exports	269	230	258	277	257	225	210	211	186	166	220	211	224
Net imports	2,497	2,833	2,330	2,834	2,363	2,428	2,550	2,470	2,276	2,716	2,236	2,675	2,518
1975													
Crude imports	2,234	2,056	2,095	2,047	1,952	1,989	2,130	2,201	2,136	2,199	2,203	2,462	2,120
Product imports	213	266	203	165	127	162	180	100	118	113	131	131	158
Total imports	2,447	2,322	2,298	2,212	2,079	2,151	2,310	2,301	2,254	2,312	2,334	2,593	2,278
Exports	209	221	175	217	190	230	182	302	264	214	267	259	227
Net imports	2,238	2,101	2,123	1,995	1,889	1,921	2,128	1,999	1,990	2,098	2,067	2,334	2,051
1976													
Crude imports	2,175	2,447	2,600	2,500	2,188	2,039	2,456	2,370	2,517	2,180	2,767	2,704	2,417
Product imports	134	143	158	158	128	233	266	218	199	223	170	151	181
Total imports	2,309	2,590	2,758	2,658	2,316	2,272	2,722	2,588	2,716	2,403	2,937	2,855	2,598
Exports	276	325	395	316	272	324	244	288	274	207	268	288	249
Net imports	2,033	2,265	2,363	2,342	2,044	1,948	2,478	2,300	2,442	2,196	2,669	2,567	2,349
1977													
Crude imports	2,711	2,508	2,198	2,537	1,944	2,079	2,289	2,360					
Product imports	123	117	169	166	145	183	171	216					
Total imports	2,834	2,625	2,367	2,703	2,089	2,262	2,460	2,576					
Exports	277	266	286	356	366	276	278	351					
Net imports	2,557	2,359	2,081	2,347	1,723	1,986	2,182	2,225					
Italy													
1973													
Crude imports	2,308	2,448	2,600	2,598	2,498	2,996	2,779	2,784	2,606	2,548	1,844	N.A.	2,567
Product imports	76	133	97	98	154	98	109	137	232	29	65	N.A.	102
Total imports	2,384	2,581	2,697	2,696	2,652	3,094	2,888	2,921	2,838	2,577	1,909	N.A.	2,669
Exports	604	628	513	595	678	671	775	725	586	630	515	N.A.	579
Net imports	1,780	1,953	2,184	2,101	1,974	2,423	2,113	2,196	2,252	1,947	1,394	N.A.	2,090
1974													
Crude imports	1,576	2,850	2,270	2,527	2,961	2,435	2,575	2,800	2,254	2,270	2,285	2,237	2,397
Product imports	71	60	92	145	126	108	219	190	241	225	378	283	119
Total imports	1,647	2,910	2,362	2,672	3,087	2,543	2,794	2,990	2,495	2,495	2,663	2,520	2,516
Exports	198	645	413	583	444	397	546	433	407	293	375	363	423
Net imports	1,449	2,265	1,949	2,089	2,643	2,146	2,248	2,557	2,088	2,202	2,288	2,157	2,093
1975													
Crude imports	1,858	1,688	1,724	1,841	1,659	1,949	1,706	1,918	2,236	2,117	1,752	1,990	1,941
Product imports	172	229	246	246	319	181	219	142	138	202	191	229	180
Total imports	2,030	1,917	1,970	2,087	1,978	2,130	1,925	2,060	2,374	2,319	1,943	2,219	2,121
Exports	240	264	212	240	246	308	285	413	394	324	252	236	291
Net imports	1,790	1,653	1,758	1,847	1,732	1,822	1,640	1,647	1,980	1,995	1,691	1,983	1,830

Selected Developed Countries: Trends in Oil Trade
(Continued)

Thousand b/d

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Average
Italy (Continued)													
1976													
Crude imports	2,024	2,024	2,024	2,014	2,014	2,014	2,115	2,115	2,115	2,131	2,131	2,131	2,071
Product imports	160	160	160	216	216	216	219	219	219	194	194	194	197
Total imports	2,184	2,184	2,184	2,230	2,230	2,230	2,334	2,334	2,334	2,325	2,325	2,325	2,268
Exports	271	271	271	337	337	337	322	322	322	289	289	289	305
Net imports	1,913	1,913	1,913	1,893	1,893	1,893	2,012	2,012	2,012	2,036	2,036	2,036	1,963
1977 [2]													
Crude imports	2,198	2,198	2,198	2,370	1,931	2,145	1,966	2,025	1,971				
Product imports	232	232	232	198	141	196	145	134	161				
Total imports	2,430	2,430	2,430	2,568	2,072	2,341	2,111	2,159	2,132				
Exports	368	368	368	341	365	434	290	358	292				
Net imports	2,062	2,062	2,062	2,227	1,707	1,907	1,821	1,801	1,840				
United Kingdom													
1973													
Crude imports	2,276	2,090	2,273	2,248	2,402	2,535	2,175	2,818	1,917	2,892	2,415	2,004	2,329
Product imports	615	533	457	359	488	439	323	417	361	416	326	208	409
Total imports	2,891	2,623	2,730	2,607	2,890	2,974	2,498	3,235	2,278	3,308	2,741	2,212	2,738
Exports	464	311	323	329	332	257	430	555	496	464	488	293	396
Net imports	2,427	2,312	2,407	2,278	2,558	2,717	2,068	2,680	1,782	2,844	2,253	1,919	2,342
1974													
Crude imports	2,593	2,439	2,486	2,437	2,486	2,442	2,182	1,994	2,144	2,534	2,259	1,941	2,271
Product imports	440	372	353	306	364	291	326	252	246	324	372	385	314
Total imports	3,033	2,811	2,839	2,743	2,850	2,733	2,508	2,246	2,390	2,858	2,631	2,326	2,585
Exports	491	256	204	238	344	373	331	364	353	385	268	314	321
Net imports	2,542	2,555	2,635	2,505	2,506	2,360	2,177	1,882	2,037	2,473	2,363	2,012	2,264
1975													
Crude imports	2,216	2,030	1,491	1,849	1,802	1,926	1,748	1,776	1,687	2,032	1,429	1,599	1,775
Product imports	442	329	267	290	231	257	262	247	240	303	348	344	292
Total imports	2,658	2,359	1,758	2,139	2,033	2,183	2,010	2,023	1,927	2,335	1,777	1,943	2,067
Exports	310	343	224	226	262	303	317	308	357	423	299	261	300
Net imports	2,348	2,016	1,534	1,913	1,771	1,880	1,693	1,715	1,570	1,912	1,478	1,683	1,767
1976													
Crude imports	1,888	1,986	1,762	1,938	1,698	1,814	1,688	1,615	1,779	1,474	2,112	1,724	1,770
Product imports	302	314	421	301	318	267	297	220	221	200	251	283	282
Total imports	2,190	2,300	2,183	2,239	2,016	2,081	1,985	1,835	2,000	1,674	2,363	2,007	2,052
Exports	333	264	384	332	349	328	407	399	488	464	522	447	392
Net imports	1,857	2,036	1,799	1,907	1,667	1,753	1,578	1,436	1,512	1,210	1,841	1,560	1,660
1977													
Crude imports	1,756	1,511	1,672	1,347	1,701	1,449	1,147	1,263					
Product imports	253	238	261	272	312	286	261	313					
Total imports	2,109	1,749	1,933	1,619	2,013	1,735	1,408	1,576					
Exports	546	575	589	538	539	732	597	747					
Net imports	1,563	1,174	1,344	1,081	1,474	1,003	811	829					
West Germany													
1973													
Crude imports	2,177	2,217	2,226	2,201	2,173	2,306	2,091	2,140	2,297	2,359	2,274	2,067	2,210
Product imports	776	788	690	831	870	748	789	710	828	904	859	709	836
Total imports	2,953	3,005	2,916	3,032	3,043	3,054	2,889	2,850	3,125	3,263	3,133	2,776	3,046
Exports	153	177	164	135	184	174	177	185	155	239	235	141	177
Net imports	2,800	2,828	2,752	2,897	2,859	2,880	2,712	2,665	2,970	3,024	2,898	2,635	2,869
1974													
Crude imports	2,050	1,891	1,973	1,962	1,990	2,245	2,080	2,147	2,055	2,048	2,244	1,918	2,050
Product imports	613	774	767	646	795	740	882	891	806	756	669	689	746
Total imports	2,663	2,665	2,649	2,608	2,785	2,985	2,962	3,038	2,861	2,804	2,913	2,607	2,796
Exports	180	178	238	147	236	141	170	214	193	165	184	186	199
Net imports	2,483	2,487	2,411	2,461	2,549	2,844	2,792	2,824	2,668	2,639	2,729	2,421	2,597
1975													
Crude imports	1,684	1,614	1,453	1,798	1,754	1,911	1,676	1,839	1,810	2,051	2,075	1,935	1,807
Product imports	583	766	606	824	575	920	794	767	873	789	667	718	709
Total imports	2,267	2,380	2,059	2,622	2,329	2,831	2,470	2,606	2,683	2,840	2,742	2,653	2,509
Exports	158	120	113	132	100	121	137	120	133	125	161	126	129
Net imports	2,109	2,260	1,946	2,490	2,229	2,710	2,333	2,486	2,550	2,715	2,581	2,527	2,380
1976													
Crude imports	1,669	1,836	1,717	1,823	1,830	1,847	2,050	2,168	2,220	2,068	2,233	2,273	1,979
Product imports	761	978	792	808	833	871	850	991	811	645	690	899	830
Total imports	2,430	2,814	2,509	2,631	2,663	2,718	2,900	3,159	3,031	2,713	2,923	3,172	2,809
Exports	113	115	148	115	131	101	176	128	168	116	132	160	134
Net imports	2,317	2,699	2,361	2,516	2,532	2,617	2,724	3,031	2,863	2,597	2,791	3,012	2,675
1977													
Crude imports	2,140	2,020	1,894	1,774	1,871	1,920	2,042	2,097					
Product imports	705	615	680	813	751	921	969	835					
Total imports	2,845	2,635	2,574	2,587	2,622	2,841	3,011	2,932					
Exports	78	155	128	113	152	147	117	129					
Net imports	2,767	2,480	2,446	2,474	2,470	2,694	2,894	2,803					

[1] Bureau of the Mines data through Apr 1977.
[2] Estimated.

Developed Countries: Exports to OPEC[1]

Million US $ (f.o.b.)

	Algeria	Ecuador	Gabon	Indonesia	Iran	Iraq	Kuwait	Libya	Nigeria	Qatar	Saudi Arabia	UAE	Venezuela	Total
United States														
1974	**315.1**	**325.8**	**32.5**	**530.5**	**1,733.6**	**284.7**	**208.5**	**139.4**	**286.4**	**33.6**	**835.1**	**229.7**	**1,767.7**	**6,722.6**
1975	**631.8**	**409.8**	**58.7**	**810.1**	**3,243.7**	**309.7**	**366.1**	**231.5**	**536.3**	**50.3**	**1,501.8**	**372.2**	**2,243.3**	**10,765.3**
1976	**487.0**	**415.8**	**45.9**	**1,036.0**	**2,776.0**	**381.8**	**471.5**	**276.6**	**769.9**	**78.7**	**2,774.1**	**424.8**	**2,627.8**	**12,565.9**
1st Qtr	75.7	91.3	9.1	271.1	748.3	78.6	111.9	33.1	127.4	16.5	484.9	111.2	591.7	2,750.8
2d Qtr	165.5	99.8	9.0	286.7	617.1	95.4	110.3	52.5	161.6	19.6	743.3	112.0	640.1	3,112.9
3d Qtr	113.0	105.1	8.0	244.5	624.5	159.0	114.6	118.1	197.8	8.5	714.2	81.0	617.4	3,105.7
4th Qtr	132.8	119.6	19.8	233.7	786.1	48.8	134.7	72.9	283.1	34.1	831.7	120.6	778.6	3,596.5
1977														
1st Qtr	116.0	98.0	9.3	187.8	592.7	53.7	152.3	68.5	203.6	24.6	739.5	147.0	669.2	3,062.2
2d Qtr	145.7	133.4	9.5	197.1	609.8	49.5	157.1	89.0	239.6	19.0	838.1	134.3	766.8	3,388.9
Japan														
1974	**154.5**	**113.8**	**7.4**	**1,453.3**	**1,014.9**	**474.4**	**279.5**	**234.4**	**285.1**	**46.7**	**677.5**	**309.2**	**399.0**	**5,449.7**
1975	**260.9**	**177.8**	**14.2**	**1,849.9**	**1,855.3**	**818.8**	**367.1**	**240.2**	**586.0**	**122.3**	**1,350.4**	**420.2**	**360.2**	**8,423.3**
1976	**204.4**	**133.6**	**16.7**	**1,642.4**	**1,709.4**	**626.2**	**720.4**	**327.2**	**575.0**	**229.0**	**1,892.7**	**636.8**	**563.6**	**9,277.4**
1st Qtr	44.3	21.6	1.8	361.6	400.0	128.0	126.2	68.1	112.6	56.5	330.8	130.8	89.4	1,871.7
2d Qtr	56.6	32.8	2.7	381.1	400.0	191.4	172.9	75.0	124.8	42.2	529.6	143.4	118.6	2,271.1
3d Qtr	33.5	34.8	7.3	435.8	437.4	156.4	199.1	93.7	133.2	60.6	569.8	165.1	149.1	2,475.8
4th Qtr	70.0	44.4	4.9	463.9	472.0	150.4	222.2	90.4	204.4	69.7	462.5	197.5	206.5	2,658.8
1977														
1st Qtr	52.0	38.2	5.9	390.6	427.2	131.3	237.5	67.9	211.1	73.2	425.8	224.5	173.8	2,459.0
Apr	48.4	20.8	1.3	124.4	141.8	92.9	84.6	16.6	69.1	34.8	174.1	77.8	79.9	966.5
West Germany														
1974	**482.9**	**82.3**	**28.3**	**324.3**	**1,139.1**	**373.4**	**159.9**	**402.4**	**346.0**	**20.9**	**286.0**	**90.2**	**330.6**	**4,066.3**
1975	**610.1**	**76.5**	**23.9**	**392.7**	**2,105.1**	**1,047.7**	**203.2**	**535.9**	**653.4**	**47.0**	**564.6**	**145.1**	**371.2**	**6,776.4**
1976	**740.2**	**93.2**	**27.1**	**478.4**	**2,294.3**	**884.4**	**304.8**	**523.3**	**867.2**	**67.7**	**1,191.1**	**233.3**	**540.5**	**8,245.5**
1st Qtr	178.1	17.5	5.2	97.6	484.5	216.6	56.0	121.4	185.5	15.0	182.8	45.9	104.2	1,710.3
2d Qtr	152.5	17.9	6.8	104.2	539.7	182.9	63.7	102.0	176.6	22.3	302.3	50.0	117.3	1,838.2
3d Qtr	198.0	34.1	7.5	123.7	590.1	269.2	83.0	153.6	214.2	11.3	324.1	58.3	167.7	2,234.8
4th Qtr	211.6	23.7	7.6	152.9	680.0	215.7	102.1	146.3	290.9	19.1	381.9	79.1	151.3	2,462.2
1977														
1st Qtr	312.8	35.2	8.4	98.4	608.4	205.1	79.6	136.6	260.4	24.5	298.1	81.3	158.4	2,307.2
Apr	69.8	7.4	2.7	28.9	221.1	81.7	28.2	49.0	104.6	6.0	107.4	34.9	57.6	799.3
France														
1974	**1,297.5**	**18.4**	**185.0**	**103.9**	**257.5**	**214.4**	**63.9**	**362.7**	**175.0**	**9.4**	**120.0**	**68.6**	**140.9**	**3,017.2**
1975	**1,904.2**	**18.2**	**335.8**	**120.6**	**631.6**	**409.0**	**97.5**	**405.5**	**462.9**	**15.0**	**198.6**	**134.1**	**175.8**	**4,908.8**
1976	**1,475.2**	**17.7**	**389.8**	**219.3**	**652.7**	**473.5**	**225.9**	**348.7**	**531.8**	**31.7**	**339.3**	**190.8**	**170.4**	**5,066.8**
1st Qtr	392.7	4.3	84.4	63.2	176.3	134.8	34.7	94.2	102.7	7.3	65.3	44.1	36.3	1,240.3
2d Qtr	330.2	4.8	90.6	56.3	162.8	110.4	53.8	99.2	133.7	7.2	92.0	41.1	39.0	1,221.1
3d Qtr	383.1	5.2	114.2	49.5	173.8	111.3	48.1	73.0	136.6	6.6	78.7	50.2	49.4	1,279.7
4th Qtr	369.2	3.4	100.6	50.3	139.8	117.0	89.3	82.3	158.8	10.6	103.3	55.4	45.7	1,325.7
1977														
1st Qtr	363.7	5.5	121.0	56.2	154.3	127.7	36.4	98.6	184.8	20.7	114.3	52.2	56.2	1,391.6
Apr	104.3	1.5	45.6	19.7	57.0	32.2	18.0	33.3	55.0	4.1	59.4	13.6	16.0	459.7
United Kingdom														
1974	**128.1**	**31.8**	**8.4**	**109.2**	**653.2**	**139.9**	**139.9**	**146.5**	**520.3**	**51.6**	**280.4**	**227.0**	**117.8**	**2,554.1**
1975	**173.7**	**38.4**	**6.3**	**133.4**	**1,097.7**	**302.2**	**217.5**	**236.8**	**1,125.9**	**121.6**	**440.0**	**440.8**	**200.3**	**4,534.6**
1976	**183.7**	**41.2**	**7.3**	**144.4**	**921.1**	**273.5**	**257.1**	**241.8**	**1,389.0**	**155.9**	**710.6**	**579.0**	**229.9**	**5,134.5**
1st Qtr	50.0	7.0	2.1	33.4	235.3	95.5	52.0	57.1	339.8	38.3	131.7	141.1	55.1	1,238.4
2d Qtr	47.0	9.1	1.9	38.7	250.9	60.8	59.8	61.0	338.4	44.3	161.0	137.4	48.9	1,259.2
3d Qtr	43.9	11.4	1.5	32.2	226.2	63.4	69.8	64.7	340.5	34.0	193.8	130.3	50.8	1,262.5
4th Qtr	42.8	13.7	1.8	40.1	208.7	53.8	75.5	59.0	370.3	39.3	224.1	170.2	75.1	1,374.4
1977														
1st Qtr	43.8	22.3	2.0	42.7	274.3	66.4	79.1	61.9	407.2	42.6	209.7	209.1	59.8	1,520.9
2d Qtr	34.3	26.1	3.4	30.2	282.6	70.0	113.6	77.5	482.9	57.0	250.9	194.7	64.2	1,687.4

Developed Countries: Exports to OPEC[1]
(Continued)

Million US $ (f.o.b.)

	Algeria	Ecuador	Gabon	Indonesia	Iran	Iraq	Kuwait	Libya	Nigeria	Qatar	Saudi Arabia	UAE	Venezuela	Total
Italy														
1974	**325.7**	**25.5**	**6.6**	**58.0**	**282.4**	**96.0**	**65.7**	**853.8**	**131.0**	**11.0**	**133.2**	**37.3**	**211.6**	**2,237.8**
1975	**559.7**	**30.2**	**13.9**	**85.5**	**566.3**	**259.5**	**116.5**	**1,032.2**	**298.5**	**22.6**	**323.3**	**87.6**	**321.9**	**3,717.7**
1976	**408.5**	**22.6**	**14.9**	**53.1**	**730.6**	**203.2**	**175.2**	**955.5**	**317.4**	**25.7**	**636.1**	**133.2**	**350.4**	**4,026.4**
1st Qtr	104.5	4.3	2.4	12.3	140.4	42.7	26.3	186.0	46.2	6.7	96.3	23.8	63.9	755.8
2d Qtr	77.9	4.8	3.2	18.4	193.5	67.6	39.1	232.8	74.2	5.2	127.5	28.8	77.7	950.7
3d Qtr	97.1	6.2	4.0	11.8	198.6	48.4	46.9	265.6	92.4	7.5	155.0	31.0	92.1	1,056.6
4th Qtr	129.0	7.3	5.3	10.6	198.1	44.5	62.9	271.1	104.6	6.3	257.3	49.6	116.7	1,263.3
1977														
1st Qtr	126.8	5.9	7.3	11.5	193.6	53.6	53.9	269.7	122.4	9.0	211.4	45.6	124.8	1,235.5
Apr & May	99.4	6.9	6.7	6.8	153.6	33.0	43.8	229.4	102.3	7.5	160.9	33.5	97.1	980.9
Canada														
1974	**161.2**	**13.4**	**0**	**54.9**	**61.1**	**19.6**	**4.9**	**5.9**	**25.8**	**3.6**	**18.0**	**3.9**	**253.3**	**625.6**
1975	**99.3**	**21.4**	**0.5**	**63.7**	**144.7**	**66.5**	**15.7**	**22.4**	**37.6**	**1.5**	**34.3**	**4.5**	**314.5**	**826.6**
1976	**94.6**	**24.5**	**2.5**	**77.1**	**145.9**	**36.2**	**22.6**	**9.6**	**32.6**	**4.3**	**107.8**	**11.4**	**360.4**	**929.5**
1st Qtr	7.1	1.9	0.1	7.9	32.4	21.7	3.9	3.3	9.0	1.2	30.6	2.5	45.6	167.2
2d Qtr	20.6	13.5	1.3	15.4	35.2	8.2	2.6	3.7	6.6	0.2	12.8	3.1	60.6	183.8
3d Qtr	32.4	4.5	0.4	20.9	42.7	5.1	4.7	1.4	6.8	1.4	13.7	2.5	133.5	270.0
4th Qtr	34.5	4.6	0.7	32.9	35.6	1.2	11.4	1.2	10.2	1.5	50.7	3.3	120.7	308.5
1977														
1st Qtr	29.6	3.3	0.6	24.7	35.1	22.1	13.2	2.0	9.8	1.1	28.6	3.4	73.6	247.1
2d Qtr	31.0	5.3	0.3	10.4	31.2	11.8	8.3	5.5	6.5	0.6	22.7	5.1	139.4	278.1

[1] Data are unadjusted.

Developed Countries: Imports From OPEC[1]

Million US $ (c.i.f.)

	Algeria	Ecuador	Gabon	Indonesia	Iran	Iraq	Kuwait	Libya	Nigeria	Qatar	Saudi Arabia	UAE	Venezuela	Total
United States[2]														
1974	**1,090.5**	**473.0**	**162.3**	**1,688.1**	**2,132.2**	**0.9**	**13.4**	**1.4**	**3,286.2**	**79.6**	**1,671.2**	**366.3**	**4,671.1**	**15,636.2**
1975	**1,358.6**	**460.8**	**196.9**	**2,220.6**	**1,399.8**	**19.1**	**111.4**	**1,045.7**	**3,281.5**	**56.5**	**2,624.6**	**683.8**	**3,623.9**	**17,083.2**
1976	**2,209.4**	**539.0**	**189.8**	**3,004.3**	**1,480.1**	**110.0**	**37.6**	**2,243.4**	**4,937.6**	**119.0**	**5,212.9**	**1,359.2**	**3,574.6**	**25,016.9**
1st Qtr	447.5	109.4	51.3	714.4	378.0	1.2	25.7	485.0	1,016.8	22.2	1,152.9	272.7	893.3	5,570.4
2d Qtr	529.9	123.5	65.0	692.5	345.3	0.3	4.3	478.7	1,141.5	8.2	1,166.2	288.2	738.1	5,581.7
3d Qtr	674.8	136.2	20.3	851.1	397.1	35.1	4.9	603.9	1,365.3	57.4	1,506.3	363.9	935.5	6,951.8
4th Qtr	557.2	169.9	53.2	746.3	359.7	73.4	2.7	675.8	1,414.0	31.2	1,387.5	434.4	1,007.7	6,913.0
1977														
1st Qtr	695.7	155.4	58.2	914.0	657.5	45.1	66.2	820.5	1,646.7	41.1	1,603.2	405.8	1,214.6	8,324.0
2d Qtr	743.2	171.1	62.3	926.7	699.3	126.3	72.5	1,080.5	1,598.1	74.3	1,720.8	439.0	958.5	8,672.6
Japan														
1974	**34.3**	**22.3**	**6.8**	**4,569.3**	**4,767.0**	**201.6**	**2,131.9**	**364.2**	**448.9**	**22.1**	**5,238.2**	**2,116.6**	**46.4**	**19,969.6**
1975	**36.4**	**13.5**	**12.8**	**3,431.2**	**4,978.3**	**395.6**	**2,009.7**	**280.1**	**278.6**	**27.6**	**6,132.9**	**1,773.4**	**33.9**	**19,404.0**
1976	**10.3**	**22.0**	**17.9**	**4,093.3**	**4,453.8**	**579.1**	**2,015.9**	**206.7**	**108.7**	**30.4**	**7,834.0**	**2,471.6**	**33.6**	**21,877.3**
1st Qtr	8.7	6.0	5.9	962.5	974.2	119.3	535.1	16.0	73.7	9.4	1,856.7	635.5	9.8	5,212.8
2d Qtr	0.1	6.6	4.3	1,002.0	1,179.1	136.2	466.4	62.3	11.5	4.8	1,954.7	564.2	7.6	5,399.8
3d Qtr	0.7	4.1	4.8	1,021.7	952.6	119.1	505.1	69.0	18.2	11.3	2,064.4	629.5	5.9	5,406.4
4th Qtr	0.8	5.3	2.9	1,107.1	1,347.9	204.5	509.3	59.4	5.3	4.9	1,958.2	642.4	10.3	5,858.3
1977														
1st Qtr	1.7	5.0	2.5	1,252.5	1,181.0	187.4	514.8	14.3	3.8	45.1	2,328.1	699.0	10.6	6,245.8
Apr	0	1.6	0.4	390.9	249.6	62.4	181.1	2.7	4.2	23.5	678.9	177.4	3.8	1,776.5
West Germany														
1974	**1,090.8**	**66.1**	**97.7**	**188.7**	**1,240.3**	**305.3**	**355.0**	**1,633.1**	**1,101.4**	**92.9**	**2,044.1**	**752.1**	**243.9**	**9,211.4**
1975	**1,025.4**	**62.0**	**107.4**	**153.4**	**1,467.4**	**127.9**	**226.9**	**1,391.1**	**962.4**	**124.0**	**1,623.1**	**736.0**	**232.1**	**8,239.1**

Developed Countries: Imports From OPEC[1]
(Continued)

Million US $ (c.i.f.)

	Algeria	Ecuador	Gabon	Indonesia	Iran	Iraq	Kuwait	Libya	Nigeria	Qatar	Saudi Arabia	UAE	Venezuela	Total
West Germany (Continued)														
1976	**1,145.7**	**67.3**	**69.3**	**213.6**	**1,987.5**	**154.7**	**182.1**	**2,103.3**	**975.1**	**124.6**	**1,798.1**	**691.1**	**207.9**	**9,720.3**
1st Qtr	264.0	13.4	21.2	48.2	426.0	27.3	51.3	473.6	251.6	26.3	388.7	153.6	44.3	2,189.5
2d Qtr	292.8	14.4	21.2	35.4	410.3	33.2	55.3	474.9	232.8	41.3	367.3	167.4	76.7	2,223.0
3d Qtr	305.7	12.1	13.0	62.1	526.8	57.0	38.1	544.0	238.7	0.1	554.8	177.9	45.1	2,575.4
4th Qtr	283.2	27.4	13.9	67.9	624.4	37.2	37.4	610.8	252.0	56.9	487.3	192.2	41.8	2,732.4
1977														
1st Qtr	328.6	20.8	16.0	96.8	496.1	38.8	44.6	623.8	232.3	16.6	436.7	197.0	30.0	2,578.1
Apr	66.0	7.3	4.0	24.0	160.2	0.5	20.0	152.5	84.2	22.3	131.7	72.4	10.5	755.6
France														
1974	**957.7**	**9.7**	**320.8**	**61.5**	**716.3**	**1,242.3**	**938.5**	**386.8**	**872.8**	**264.0**	**3,028.3**	**1,184.6**	**133.5**	**10,116.8**
1975	**747.2**	**15.7**	**246.8**	**55.2**	**1,286.1**	**1,128.5**	**652.0**	**200.6**	**859.4**	**211.9**	**3,041.6**	**1,134.4**	**86.1**	**9,665.5**
1976	**691.4**	**13.2**	**293.8**	**97.2**	**1,436.1**	**1,590.6**	**409.1**	**320.3**	**749.4**	**326.1**	**4,079.1**	**1,235.3**	**94.0**	**11,335.6**
1st Qtr	179.8	3.7	64.2	14.4	358.9	281.5	63.1	78.7	207.3	98.4	982.4	452.7	32.6	2,817.7
2d Qtr	170.7	2.8	74.1	21.5	315.8	331.6	120.4	89.4	173.0	74.2	977.1	238.5	20.7	2,609.8
3d Qtr	155.3	1.9	79.1	27.1	331.4	400.0	111.7	65.4	152.6	80.0	1,033.5	264.4	20.3	2,722.7
4th Qtr	185.6	4.8	76.4	34.2	430.0	577.5	113.9	86.8	216.5	73.5	1,086.1	279.7	20.4	3,185.4
1977														
1st Qtr	196.5	5.5	88.1	30.7	448.6	470.7	125.5	65.4	209.4	99.5	1,033.5	263.5	19.5	3,056.4
Apr	54.5	3.5	32.8	13.6	134.1	135.4	23.8	16.3	84.9	16.4	304.5	53.3	6.0	879.1
United Kingdom														
1974	**83.8**	**5.1**	**66.1**	**33.8**	**1,202.9**	**248.6**	**1,334.0**	**913.6**	**860.6**	**388.5**	**2,757.8**	**483.9**	**315.9**	**8,694.6**
1975	**189.8**	**4.6**	**8.1**	**33.2**	**1,554.3**	**226.1**	**935.5**	**288.5**	**685.0**	**348.5**	**1,915.3**	**356.6**	**366.8**	**6,912.3**
1976	**147.3**	**4.6**	**16.3**	**39.9**	**1,879.0**	**492.6**	**1,042.7**	**297.4**	**574.9**	**456.1**	**1,763.9**	**362.6**	**215.4**	**7,292.7**
1st Qtr	54.6	0.9	1.2	7.8	425.9	70.1	223.3	70.1	160.9	149.0	492.1	98.2	70.1	1,824.2
2d Qtr	30.2	1.2	9.6	8.9	478.6	69.5	230.0	42.0	167.9	145.3	386.5	103.0	64.9	1,737.6
3d Qtr	41.4	1.3	3.0	13.4	473.3	196.7	225.7	98.2	138.4	103.3	444.9	103.2	50.8	1,893.6
4th Qtr	21.1	1.2	2.5	9.8	501.2	156.3	363.7	87.1	107.7	58.5	440.4	58.2	29.6	1,837.3
1977														
1st Qtr	26.8	0.9	2.3	9.2	482.0	138.5	224.3	29.8	159.3	99.4	498.6	92.0	19.9	1,783.0
2d Qtr	20.7	2.2	1.1	11.0	359.3	146.0	282.7	81.0	68.9	32.7	558.7	102.1	35.3	1,701.7
Italy														
1974	**268.2**	**25.1**	**56.0**	**72.4**	**1,123.3**	**1,166.4**	**478.6**	**2,364.8**	**360.6**	**208.1**	**3,047.0**	**108.3**	**105.3**	**9,384.1**
1975	**405.3**	**34.0**	**41.7**	**53.4**	**1,134.5**	**1,672.3**	**357.9**	**1,248.4**	**67.6**	**127.1**	**2,351.2**	**201.1**	**159.7**	**7,854.2**
1976	**296.8**	**25.4**	**16.4**	**114.7**	**1,218.9**	**1,304.2**	**203.2**	**1,587.0**	**55.8**	**140.1**	**2,423.8**	**236.8**	**208.1**	**7,831.2**
1st Qtr	81.3	4.8	1.9	21.4	290.5	313.3	17.9	351.8	10.7	33.5	471.3	62.9	27.8	1,689.1
2d Qtr	73.1	6.1	5.0	24.9	309.1	284.5	26.5	481.4	12.7	39.9	729.8	49.6	49.1	2,091.7
3d Qtr	76.5	7.8	5.5	30.1	303.4	356.9	71.9	403.1	17.8	18.9	632.6	41.5	68.9	2,034.9
4th Qtr	65.9	6.7	4.0	38.3	315.9	349.5	86.9	350.7	14.6	47.8	590.1	82.8	62.3	2,015.5
1977														
1st Qtr	40.5	7.7	13.2	33.3	340.9	370.9	168.2	355.1	30.5	26.5	644.8	96.5	37.5	2,165.6
Apr & May	32.7	7.9	5.3	26.7	249.6	297.0	96.2	273.8	17.3	20.0	517.7	41.0	20.2	1,605.4
Canada														
1974	**6.9**	**40.0**	**4.9**	**4.7**	**633.6**	**37.2**	**66.0**	**31.3**	**55.1**	**0**	**325.4**	**88.0**	**1,320.0**	**2,613.1**
1975	**1.7**	**20.8**	**25.4**	**14.0**	**745.3**	**131.7**	**108.7**	**35.5**	**77.0**	**6.3**	**733.3**	**138.2**	**1,088.0**	**3,125.9**
1976	**66.1**	**30.6**	**62.4**	**18.4**	**704.9**	**135.5**	**22.7**	**106.1**	**157.6**	**0**	**488.8**	**62.8**	**1,314.8**	**3,170.7**
1st Qtr	19.1	3.8	11.2	2.2	211.0	30.6	6.4	51.1	85.1	0	118.3	36.0	268.2	843.0
2d Qtr	19.5	7.2	8.1	4.2	211.5	28.4	6.5	35.0	48.8	0	126.6	19.7	439.3	954.8
3d Qtr	4.4	5.0	22.8	6.0	132.5	47.9	9.8	20.0	15.9	0	141.4	7.1	302.4	715.2
4th Qtr	23.1	14.6	20.3	6.0	149.9	28.6	0	0	7.8	0	102.5	0	304.9	657.7
1977														
1st Qtr	9.2	22.1	13.8	3.9	125.7	23.0	0	0	13.3	0	191.9	0	338.8	741.7
2d Qtr	11.0	15.9	0	6.4	136.5	0.1	0	0	0.1	0	167.3	0	339.5	676.8

[1] Data are unadjusted.
[2] Data are f.a.s.
[3] Data are f.o.b.

Selected OECD Countries: Trends in Inland Oil Consumption

Thousand b/d

		1972	1973	1974	1975	1976	1977
United States [1]	**Annual Average**	**16,367**	**17,308**	**16,653**	**16,322**	**17,444**	
	Jan	16,735	18,713	17,286	18,004	18,598	20,481
	Feb	17,861	19,094	17,366	17,084	17,429	20,427
	Mar	16,870	17,216	16,104	16,315	17,299	18,056
	Apr	15,529	15,921	15,929	16,048	16,671	17,570
	May	14,801	16,626	15,726	15,155	15,977	(est.) 17,252
	Jun	15,615	16,481	16,117	15,610	16,836	(est.) 17,600
	Jul	14,821	16,372	16,349	15,740	16,613	(est.) 17,697
	Aug	15,936	17,499	16,550	15,806	16,642	(est.) 18,533
	Sep	15,489	16,656	16,024	15,768	16,825	(est.) 17,885
	Oct	16,455	17,202	17,050	16,377	17,052	
	Nov	17,610	18,492	17,351	15,777	18,847	
	Dec	18,738	17,538	18,013	18,185	20,506	
Canada	**Annual Average**	**1,511**	**1,597**	**1,630**	**1,595**	**1,658**	
	Jan	1,536	1,667	1,823	1,691	1,785	1,797
	Feb	1,793	1,747	1,863	1,872	1,754	1,919
	Mar	1,612	1,584	1,659	1,558	1,747	1,664
	Apr	1,367	1,431	1,560	1,592	1,518	1,526
	May	1,374	1,486	1,577	1,471	1,509	1,523
	Jun	1,334	1,474	1,455	1,550	1,560	1,633
	Jul	1,294	1,490	1,534	1,493	1,531	1,530
	Aug	1,394	1,557	1,463	1,449	1,585	
	Sep	1,402	1,427	1,415	1,469	1,514	
	Oct	1,577	1,680	1,680	1,555	1,560	
	Nov	1,685	1,801	1,714	1,577	1,822	
	Dec	1,782	1,828	1,831	1,880	2,008	
Japan	**Annual Average**	**N.A.**	**5,000**	**4,872**	**4,568**	**4,786**	
	Jan	N.A.	5,036	5,103	4,729	4,941	5,428
	Feb	N.A.	5,352	5,664	5,191	5,246	6,019
	Mar	N.A.	5,306	5,407	4,918	5,165	5,540
	Apr	N.A.	4,737	4,706	4,202	4,526	4,713
	May	N.A.	4,597	4,568	4,041	4,218	4,313
	Jun	N.A.	4,776	4,520	4,135	4,429	4,480
	Jul	N.A.	4,586	4,385	4,265	4,416	4,700
	Aug	N.A.	4,684	4,576	4,234	4,461	
	Sep	N.A.	4,778	4,720	4,543	4,517	
	Oct	N.A.	5,093	4,614	4,409	4,523	
	Nov	N.A.	5,559	4,925	4,747	5,160	
	Dec	N.A.	5,526	5,330	5,447	5,846	
Austria	**Annual Average**	**203**	**227**	**203**	**199**	**215**	
	Jan	189	220	236	183	207	200
	Feb	221	225	220	190	208	208
	Mar	212	224	160	172	209	182
	Apr	183	204	169	184	156	197
	May	174	210	172	156	169	166
	Jun	181	200	169	186	189	208
	Jul	179	221	214	210	219	192
	Aug	187	222	218	223	229	213
	Sep	213	227	222	232	246	
	Oct	227	253	243	226	233	
	Nov	246	276	215	201	252	
	Dec	230	234	203	229	261	
Belgium/Luxembourg	**Annual Average**	**485**	**505**	**440**	**416**	**449**	
	Jan	535	543	512	550	498	552
	Feb	591	589	528	558	547	507
	Mar	546	570	392	410	469	517
	Apr	470	565	383	465	460	

Selected Countries: Crude Oil Imports
(Continued)

Thousand b/d

		1972	1973	1974	1975	1976	1977
Belgium/Luxembourg (Continued)	May	454	483	419	363	357	
	Jun	464	463	376	366	383	
	Jul	346	359	339	288	308	
	Aug	367	389	352	331	361	
	Sep	479	465	478	372	425	
	Oct	484	556	534	442	424	
	Nov	563	558	427	439	532	
	Dec	530	503	542	508	628	
Denmark	**Annual Average**				**301**	**307**	
	Jan	N.A.	N.A.	N.A.	332	358	370
	Feb	N.A.	N.A.	N.A.	380	398	405
	Mar	N.A.	N.A.	N.A.	317	367	362
	Apr	N.A.	N.A.	N.A.	354	307	340
	May	N.A.	N.A.	N.A.	258	242	241
	Jun	N.A.	N.A.	N.A.	257	250	236
	Jul	N.A.	N.A.	N.A.	218	184	192
	Aug	N.A.	N.A.	N.A.	264	261	293
	Sep	N.A.	N.A.	N.A.	262	274	
	Oct	N.A.	N.A.	N.A.	302	280	
	Nov	N.A.	N.A.	N.A.	324	356	
	Dec	N.A.	N.A.	N.A.	353	414	
France	**Annual Average**	**1,985**	**2,219**	**2,094**	**1,925**	**2,071**	
	Jan	2,276	2,743	2,523	2,190	2,432	2,518
	Feb	2,450	2,687	2,389	2,243	2,492	2,386
	Mar	2,100	2,528	2,249	1,952	2,372	2,109
	Apr	1,848	2,296	1,970	2,202	2,116	2,044
	May	1,743	1,890	1,915	1,640	1,795	1,846
	Jun	1,597	1,685	2,103	1,642	1,603	1,717
	Jul	1,444	1,566	1,703	1,491	1,624	1,349
	Aug	1,441	1,495	1,506	1,300	1,668	1,390
	Sep	1,950	1,932	1,996	1,785	1,966	1,789
	Oct	2,106	2,482	2,045	1,917	1,908	
	Nov	2,332	2,593	2,260	2,077	2,204	
	Dec	2,574	2,768	2,492	2,658	2,687	
Italy	**Annual Average**	**1,435**	**1,525**	**1,521**	**1,468**	**1,502**	
	Jan	1,720	1,781	1,755	1,792	1,775	1,683
	Feb	1,756	1,866	1,760	1,767	1,743	1,809
	Mar	1,450	1,710	1,579	1,558	1,641	1,548
	Apr	1,169	1,420	1,421	1,530	1,423	1,363
	May	1,138	1,285	1,349	1,174	1,253	1,252
	Jun	1,101	1,255	1,314	1,289	1,236	1,324
	Jul	1,175	1,303	1,368	1,234	1,355	1,233
	Aug	1,129	1,255	1,287	1,105	1,372	1,135
	Sep	1,450	1,462	1,527	1,465	1,592	1,682
	Oct	1,650	1,610	1,569	1,679	1,464	
	Nov	1,702	1,551	1,580	1,448	1,393	
	Dec	1,899	1,698	1,753	1,600	1,779	
Netherlands	**Annual Average**	**496**	**507**	**444**	**412**	**487**	
	Jan	509	584	468	399	480	521
	Feb	591	586	522	430	542	524
	Mar	557	542	438	379	543	518
	Apr	512	541	530	474	443	424
	May	453	475	432	390	453	393
	Jun	430	436	427	403	462	456
	Jul	374	408	415	354	426	388
	Aug	435	437	414	364	446	
	Sep	440	485	440	412	493	

Selected OECD Countries: Trends in Inland Oil Consumption
(Continued)

Thousand b/d

		1972	1973	1974	1975	1976	1977
Netherlands (Continued)	Oct	515	594	472	440	469	
	Nov	581	503	440	419	517	
	Dec	567	505	433	484	576	
	Annual						
Norway	**Average**	**N.A.**	**N.A.**	**143**	**150**	**163**	
	Jan	N.A.	N.A.	155	142	161	177
	Feb	N.A.	N.A.	154	171	180	202
	Mar	N.A.	N.A.	124	137	181	189
	Apr	N.A.	N.A.	126	149	145	162
	May	N.A.	N.A.	118	145	147	150
	Jun	N.A.	N.A.	141	130	153	159
	Jul	N.A.	N.A.	113	120	130	131
	Aug	N.A.	N.A.	125	140	146	156
	Sep	N.A.	N.A.	151	161	168	
	Oct	N.A.	N.A.	161	162	167	
	Nov	N.A.	N.A.	174	181	175	
	Dec	N.A.	N.A.	180	162	197	
	Annual						
Spain	**Average**	**471**	**581**	**626**	**667**	**744**	
	Jan	483	539	610	720	758	740
	Feb	508	568	639	682	785	727
	Mar	461	564	571	625	769	660
	Apr	447	537	595	688	742	634
	May	444	523	620	622	685	669
	Jun	472	530	608	610	714	672
	Jul	457	466	630	624	755	677
	Aug	462	667	617	584	685	615
	Sep	477	576	636	667	734	
	Oct	459	669	677	713	742	
	Nov	500	646	653	706	780	
	Dec	515	681	650	735	782	
	Annual						
Sweden	**Average**	**N.A.**	**533**	**490**	**478**	**529**	
	Jan	N.A.	603	521	511	565	606
	Feb	N.A.	555	415	547	530	600
	Mar	N.A.	540	427	479	539	545
	Apr	N.A.	506	441	532	450	499
	May	N.A.	524	495	392	395	466
	Jun	N.A.	420	464	511	410	409
	Jul	N.A.	387	423	362	382	377
	Aug	N.A.	455	463	459	483	
	Sep	N.A.	492	516	503	571	
	Oct	N.A.	656	553	462	585	
	Nov	N.A.	645	568	446	697	
	Dec	N.A.	618	581	538	740	
	Annual						
United Kingdom	**Average**	**1,954**	**1,974**	**1,857**	**1,633**	**1,603**	
	Jan	2,121	2,315	2,045	1,981	1,679	1,830
	Feb	2,401	2,313	2,127	1,907	1,865	1,844
	Mar	2,249	2,271	2,133	1,731	1,879	1,818
	Apr	2,027	2,038	1,899	1,826	1,716	1,670
	May	1,851	1,939	1,704	1,482	1,417	1,546
	Jun	1,745	1,697	1,545	1,416	1,416	1,454
	Jul	1,519	1,637	1,531	1,322	1,346	1,302
	Aug	1,527	1,615	1,513	1,208	1,276	
	Sep	1,703	1,727	1,663	1,501	1,477	
	Oct	1,959	2,150	2,049	1,707	1,544	
	Nov	2,194	2,258	2,108	1,723	1,750	
	Dec	2,132	1,906	1,983	1,821	1,869	

Selected OECD Countries: Trends in Inland Oil Consumption
(Continued)

Thousand b/d

		1972	1973	1974	1975	1976	1977
West Germany	Annual Average	2,521	2,693	2,408	2,319	2,507	
	Jan	2,545	2,868	2,556	2,183	2,464	2,389
	Feb	2,803	2,850	1,969	2,455	2,497	2,441
	Mar	2,525	2,707	2,173	2,234	2,747	2,519
	Apr	2,347	2,809	2,539	2,431	2,339	2,425
	May	2,335	2,546	2,403	2,253	2,320	2,359
	Jun	2,632	2,674	2,414	2,106	2,393	2,495
	Jul	2,188	2,196	2,548	2,319	2,624	2,381
	Aug	2,444	2,738	2,476	2,360	2,515	2,468
	Sep	2,487	2,618	2,473	2,309	2,521	
	Oct	2,522	2,969	2,613	2,328	2,391	
	Nov	2,667	2,883	2,432	2,361	2,700	
	Dec	2,783	2,481	2,261	2,502	2,571	

[1] Including bunkers, refinery fuel, and losses.
[2] Principal products only.

Selected OECD Countries: Oil Stocks

Thousand Barrels, End of Month

	United States	Japan	Canada	Austria	Belgium	Denmark	France	Ireland	Italy
1973 Sep	1,057,911 [1]	300,000	113,193	N.A.	N.A.	30,996	194,122	5,555	N.A.
1974 Jan	1,017,333 [1]	275,000	125,289	7,650	35,018	25,617	174,594	5,490	N.A.
Mar	995,365 [1]	257,000	116,060	8,358	25,404	25,849	171,229	6,037	143,876
Jun	1,102,467 [1]	325,000	N.A.	10,454	31,375	28,025	196,406	6,190	163,922
Sep	1,156,105 [1]	359,000	148,305	9,278	37,011	34,507	238,630	6,504	177,310
Dec	1,115,916 [1]	334,000	142,233	9,402	40,274	37,223	235,848	7,424	173,609
1975 Jan	1,099,144	330,000	136,590	9,826	40,406	33,609	230,271	7,687	147,431
Mar	1,076,360	296,000	133,805	9,220	38,902	34,595	215,365	7,439	150,124
Jun	1,071,150	314,000	140,617	10,257	36,704	34,566	203,831	7,665	169,776
Sep	1,147,338	330,000	147,939	8,913	41,420	44,238	223,942	7,599	174,010
Dec	1,132,955	325,000	138,462	7,329	40,194	40,325	195,998	7,081	N.A.
1976 Jan [2]	1,102,282	308,000	128,356	6,877	38,508	39,223	182,887	6,825	N.A.
Mar	1,060,489	290,000	121,490	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Jun	1,108,703	325,000	132,174	6,855	41,676	31,193	167,017	7,315	N.A.
Sep	1,206,690	365,000	138,211	8,110	41,537	40,661	209,692	7,877	N.A.
Dec	1,129,445	359,000	125,934	7,680	43,092	37,478	203,407	7,628	157,687
1977 Jan	1,064,915	364,000	126,025	7,059	43,683	36,383	192,676	7,242	155,811
Feb	1,050,507	315,000	120,857	8,358	42,880	33,544	188,347	7,271	154,322
Mar	1,086,822	327,000	125,757	9,074	42,880	33,361	183,303	7,110	151,110
Apr	1,121,008	332,000	122,770	9,454	43,187	32,551	187,048	7,154	166,973
May	1,171,222	358,000	129,467	9,373	44,085	34,128	174,010	8,497	170,893
Jun	1,209,500	362,000	138,808	8,541	43,618	36,215	184,354	9,388	N.A.
Jul	1,239,100	356,000	139,053	9,044	45,552	38,654	197,480	9,943	164,900
Aug	1,251,800	361,000	N.A.	N.A.	N.A.	N A.	N.A.	N.A.	N.A.
Sep	1,284,900	N.A.	N.A.	N.A.	N.A.	N A.	N.A.	N.A.	N.A.

	Luxem-bourg	Nether-lands	Norway	Portugal	Spain	Sweden	Switzer-land	Turkey	United Kingdom	West Germany
1973 Sep	N.A.	N.A.	8,045	7,125	N.A.	43,398	26,514	N.A.	152,261	172,010
1974 Jan	N.A.	N.A.	8,446	5,745	40,449	37,668	25,995	N.A.	131,239	149,190
Mar	N.A.	N.A.	9,176	7,840	47,414	39,128	26,382	9,979	134,816	165,549
Jun	N.A.	N.A.	10,476	7,307	50,217	43,034	26,966	9,446	167,637	170,827
Sep	N.A.	N.A.	10,541	7,264	53,538	47,815	28,309	12,527	175,236	187,968
Dec	N.A.	66,452	7,037	7,037	53,261	44,749	29,638	9,345	160,593	187,938
1975 Jan	1,708	65,269	8,650	6,344	40,449	43,727	29,025	8,234	169,623	171,192
Mar	1,745	61,430	9,672	6,110	50,611	39,785	26,928	8,088	145,248	158,169
Jun	2,102	62,941	9,789	5,928	48,633	34,675	27,652	10,220	147,949	161,520
Sep	2,139	63,758	10,986	6,446	51,677	40,114	29,623	11,213	154,921	184,267
Dec	2,044	60,086	11,614	8,541	50,201	43,180	29,762	N.A.	138,941	186,668
1976 Jan	2,015	53,195	12,410	5,533	48,728	42,742	29,200	N.A.	N.A.	184,829
Mar	1,832	52,932	9,570	7,234	N.A.	37,668	27,528	N.A.	N.A.	175,483
Jun	1,971	54,560	11,154	6,658	N.A.	37,194	28,587	N.A.	135,291	189,092
Sep	1,986	61,656	12,038	6,066	50,582	37,194	29,799	N.A.	140,686	201,845
Dec	2,008	56,568	12,468	8,176	N.A.	48,326	31,178	9,541	136,065	218,540
1977 Jan	2,008	53,618	12,673	9,855	61,320	45,954	32,047	8,636	133,320	217,474
Mar	1,978	53,078	9,833	7,205	66,576	40,478	31,032	7,169	124,217	211,423
Jun	2,022	58,765	12,695	7,753	67,240	46,070	35,514	10,731	129,020	219,781
Jul	2,044	62,481	12,790	7,358	67,897	46,143	34,274	N.A.	132,422	224,380

[1] Estimated.

[2] As of January 1977, US Bureau of Mines changed the reporting of crude oil stocks to include foreign crude oil not yet received at refineries. Figures for 1976 and 1977 have been computed on the new basis.

Estimated OECD Oil Consumption [1]

Million b/d

	1st Qtr	2d Qtr	3d Qtr	4th Qtr
1973	43.2	37.6	36.8	42.4
1974	39.6	35.9	36.3	39.0
1975	37.9	34.2	34.2	37.6
1976	39.9	35.7	36.2	41.1
1977	42.5	37.1		

[1] Excluding Australia and New Zealand, and including US refinery gain.

Western Europe: Oil Spot Market Prices

US $ per Barrel

	F.O.B. Rotterdam [1]				F.O.B. Italy [2]			
	Heavy Fuel Oil				Heavy Fuel Oil			
	1% Sulfur	3.5% Sulfur	Gas Oil	Gasoline (Premium)	1% Sulfur	3.5% Sulfur	Gas Oil	Gasoline (Premium)
1974								
1st Qtr	14.02	12.77	15.13	19.76	13.87	12.88	13.95	19.26
2d Qtr	10.15	9.70	11.77	19.61	9.90	9.35	10.93	18.77
3d Qtr	9.87	9.24	12.34	13.92	9.61	9.23	11.96	13.15
4th Qtr	11.09	10.11	12.33	13.26	10.29	9.96	11.68	12.08
1975								
1st Qtr	11.97	10.49	11.18	14.20	10.57	10.24	11.10	13.23
2d Qtr	10.61	9.68	12.90	15.95	10.40	10.16	12.24	15.28
3d Qtr	9.33	8.62	14.40	15.02	8.81	8.30	13.87	14.64
4th Qtr	9.53	8.33	14.84	15.85	8.99	8.38	14.56	15.24
1976								
1st Qtr	10.39	9.84	13.79	17.10	9.95	9.65	13.59	16.48
2d Qtr	10.40	9.56	14.08	19.24	10.18	9.73	13.90	18.30
3d Qtr	11.06	9.99	14.40	18.02	10.34	10.06	14.19	17.37
4th Qtr	12.07	10.76	14.57	17.44	11.64	10.85	14.48	16.83
1977								
1st Qtr	13.25	11.71	15.80	16.82	13.53	12.06	15.89	16.56
2d Qtr	12.51	10.77	15.74	17.26	12.25	10.88	15.71	16.48
3d Qtr	12.47	11.33	15.67	16.60	12.42	11.29	15.70	15.87
Oct	12.57	11.58	15.60	16.51	12.54	11.64	15.62	15.58

[1] Barge lot—minimum 3,500 barrels.
[2] Cargo lot—minimum 130,000 barrels.

Selected Developed Countries: Retail Petroleum Product Prices

US Cents per Gallon

	Regular Gasoline		Premium Gasoline		Diesel Fuel	
	Price [1]	Tax	Price [1]	Tax	Price [1]	Tax
United States						
1973 Oct	40	12	44	12	23	12
1974 Jan	46	12	50	12	32	12
Jun	55	12	59	12	36	12
1975 Jan	53	12	57	12	50	12
Jun	57	12	61	12	51	12
1976 Jan	58	12	63	12	52	12
Jun	59	12	64	12	52	12
1977 Jan	60	12	65	12	54	12
Jun	63	12	69	12	57	12
Jul	63	12	69	12	57	12
Japan						
1973 Oct	88	39	105	39	48	21
1974 Jan	115	39	133	39	54	21
Jun	137	47	155	47	71	21
1975 Jan	152	47	170	47	78	21
Jun	155	47	172	47	82	21
1976 Jan	156	47	174	47	86	21
Jun	157	47	175	47	93	27
1977 Jan	167	59	185	59	93	27
Jun	167	59	185	59	88	25
West Germany						
1973 Oct	112	81	124	82	112	76
1974 Jan	137	83	149	84	139	79
Jun	137	83	149	84	139	79
1975 Jan	129	84	140	84	137	76
Jun	129	84	143	84	137	76
1976 Jan	141	84	151	85	141	79
Jun	144	84	154	85	141	79
1977 Jan	144	84	154	84	141	79
Jun	141	84	150	86	140	79
Sep	140	84	149	86	140	79
France [2]						
1973 Oct	95	65	103	69	66	39
1974 Jan	123	69	133	73	79	41
Jun	123	69	133	73	79	41
1975 Jan	129	73	139	77	88	38
Jun	129	73	139	77	85	46
1976 Jan	134	75	145	80	95	47
Jun	134	76	149	80	95	48
1977 Jan	159	97	171	103	99	48
Jun	167	101	180	108	109	54
Sep	167	101	180	108	109	54
United Kingdom						
1973 Oct	51	32	53	32	51	32
1974 Jan	55	32	57	32	55	32
Jun	76	39	79	39	78	39
1975 Jan	100	39	104	39	79	39
Jun	100	39	104	39	78	39
1976 Jan	107	54	109	53	88	39
Jun	107	54	109	54	88	39
1977 Jan	112	55	115	56	111	52
Jun	119	64	122	64	120	59
Sep	109	55	112	55	120	59
Italy [2]						
1973 Oct	75	56	79	58	41	26
1974 Jan	81	57	85	59	48	27
Jun	105	69	111	70	58	27
1975 Jan	122	83	128	87	58	27
Jun	122	83	128	87	60	28
1976 Jan	128	84	134	87	62	27
Jun	164	107	171	110	70	29
1977 Jan	205	147	213	153	72	29
Jun	205	148	213	153	66	19
Sep	205	148	213	153	66	19
Canada [3]						
1973 Oct	44	17	48	17	48	23
1974 Jan	44	17	48	17	48	23
Jun	51	17	55	17	55	23
1975 Jan	52	17	56	17	56	23
Jun	54	17	58	17	56	23
1976 Jan	66	25	70	25	61	31
Jun	66	25	70	25	62	31
1977 Jan	70	25	74	25	65	31
Mar	72	25	76	25	68	31

[1] Including tax.
[2] Government price ceilings in effect.
[3] Toronto prices.
NOTE: Converted at 28 March 1977 exchange rates.

OPEC Countries: Crude Oil Prices

US $ per Barrel

	4th Qtr 1975		1976		1st Qtr 1977		2d Qtr 1977		July 1977	
	Operating Company Cost	Direct Sales Price	Operating Company Cost	Direct Sales Price	Operating Company Cost	Direct Sales Price	Operating Company Cost	Direct Sales Price	Operating Company Cost	Direct Sales Price
OPEC average [3]	11.41	11.75	11.48	11.77	12.45	12.74	12.46	12.76	12.70	13.02
Saudi Arabia										
Light 34° API 1.70% sulfur	11.27	11.51	11.27	11.51	11.84	12.09	11.84	12.09	12.45	12.70
Berri 39° API 1.16% sulfur	11.62	11.87	11.62	11.87	12.22	12.48	12.22	12.48	12.95	13.22
Heavy 27° API 2.85% sulfur	10.90	11.14	10.85	11.08	11.13	11.37	11.13	11.37	11.77	12.02
Medium 31° API 2.40% sulfur	11.09	11.33	11.07	11.30	11.44	11.69	11.44	11.69	12.07	12.32
Iran										
Light 34° API 1.35% sulfur	11.40	11.62	11.40	11.62	12.59	12.81	12.59	12.81	12.59	12.81
Heavy 31° API 1.60% sulfur	11.28	11.50	11.15	11.37	12.27	12.49	12.27	12.49	12.27	12.49
Iraq 35° API 1.95% sulfur	11.21	11.43	11.46	11.46	12.62	12.62	12.60	12.60	12.60	12.60
Nigeria 34° API 0.16% sulfur	12.11	12.51	12.64	12.93	13.91	14.22	14.17	14.52	14.17	14.52
UAE 39° API 0.75% sulfur	11.62	11.92	11.62	11.92	12.08	12.50	12.08	12.50	12.73	13.26
Kuwait 31° API 2.50% sulfur [4]	11.15	11.30	11.11	11.26	12.22	12.37	12.22	12.37	12.22	12.37
Libya 40° API 0.22% sulfur	12.08	12.32	12.21	12.47	13.68	13.92	13.68	13.92	13.92	14.20
Venezuela 26° API 1.52% sulfur	11.19	N.A.	11.13	11.33	12.52	12.72	12.52	12.72	12.52	12.72
Indonesia 35° API 0.09% sulfur	10.65	12.80	11.10	12.80	12.15	13.55	12.15	13.55	12.15	13.55
Algeria 42° API 0.10% sulfur	12.62	12.75	13.01	13.01	14.29	14.29	14.29	14.29	14.45	14.45
Qatar 40° API 1.17% sulfur	11.54	11.85	11.54	11.85	12.88	13.19	12.88	13.19	12.88	13.19
Gabon 29° API 1.26% sulfur	10.29	11.55	10.45	11.55	11.23	12.60	11.23	12.60	11.23	12.60
Ecuador 28° API 0.93% sulfur	10.81	11.46	10.81	11.46	N.A.	13.00	N.A.	13.00	N.A.	13.00

[1] Total average f.o.b. costs paid by present or former concessionaires.

[2] F.o.b. prices set by the government for direct sales and, in most cases, for the producing company buy-back oil.

[3] Weighted by the volume of production.

[4] A 10-cent-per-barrel discount will be offered to buyers provided they meet their minimum contractual lifting volumes for second half 1977. The discount will be credited to the lifting companies' accounts beginning in first quarter 1978.

USSR: Crude Oil Production [1]

	Million b/d
1970	7.06
1971	7.54
1972	8.01
1973	8.58
1974	9.18
1975	9.82
1976	10.37
1977	
Jan	10.64
Feb	10.69
Mar	10.83
Apr	10.85
May	10.86
Jun	10.93
Jul	10.95
Aug	10.97

[1] Including natural gas liquids.

USSR: Regional Production of Crude Oil [1]

Million b/d

	1970	1971	1972	1973	1974	1975	1976 [2]
Total	**7.06**	**7.54**	**8.01**	**8.58**	**9.18**	**9.82**	**10.4**
Urals-Volga	4.17	4.23	4.31	4.40	4.44	4.50	4.5
West Siberia	0.63	0.90	1.25	1.75	2.33	2.96	3.6
Central Asia	0.58	0.66	0.71	0.76	0.79	0.81	0.8
Azerbaydzhan SSR	0.40	0.38	0.37	0.36	0.36	0.34	0.3
North Caucasus	0.68	0.72	0.69	0.59	0.53	0.47	0.4
Ukrainian SSR	0.27	0.28	0.28	0.27	0.25	0.23	0.2
Komi ASSR	0.11	0.12	0.13	0.13	0.14	0.14	0.2
Belorussia SSR	0.08	0.11	0.12	0.14	0.16	0.16	0.2
Far East	0.05	0.05	0.05	0.05	0.05	0.04	Negl.
Other	0.09	0.09	0.10	0.13	0.13	0.17	0.1

[1] Including natural gas liquids.
[2] Preliminary.

USSR: Imports of Oil

Thousand b/d

	1970	1971	1972	1973	1974	1975	1976
Total	**90**	**130**	**180**	**290**	**110**	**150**	**128**
Middle East							
Egypt	40	40	20	4	3	5	3
Iraq	0	0	80	220	78	108	116
Other	50	90	80	66	29	37	9

USSR: Exports of Oil

Thousand b/d

	1970	1971	1972	1973	1974	1975	1976
Total	**1,920**	**2,110**	**2,140**	**2,380**	**2,340**	**2,600**	**2,970**
Other Communist countries	**1,010**	**1,110**	**1,200**	**1,350**	**1,440**	**1,550**	**1,680**
Eastern Europe	805	895	975	1,100	1,180	1,260	1,370
Asia	30	25	20	20	30	40	40
Cuba	120	130	140	150	155	160	175
Yugoslavia	55	60	65	80	75	90	95
Free World countries	**910**	**1,000**	**940**	**1,030**	**900**	**1,050**	**1,290**
North America	5	0	10	30	20	15	23
Canada	0	0	0	0	3	5	2
United States	5	0	10	30	17	10	21
Western Europe	760	830	815	880	750	880	1,102
Finland	155	170	170	200	180	175	190
France	50	90	60	105	30	70	117
Italy	205	180	170	175	135	135	240
Netherlands	30	35	50	65	60	60	53
Sweden	95	90	90	65	60	70	55
West Germany	125	120	125	115	125	150	145
Other	100	145	150	155	160	220	302
Near and Middle East	60	60	50	30	30	45	56
Egypt	30	32	30	7	4	5	5
Greece	20	20	18	16	20	38	40
Other	10	8	2	7	6	2	11
Africa	25	30	35	35	23	20	23
Ghana	10	12	13	12	6	3	5
Morrocco	14	17	19	19	13	13	13
Other	1	1	3	4	4	4	5
Asia	60	80	30	55	52	60	65
India	5	10	8	10	20	25	22
Japan	54	66	20	41	25	26	35
Other	1	4	2	4	7	9	8
Latin America	0	0	0	0	25	30	21
Brazil	0	0	0	0	25	30	21

USSR: Oil Consumption

	Million b/d
1970	5.15
1971	5.46
1972	5.92
1973	6.33
1974	6.79
1975	7.20
1976	7.55

USSR: Natural Gas Production
Million cm/d

1970	542.3
1971	581.9
1972	604.9
1973	647.5
1974	713.8
1975	792.6
1976	876.0
1977	
Jan	958.1
Feb	971.4
Mar	958.1
Apr	933.3
May	912.9
Jun	903.3
Jul	900.0
Aug	909.7

USSR: Regional Production of Natural Gas
Million cm/d

	1970	1971	1972	1973	1974	1975 [1]	1976 [2]
Total	**542.3**	**581.9**	**604.9**	**647.5**	**713.8**	**792.6**	**876.0**
Central Asia	131.7	148.1	162.8	196.0	226.0	260.0 [1]	285.6
Ukrainian SSR	166.8	177.0	184.1	186.6	187.2	188.2 [1]	187.7
North Caucasus	104.8	99.1	82.1	70.8	68.0	65.1	60.0 [3]
West Siberia	26.5	26.5	31.1	45.0	67.7	103.0	131.1
Komi ASSR	17.0	27.5	36.4	38.2	46.7	50.7 [1]	53.6
Azerbaydzhan SSR	15.0	15.9	18.7	22.9	24.9	27.1 [1]	30.1
Urals-Voga and other producing regions in the RSFSR	80.5	87.8	89.7	88.0	93.3	98.5 [1]	127.9

[1] Revised.
[2] Preliminary.
[3] Estimate based on average rate of decline during 1970-75.

USSR: Natural Gas Trade
Million cm/d

	1970	1971	1972	1973	1974	1975	1976
Exports	**9.0**	**12.5**	**13.9**	**18.7**	**38.5**	**53.0**	**70.4**
Eastern Europe	6.4	8.6	9.4	13.3	23.4	31.0	36.7
Bulgaria	0	0	0	0	0.8	3.2	6.1
Czechoslovakia	3.7	4.5	5.3	6.5	8.9	10.1	11.7
East Germany	0	0	0	2.1	7.9	9.1	9.2
Hungary	0	0	0	0	0	1.7	2.7
Poland	2.7	4.1	4.1	4.7	5.8	6.9	7.0
Western Europe	2.6	3.9	4.5	5.4	15.1	22.0	33.7
Austria	2.6	3.9	4.5	4.4	5.8	5.1	7.6
Finland	0	0	0	0	1.2	2.0	2.4
France	0	0	0	0	0	0	2.7
Italy	0	0	0	0	2.2	6.4	10.1
West Germay	0	0	0	1.0	5.9	8.5	10.9
Imports	**9.7**	**22.3**	**30.2**	**31.3**	**32.7**	**34.0**	**32.2**
Afghanistan	7.1	6.9	7.8	7.5	7.8	7.8	6.8
Iran	2.6	15.4	22.4	23.8	24.9	26.2	25.4

USSR: Consumption of Natural Gas

	Million cm/d
1970	543.0
1971	591.7
1972	621.2
1973	660.1
1974	708.0
1975	773.6
1976	837.8

Eastern Europe: Oil Production and Consumption

Thousand b/d

	1970	1971	1972	1973	1974	1975	1976
Production	**384**	**393**	**404**	**410**	**417**	**423**	**429**
Bulgaria	7	6	5	4	3	2	2
Czechoslovakia	4	4	4	3	3	3	2
East Germany	1	1	1	1	1	1	1
Hungary	39	39	40	40	40	40	43
Poland	8	8	7	8	11	11	9
Romania	268	276	283	286	290	292	294
Yugoslavia	57	59	64	68	69	74	78
Consumption	**1,236**	**1,385**	**1,525**	**1,797**	**1,822**	**1,977**	**N.A.**
Bulgaria	179	208	218	244	262	284 [1]	N.A.
Czechoslovakia	207	236	256	294	308	330 [1]	N.A.
East Germany	191	209	272	293	297	332 [1]	N.A.
Hungary	128	145	163	179	186	204	N.A.
Poland	170	192	214	266	259	280	N.A.
Romania	207	227	239	270	276	310 [1]	N.A.
Yugoslavia	154	168	163	251	234	237	N.A.

[1] Estimated.

Thousand b/d

	1970	1971	1972	1973	1974	1975	1976 (Est.)
Crude Oil [1]							
Imports	**879**	**1,013**	**1,171**	**1,401**	**1,445**	**1,542**	**1,732**
USSR	679	800	921	1,044	1,118	1,242	1,337
OPEC	102	117	107	233	270	260	385
Iraq	40	53	28	53	86	125	102
Iran	62	64	71	94	63	72	12
Algeria	0	0	6	0	5	14	0
Libya	0	Negl.	2	0	4	9	10
Kuwait	0	0	0	4	0	15	0
Other OPEC	0	0	0	82 [2]	112 [2]	25 [2]	261 [2]
Other Non-OPEC	98	96	143	124	57	40	10
Belgium	0	0	0	0	6	4	0
West Germany	0	0	0	6	4	0	0
Netherlands	0	0	0	0	2	11	0
Syria	Negl.	0	7	3	Negl.	0	0
France	0	7	1	0	0	0	0
Other	98	89	135	115	45	25	10
Petroleum products							
Imports	**166**	**153**	**159**	**177**	**180**	**160**	**162**
Bulgaria	58	51	47	47	48	34	35
Czechoslovakia	22	20	21	25	27	21	25
East Germany	2	4	11	2	2	3	3
Hungary	19	16	14	20	21	19	21
Poland	48	45	47	61	60	63	64
Yugoslavia	17	17	19	22	22	20	14
Exports	**201**	**182**	**220**	**204**	**236**	**243**	**298**
Czechoslovakia	15	18	20	13	10	15	17
East Germany	26	20	47	48	58	57	55
Hungary	18	10	13	13	10	11	11
Poland	26	21	34	27	24	32	54
Romania	107	107	102	99	129	124	157
Yugoslavia	9	6	4	4	5	4	4

[1] Crude oil exports are negligible.
[2] Including data that cannot be distributed by country of origin.

Eastern Europe: Natural Gas Production and Consumption

Million cm/d

	1970	1971	1972	1973	1974	1975	1976
Production	**100.09**	**110.27**	**121.00**	**132.76**	**137.03**	**144.04**	**155.89**
Bulgaria	1.30	0.90	0.60	0.61	0.49	0.30	0.10
Czechoslovakia	3.30	3.35	3.19	2.85	2.67	2.55	2.69
East Germany	3.38	7.82	13.85	19.21	21.18	19.92 [1]	19.00 [1]
Hungary	9.50	10.15	11.26	13.21	13.96	14.20	16.66
Poland	14.20	14.75	15.95	16.51	15.72	16.34	18.35
Romania	65.73	70.15	72.75	76.73	79.05	86.49	94.36 [1]
Yugoslavia	2.68	3.15	3.40	3.64	3.96	4.24	4.73
Consumption	**106.71**	**118.80**	**130.09**	**145.88**	**160.26**	**175.04** [1]	**193.52** [1]
Bulgaria	1.30	0.90	0.60	0.61	1.33	3.55	6.21
Czechoslovakia	6.78	7.56	8.23	9.11	11.49	12.92	15.42
East Germany	3.82	8.12	13.85	21.37	28.96	28.76 [1]	28.21 [1]
Hungary	10.05	10.72	11.81	13.76	14.51	16.41	19.97 [1]
Poland	16.95	18.83	20.06	21.19	21.52	23.22	25.27
Romania	65.18	69.60	72.20	76.20	78.48	85.94 [1]	85.39 [1]
Yugoslavia	2.63	3.07	3.34	3.64	3.96	4.24	4.73

[1] Estimated.

Eastern Europe: Natural Gas Trade

Million cm/d

	1970	1971	1972	1973	1974	1975	1976
Imports	**7.46**	**9.50**	**10.02**	**13.92**	**23.89**	**31.65** [1]	**38.28** [1]
Bulgaria	0	0	0	0	0.84	3.25	6.11
Czechoslovakia	3.72	4.55	5.36	6.53	8.92	10.47	12.73
East Germany	0.44	0.30	Negl.	2.16	7.78	8.84	9.21
Hungary	0.55	0.57	0.55	0.55	0.55	2.21	3.31
Poland	2.75	4.08	4.11	4.68	5.80	6.88	6.92
Exports	**0.84**	**0.97**	**0.93**	**0.80**	**0.66**	**0.65** [1]	**0.65** [1]
Czechoslovakia	0.24	0.34	0.32	0.27	0.10	0.10	0.10 [1]
Romania	0.55	0.55	0.55	0.53	0.56	0.55 [1]	0.55 [1]
Yugoslavia	0.05	0.08	0.06	Negl.	0	0	0

[1] Estimated.

PRC: Oil Production, Consumption, and Trade

Thousand b/d

	1970	1971	1972	1973	1974	1975	1976
Crude Oil Production	570	730	860	1,090	1,310	1,490	1,670
Crude Oil Consumption	500	630	740	920	1,030	1,300	1,500
Oil Trade							
Crude Exports							
Japan [1]	0	0	0	20	80	164	136
Philippines [1]	0	0	0	0	2.8	10.0	10.0
Thailand [1]	0	0	0	0	0	5.0	0
Product Exports							
North Korea	10	10	10	5	5	5	5
Thailand [1]	0	0	0	0	0	0	6.2
Vietnam	20	20	20	8	9	11	11

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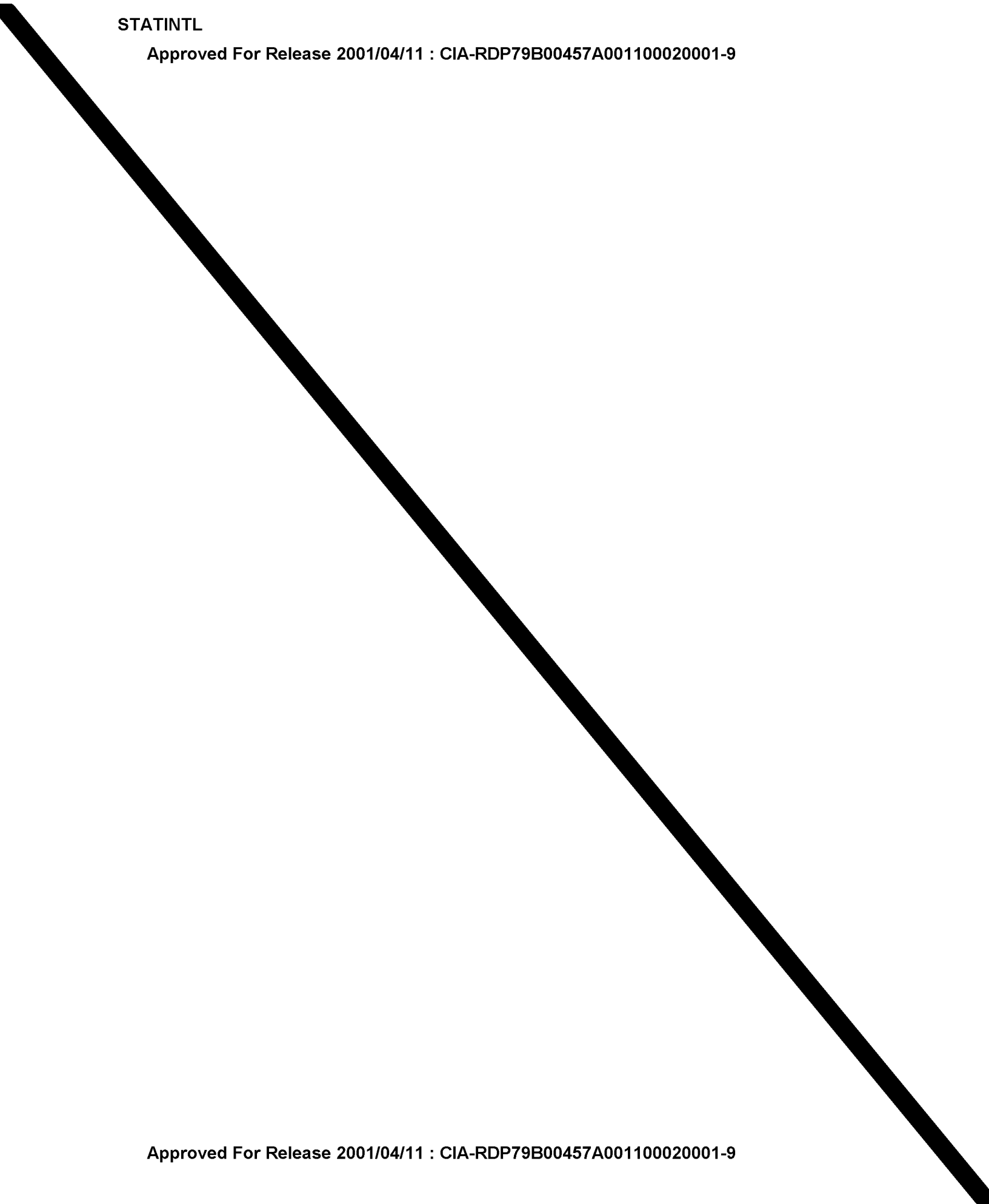

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3. TO 1 & 2. PLEASE REVIEW I[redacted]EBR OVERVIEW FOR 30NOV'77 AND MARK FOR SANITIZATION FOR RELEASE TO

STATINTL [redacted]

THANK YOU,

ETHEL, 4 F 42, HA. R 9002

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ASA/D/OER, 4 F 42, HQ. R 9002	30 NOV'77

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FORM NO. 1-67 237 Use previous editions (40)

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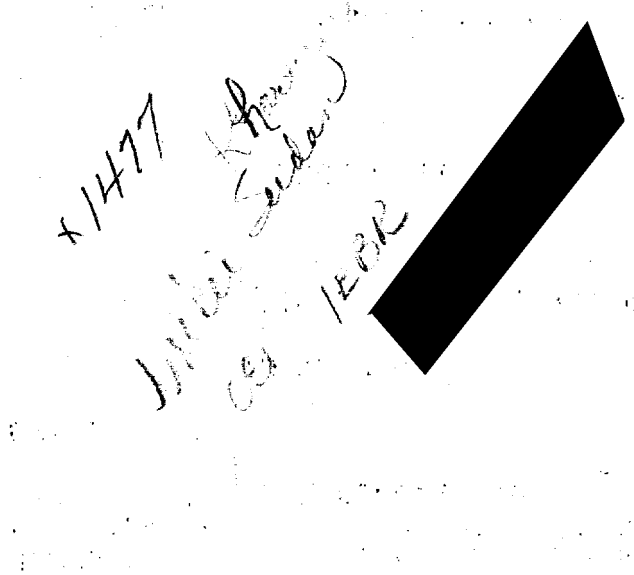

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INTERNATIONAL ENERGY BIWEEKLY REVIEW

Overview

The strenth of Iran's commitment to an oil price freeze will have a crucial bearing on OPEC's decision on whether to raise 1978 crude oil prices. At this time, it is still uncertain how forcefully Iran will assert its support of a price freeze.

The Shah shifted his position while in Washington by pledging that Iran would actively work for a freeze when the cartel members meet in Caracas on 20 December. A staunch Iranian-Saudi Arabian coalition probably could successfully hold the price line, even though most OPEC states strongly favor an increase.

Tehran initially had planned to maintain a neutral position at Caracas and side with the majority. This would have led to an increase of 5 to 10 percent, since Riyadh previously indicated it would not stand alone in support of a price freeze. Shortly before the Shah's announcement, Saudi oil minister Yamani delivered a letter to the United Arab Emirates stating that Saudi Arabia would support a price freeze, unless this policy would cause a split among OPEC countries.

If Iran's commitment to a freeze is softer than the Shah's recent assurances suggest, then an increase in price is still likely. To push through a freeze, the Iranian delegation will have to stick to its stance beyond the opening rounds of negotiations at Caracas and resist pressure to reach an accomodation with the majority in later rounds.

The Shah's recent announcement has sparked little change in strategy among the proponents of a price hike. Those seeking an increase hope to mold a common front that would pressure Saudi Arabia and Iran to conform to the majority position. Both sides want to avoid a replay of the split that occurred last year at Doha.

The Shah's revised position probably has caused some cartel members to lower their expectations. Venezuelan oil minister Hernandez and his Indonesian counterpart

Note: Comments and queries regarding this publication are welcome. They may be directed to [redacted] of the Office of Economic Research, telephone 851-5804.

25X1A

recently met separately with Kuwaiti oil minister Kazimi and agreed to seek an 8-percent increase at Caracas. These countries reportedly are willing to implement such an increase in two stages—4 percent in January and 4 percent in July. Additional bargaining among Arab members of OPEC will take place at the OAPEC ministerial meeting scheduled for mid-December in Bahrain.

* * * * *

Abu Dhabi reportedly will reduce its government-imposed oil production ceilings next year by about 250,000 b/d, more than 15 percent below current levels. This decision results from concerns of oil ministry officials—currently disputed by the operating companies—that technical constraints at important onshore and offshore fields limit levels of prudent oil output, at least in the near term. This ministry argument is buttressed by studies of independent reservoir engineering consultants. The government is also reacting to the lack of petroleum exploration in the past few years and the resulting net decline in oil reserves. We do not agree with the judgment in oil industry publications that these production restrictions are politically induced by the current market surplus. We will provide an in-depth technical analysis of this subject in a future issue. (Secret Noforn-Nocontract-Orcon)

ER IOD 77-024
30 November 1977

STATINTL

Articles Released [redacted]

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[redacted]

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ER IOD 77-024 30 Nov 77

Please indicate the items releasable to the [redacted] STATINTL

1. OPEC Participation in Downstream Petroleum Operations to all [redacted] STATINTL
2. Oil Reserves of Exporting Countries and the Time Horizon of Their Depletions to all [redacted] STATINTL
3. Soviets Move Toward Tertiary Oil Recovery to All [redacted] with deletion of para 3. STATINTL
4. Israelis Find Oil in Gulf of Suez, All [redacted] STATINTL

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25X1C

TO: [redacted]

25X1A WNINTEL [redacted]

10 3 - 30 November 77

25X1C FOLLOWING SANITIZED OVERVIEW FROM OER'S INTERNATIONAL ENERGY BIWEEKLY REVIEW ENDING 30 NOVEMBER 1977 IS APPROVED FOR PASSING TO [redacted] AT SECRET LEVEL.

1. THE STRENGTH OF IRAN'S COMMITMENT TO AN OIL PRICE FREEZE WILL HAVE A CRUCIAL BEARING ON OPEC'S DECISION ON WHETHER TO RAISE 1978 CRUDE OIL PRICES.

2. THE SHAH SHIFTED HIS POSITION WHILE IN WASHINGTON BY PLEDGING THAT IRAN WOULD ACTIVELY WORK FOR A FREEZE WHEN THE CARTEL MEMBERS MEET IN CARACAS ON 20 DECEMBER. A STAUNCH IRANIAN-SAUDI ARABIAN COALITION PROBABLY COULD SUCCESSFULLY HOLD THE PRICE LINE, EVEN THOUGH MOST OPEC STATES STRONGLY FAVOR AN INCREASE.

3. TEHRAN INITIALLY HAD PLANNED TO MAINTAIN A NEUTRAL POSITION AT CARACAS AND SIDE WITH THE MAJORITY. THIS WOULD HAVE LED TO AN INCREASE OF 5 TO 10 PERCENT, SINCE RIYADH PREVIOUSLY INDICATED IT WOULD NOT STAND ALONE IN SUPPORT OF A PRICE FREEZE.

25X1A 4. TO PUSH THROUGH A FREEZE, THE IRANIAN DELEGATION WILL HAVE

DATE: 30 NOVEMBER 1977
ORIG: [redacted]
UNIT: ASA/D/OER
EXT: R 9002

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TO STICK TO ITS STANCE BEYOND THE OPENING ROUNDS OF NEGOTIATIONS AT CARACAS AND RESIST PRESSURE TO REACH AN ACCOMODATION WITH THE [redacted] MAJORITY IN LATER ROUNDS.

5. THE SHAH'S RECENT ANNOUNCEMENT HAS SPARKED LITTLE CHANGE IN STRATEGY AMONG THE PROPONENTS OF A PRICE HIKE. THOSE SEEKING AN INCREASE HOPE TO MOLD A COMMON FRONT THAT WOULD PRESSURE SAUDI ARABIA AND IRAN TO CONFORM TO THE MAJORITY POSITION. BOTH SIDES WANT TO AVOID A REPLAY OF THE SPLIT THAT OCCURRED LAST YEAR AT DOHA. THE SHAH'S REVISED POSITION PROBABLY HAS CAUSED SOME CARTEL MEMBERS TO LOWER THEIR EXPECTATIONS.

6. ADDITIONAL BARGAINING AMONG ARAB MEMBERS OF OPEC WILL TAKE PLACE AT THE OAPEC MINISTERIAL MEETING SCHEDULED FOR MID-DECEMBER IN BAHRAIN. (SECRET). E 1,2,3,IMPDET,WNINTEL.

25X1A 25X1A

ORIG: ASA/D/OER/NFAC [redacted]

[redacted] NFAC/CS [redacted] REL: [redacted] 25X1A

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25X1A [redacted] IN DRAFT)

DATE: [redacted] BY TELEPHONE 25X1A

ORIG: NFAC/CS [redacted] 25X1A

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103 - 30 November 77

25X1A

TO: [redacted]

25X1A FROM: CHIEF, OER INFO [redacted] NFAC/CS, NFAC/PPG/R&D.Y

SUBJECT: OER'S INTERNATIONAL ENERGY BIWEEKLY REVIEW ARTICLES FOR RELEASE [redacted] 25X1C SERVICES.Y

1. FOUR ARTICLES RELEASED FROM OER'S INTERNATIONAL ENERGY 25X1C BIWEEKLY REVIEW ENDING 30 NOVEMBER 1977 [redacted] {A} OPEC PARTICIPATION IN DOWNSTREAM PETROLEUM OPERATIONS {UNCLASSIFIED}; {B} OIL RESERVES OF EXPORTING COUNTRIES AND THE TIME HORIZON OF THEIR DEPLETION {UNCLASSIFIED}; AND {C} ISRAELIS FIND OIL IN [redacted] GULF OF SUEZ {CONFIDENTIAL} -- RELEASABLE WITHOUT SANITIZATION TO ALL. WITH DELETION OF ENTIRE PARAGRAPH THREE, "SOVIETS MOVE TOWARD TERTIARY OIL RECOVERY {CONFIDENTIAL}" IS RELEASABLE TO ALL.Y

25X1C 2. [redacted] AT YOUR DISCRETION SUBSTANCE OF ABOVE CABLED ARTICLES MAY BE PASSED IN ADVANCE OF 25X1C RECEIPT OF HARD COPY PUBLICATION TO APPROPRIATELY CLEARED [redacted] REQUEST YOU MAKE NO REPEAT NO

25X1A

DATE: 30 NOVEMBER 1977
ORIG: [redacted]
UNIT: ASA/D/OER
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CL BY: 015718

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25X1A [redacted]

25X1A REL: C/NFAC/CS [redacted]

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S E C R E T
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TO: [redacted]

25X1A FROM: [redacted] INFO ASA/D/OER, NFAC/PPG/R&D, NFAC/CS

SUBJECT: WNINTEL [redacted]

25X1A

ARTICLES FROM OER'S EIWR AND IEB FOR RELEASE [redacted] 5X1C

1. TWO ARTICLES, BOTH UNCLASSIFIED, FROM OER'S ECONOMIC INTELLIGENCE WEEKLY REVIEW OF 1 DECEMBER AND FOUR ARTICLES FROM OER'S INTERNATIONAL ENERGY BI-WEEKLY REVIEW ENDING 30 NOVEMBER 1977 PREPARED FOR RELEASE [redacted] BEING SENT BY TM 25X1C
25X1C 362691 [redacted] AND TM 362692 [redacted]

25X1C 2 AT YOUR DISCRETION, SUBSTANCE OF ARTICLES DESCRIBED AS FOLLOWS (PARA 2,A-D) AND AVAILABLE FROM CABLED VERSION IEB MAY BE PASSED IN ADVANCE OF RECEIPT OF HARD COPY PUBLICATION [redacted] REQUEST YOU MAKE NO REPEAT NO REFERENCE TO THIS PUBLICATION AS SUCH SINCE IT IS NOT RELEASABLE TO FOREIGN NATIONALS.

A. "OPEC PARTICIPATION IN DOWNSTREAM PETROLEUM OPERATIONS: (UNCLASSIFIED);

B. "OIL RESERVES OF EXPORTING COUNTRIES AND THE TIME HORIZON OF THEIR DEPLETION" (UNCLASSIFIED)"

C. "ISRAELIS FIND OIL IN GULF OF SUEZ" (CONFIDENTIAL) 25X1C
25X1C RELEASABLE WITHOUT SANITIZATION [redacted]

D. "SOVIETS MOVE TOWARD TERTIARY OIL RECOVERY" (CONFIDENTIAL) RELEASABLE [redacted] WITH DELETION OF ENTIRE PARAGRAPH
25X1C THREE.

3. ARTICLES LISTED WILL NOT BE PASSED [redacted] 25X1C
[redacted] UNTIL WE RECEIVE NOTIFICATION THAT ARTICLES PASSED [redacted] 25X1C

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SECTION I

25X1A

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CARD TYPE (1-3)	SURVEY NO. (5-8)	DATE PUBLISHED (9-12) MO / YR	PUBLICATION NUMBER (13-23)	FOR CRG ONLY CIB PUBLICATION DATE (13-18) MO / DAY / YR
1		11 / 77	ERIOD77-024	

PUBLICATION TITLE (24-80)

MIDDLE EAST: REFINING AND PETROCHEMICAL EXPANSION

CARD 2 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

SURVEY NO. (5-8)

OFFICE (9-10)

✓ 02 OER	04 OGCR	07 OSI	27 CRG
03 OSR	06 OCR	08 OWI	28 ORPA
30 OIA	40 DIA	60 STATE	59 NSA
JOINT OFFICE (specify):			(- -)

KEY INTELLIGENCE QUESTION(S)-KIQ (11 12 13 14; 1ST KIQ # / 2ND KIQ #)

DOCUMENT TYPE (15-16)

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05 M	12 IB	32 NID	60 SURVEYOR
07 IR	13 RP	41 SID	61 WIS
08 R	14 BR	✓ 51 IOD	

19 20

CLASSIFICATION: SECRET

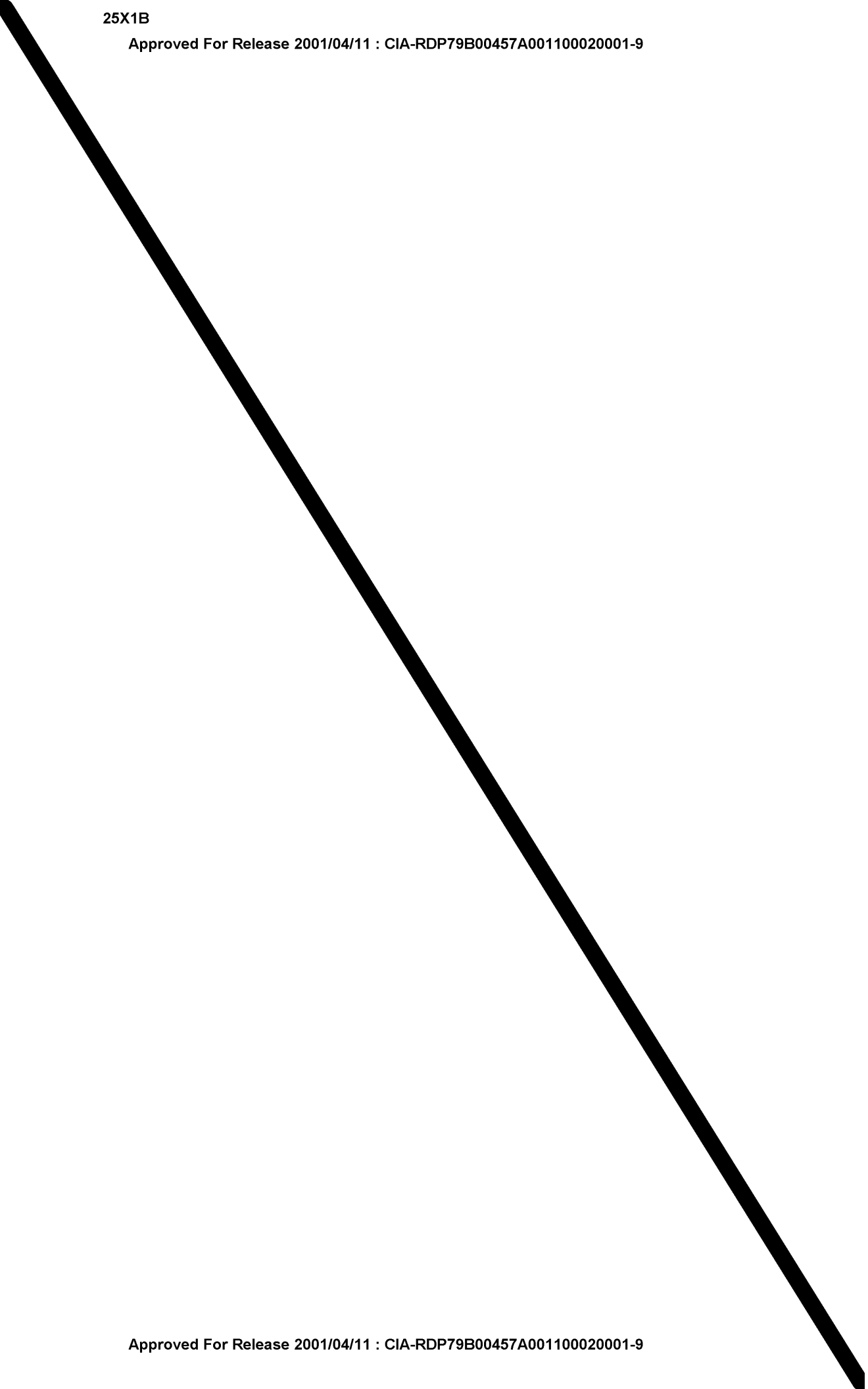
CLASSIFICATION CONTROLS: NOFORN / NO CONTRACT

TOPICAL CATEGORY	GEOGRAPHIC AREA CATEGORY
Internal Politics	USSR
International Relations	Eastern Europe
✓ Economics	Western Europe
Military	China
Science & Technology	Other Far East
Geography	✓ Near East/N. Africa
Biography	South Asia
	Africa
	Latin America

LIST SPECIFIC COUNTRIES: SAUDI ARABIA, KUWAIT, ABU DHABI, SYRIA, IRAQ

TO BE COMPLETED BY R & E

CONTROL NO. (21-22)	TOPIC (23-24)	AREA (25-28)



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SECTION I

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1		11	77	ER 10D 77024			

PUBLICATION TITLE (24-80)

SOVIETS MOVE TOWARD TERTIARY OIL RECOVERY

CARD 2

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		03 OSR	05 OCR	08 OWI	28 ORPA
		30 DIA	40 DIA	60 STATE	59 NSA
		JOINT OFFICE (specify)			(- -)

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08 R	14 BR	X 51 IOD		

17	18	19	20

CLASSIFICATION: CONFIDENTIAL

CLASSIFICATION CONTROLS: —

TOPICAL CATEGORY

- [ ] Internal Politics
- [ ] International Relations
- [ ] Economics
- [ ] Military
- [X] Science & Technology
- [ ] Geography
- [ ] Biography

GEOGRAPHIC AREA CATEGORY

- [X] USSR
- [ ] Eastern Europe
- [X] Western Europe
- [ ] China
- [ ] Other Far East
- [ ] Near East/N. Africa
- [ ] South Asia
- [ ] Africa
- [ ] Latin America

LIST SPECIFIC COUNTRIES: USSR, Italy, West Germany, U.S.

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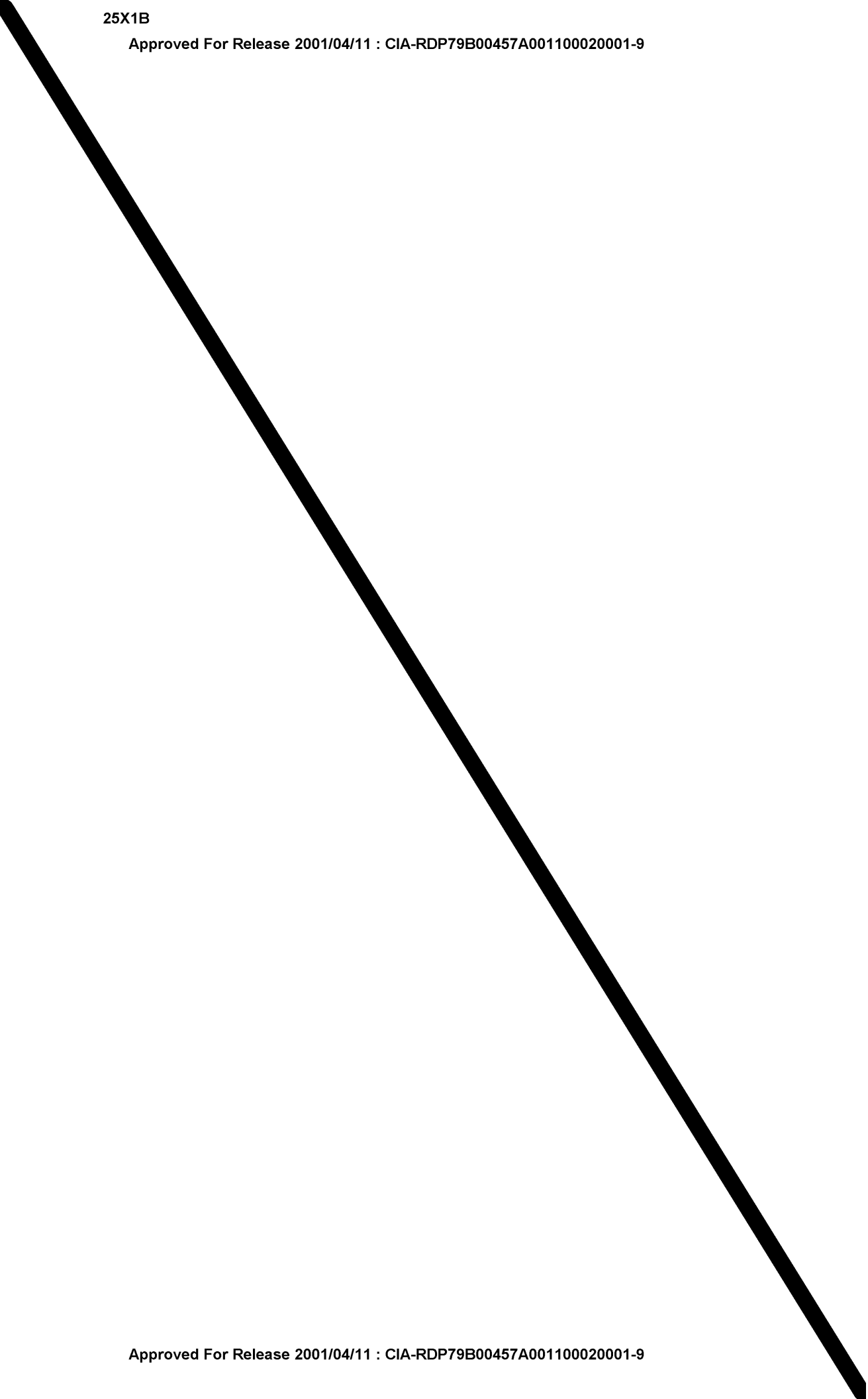

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SECTION I

NAME AND TELEPHONE NUMBER OF ANALYST [redacted] 25X1A

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OPEC PARTICIPATION IN DOWNSTREAM PETROLEUM OPERATIONS

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		03 OSR	06 OCR	08 OWI	28 ORPA
		30 OIA	40 DIA	60 STATE	59 NSA
		JOINT OFFICE (specify):			(- -)

KEY INTELLIGENCE QUESTION(S)-KIQ

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1ST KIQ #		2ND KIQ #	

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07 IR	13 RP	41 SID	61 WIS
08 R	14 BR	[X] 51 IOD	

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CLASSIFICATION: UNCLASSIFIED

CLASSIFICATION CONTROLS:

TOPICAL CATEGORY

- [ ] *Internal Politics*
- [ ] *International Relations*
- [X] *Economics*
- [ ] *Military*
- [ ] *Science & Technology*
- [ ] *Geography*
- [ ] *Biography*

GEOGRAPHIC AREA CATEGORY

- [ ] *USSR*
- [ ] *Eastern Europe*
- [ ] *Western Europe*
- [ ] *China*
- [ ] *Other Far East*
- [X] *Near East/N. Africa*
- [ ] *South Asia*
- [ ] *Africa*
- [ ] *Latin America*

LIST SPECIFIC COUNTRIES: OPEC COUNTRIES

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CONTROL NO. (21-22)	TOPIC (23-24)	AREA (25-28)

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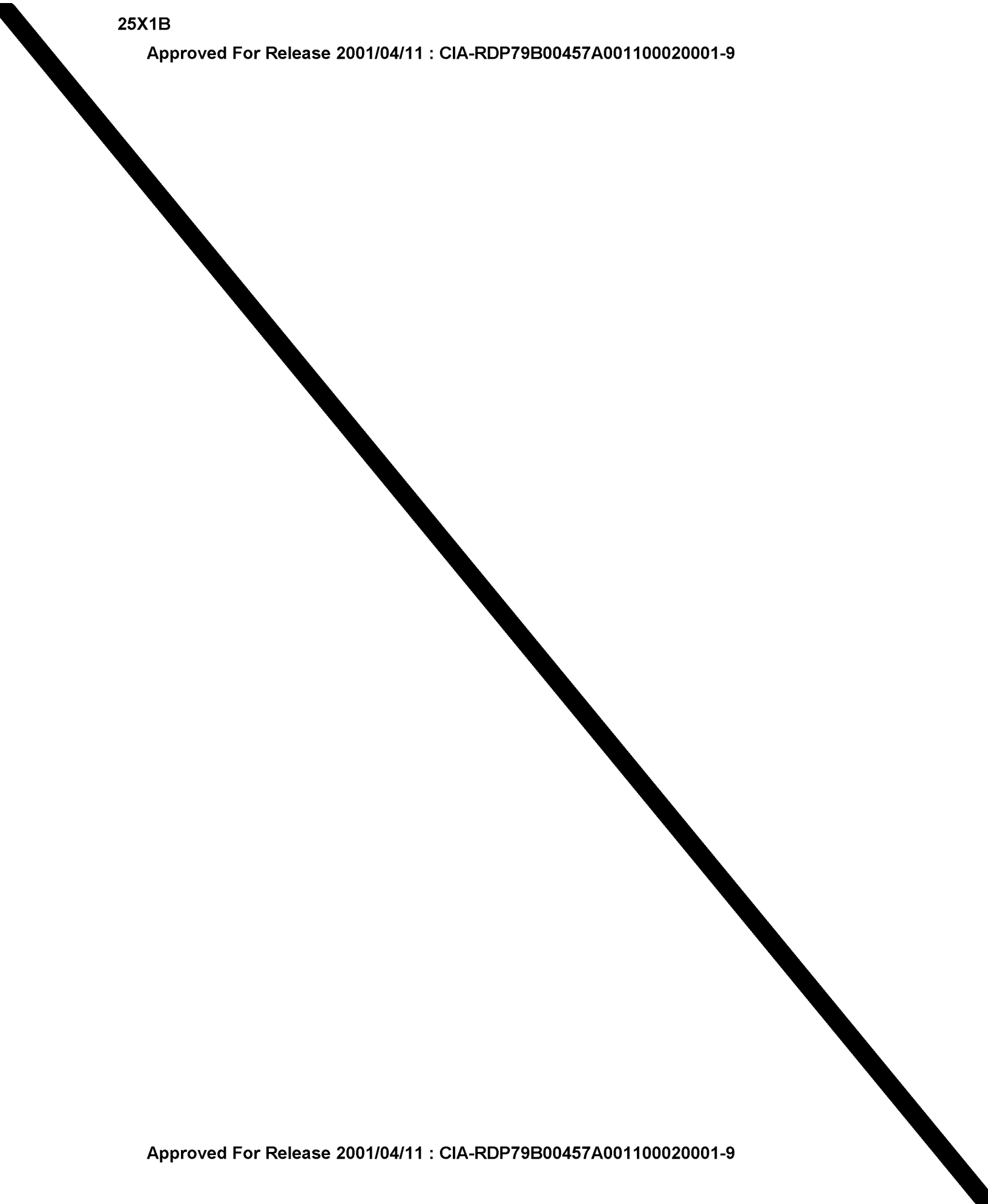

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SECTION I

NAME AND TELEPHONE NUMBER OF ANALYST [redacted] x5804 25X1A

CARD 1 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

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OPEC PRICE POSITIONS

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OFFICE (9-10)

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	03 OSR		06 OCR		08 OWI		28 ORPA
	30 OIA		40 DIA		60 STATE		59 NSA
	JOINT OFFICE (specify):						(- -)

KEY INTELLIGENCE QUESTION(S)-KIQ

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	07 IR		13 RP		41 SID		61 WIS
	08 R		14 BR	X	51 IOD		

17	18	19	20

CLASSIFICATION: SECRET

CLASSIFICATION CONTROLS: NFNCOC

TOPICAL CATEGORY

- [ ] Internal Politics
- [ ] International Relations
- [X] Economics
- [ ] Military
- [ ] Science & Technology
- [ ] Geography
- [ ] Biography

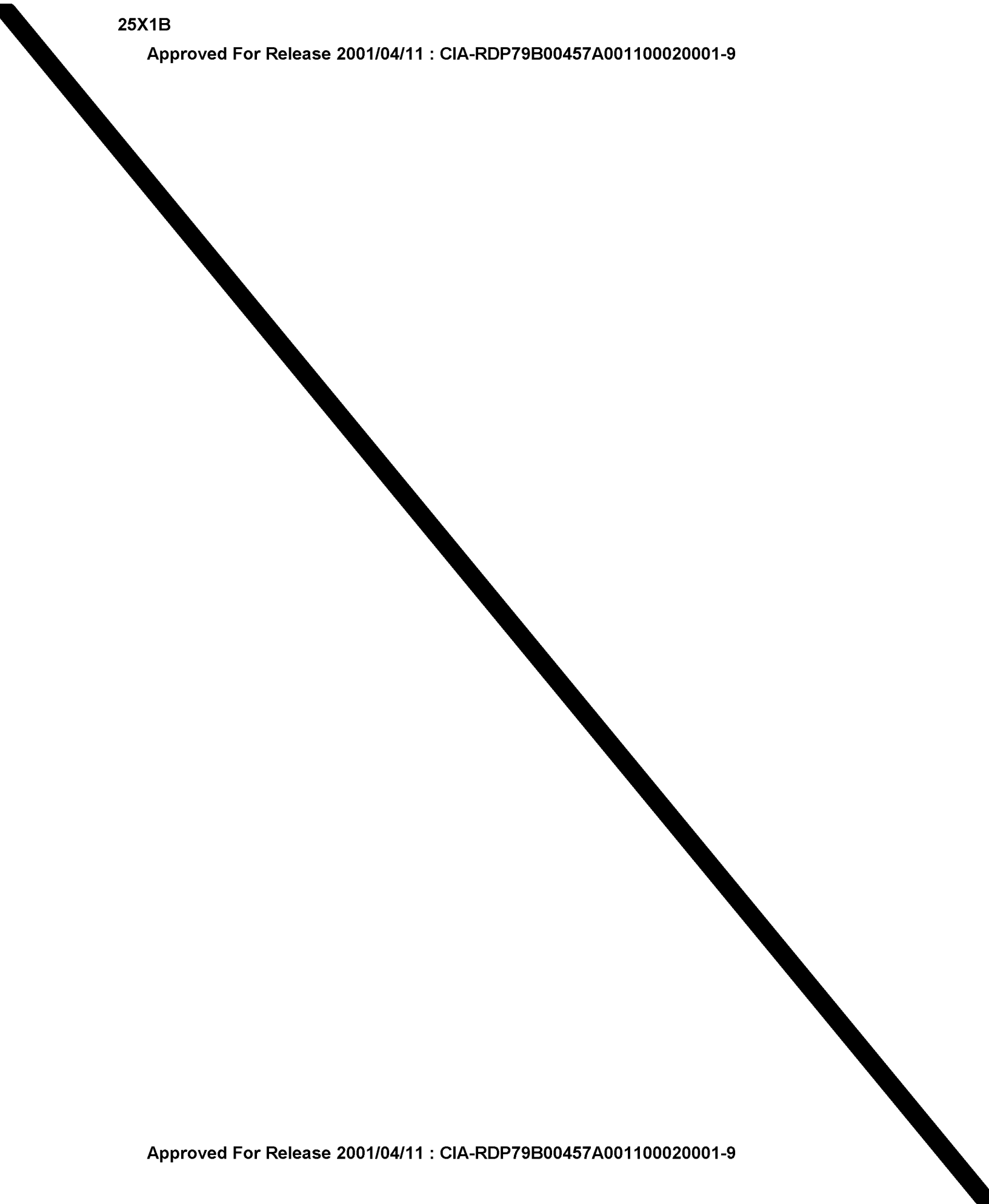
GEOGRAPHIC AREA CATEGORY

- [ ] USSR
- [ ] Eastern Europe
- [ ] Western Europe
- [ ] China
- [ ] Other Far East
- [X] Near East/N. Africa
- [ ] South Asia
- [ ] Africa
- [ ] Latin America

LIST SPECIFIC COUNTRIES: OPEC COUNTRIES

TO BE COMPLETED BY R & E

CONTROL NO. (21-22)	TOPIC (23-24)	AREA (25-28)



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SECTION I

NAME AND TELEPHONE NUMBER OF ANALYST [redacted] 5804 C 25X1A

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PUBLICATION TITLE (24-80)

Israeli Find Oil in Gulf of Suez

CARD 2 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

CARD TYPE (1-2)	SURVEY NO. (3-8)
2	

OFFICE (9-10)

✓ 02 OER	04 OGCR	07 OSI	27 CRG
03 OSR	05 OCR	08 ORI	28 ORPA
30 OIA	50 DIA	60 STATE	59 NSA
JOINT OFFICE (specify):			(- -)

KEY INTELLIGENCE QUESTION(S)-KIQ

11	12	13	14
		6	6

1ST KIQ # 2ND KIQ #

DOCUMENT TYPE (15-16)

04 IM	11 IR	15 TM	53 IW
05 M	12 IB	32 NID	60 SURVEYOR
07 R	13 RP	41 SID	61 WIS
08 P	14 BR	51 IOD	

17	18	19	20

CLASSIFICATION: C

CLASSIFICATION CONTROLS:

TOPICAL CATEGORY

- [ ] Internal Politics
- [ ] International Relations
- [x] Economics
- [ ] Military
- [ ] Science & Technology
- [ ] Geography
- [ ] Biography

GEOGRAPHIC AREA CATEGORY

- [ ] USSR
- [ ] Eastern Europe
- [ ] Western Europe
- [ ] China
- [ ] Other Far East
- [x] Near East/N. Africa
- [ ] South Asia
- [ ] Africa
- [ ] Latin America

LIST SPECIFIC COUNTRIES: ISRAEL Egypt

TO BE COMPLETED BY R & E

CONTROL NO. (21-22)	TOPIC (23-24)	AREA (25-28)