PROFITABILITY OF DOMESTIC ENERGY COMPANY OPERATIONS

HEARINGS

BEFORE THE

COMMITTEE ON FINANCE

UNITED STATES SENATE

NINETY-THIRD CONGRESS

SECOND SESSION

FEBRUARY 13 AND 14, 1974

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PROFITABILITY OF DOMESTIC ENERGY COMPANY OPERATIONS

WEDNESDAY, FEBRUARY 13, 1974

U.S. SENATE,
COMMITTEE ON FINANCE,
Washington, D.C.

The committee met, pursuant to notice, at 10:05 a.m., room 2221, Dirksen Senate Office Building, Senator Russell B. Long (chairman) presiding.

Present: Senator Long.

The CHAIRMAN. This hearing will come to order.

This hearing was called during the recess of the Congress because if we wait any longer, it might mean that the information developed would not be available to the Senate when the Senate considers the conference report on the emergency energy bill. I had advised Senators who had made plans to be in their States that if they would send in questions by telephone or otherwise that I would be glad to ask their questions to any or all of the witnesses.

Today we begin 2 days of hearings to obtain some background information necessary to the consideration of legislation dealing with the problem of excess or windfall profits in the oil industry. The information we are seeking in these hearings relate to the rate of return and tax burdens of the petroleum industry in the United States. This information will be relevant not only to windfall profits tax proposals, but also to the evaluation of proposals to reduce or eliminate present tax incentives accorded the domestic petroleum industry.

Much attention has been given recently to the overall earnings of multinational oil companies, primarily because their annual and quarterly statements of earnings deal primarily, or solely, with overall earnings.

While this information is important in the consideration of tax legislation affecting the foreign operations of U.S. companies, there is an equally important need to know the facts concerning the profitability of the petroleum industry in their U.S. operations.

If we are to achieve our goal of energy self-sufficiency in the United States, our laws must be designed carefully with this objective in mind.

It is my hope that in these hearings we can develop the information we need to legislate wisely.

[The Committee on Finance press release announcing these hearings, follows:]

COMMITTEE ON FINANCE PRESS RELEASE

JANUARY 28, 1974.

Chairman Russell B. Long, D-La., announced today that the Senate Finance Committee will conduct two days of hearings on February 13 and 14 to deal with

the problem of excess or windfall profits in the oil industry. The hearings will begin both days at 10 a.m. in Room 2221 of the Dirksen Senate Office Building.

The Chairman said the hearings will develop information on the profits and rates of return realized by oil companies from their operations in the United States during the 10-year period from 1964 to 1973.

"Testimony the Committee received on January 22–23 from the nation's top experts in tax administration was emphatic on how an excess-profits tax should not be drafted," Long said.

"These authorities agreed unanimously that the provision contained in the conference report to S. 2589 (the emergency energy bill) is not workable and cannot be administered," Long continued. "Several even raised serious doubts about its constitutionality."

The Chairman said the Committee "intends to develop all the information it can in an expeditious manner in seeking a workable alternative to the ill-conceived proposal" in S. 2589.

Long stressed the fact that emergence of the windfall profits issue is a very recent development. "Despite the raging controversy on the subject, it is surprising to many that the very first windfall-profits bill introduced in the Senate in connection with the energy crisis was proposed" on December 12, 1973, by Sen. George McGovern, D-S. Dak., he said.

Pointing to the Finance Committee's quick action on the subject, Long said, "It has been only 13 legislative days since that first proposal was referred to my Committee. Already we have had two days of full committee hearings devoted specifically to this subject, and three days of hearings by the Energy Subcommittee devoted to part of it."

The Committee expects that witnesses representing oil companies will address themselves to the following points:

(1) What was the overall rate of return which your company realized on invested and borrowed capital devoted to exploration, production, manufacturing, transportation and marketing of petroleum products during the period 1964 to 1973, inclusive?

(2) What is the rate of profitability in relation to sales during the period 1964 to 1973, inclusive?

(3) What was the rate of exploration expense and capital expense in the U.S. during the same period, 1964 to 1973?

(4) How is the price determined with respect to imports of petroleum products into the United States from a foreign subsidiary?

(5) What is your estimate of future capital requirements in the United States and what is the relationship of such needs to the rate of return on investment?

(6) What per cent of your total United States sales is based on imported petroleum products during the period 1964 to 1973?

(7) Provide information as to the amounts of oil investments outside the United States during the period 1964 to 1973 which were derived from profits generated in the United States?

The Chairman said: "We are going to be considering legislation shortly to deal with the windfall profits situation in the oil industry. The public is concerned with the sharp price increases in petroleum products since November, and I believe it is important that the Committee and the public learn the facts about oil company profits on their United States operations."

Chairman Long stated: "Before drafting an excess-profits tax law, we first need to know to what extent the profits earned on domestic oil production are being reflected in the price of gasoline at the pump and the price of other petroleum products to consumers."

Requests to testify.—Senator Long advised that witnesses desiring to testify during this hearing must make their request to testify to J. Michael Stern, Staff Director, Committee on Finance, 2227 Dirksen Senate Office Bldg., Wash., D.C., not later than Monday, February 4, 1974. Witnesses will be notified as soon as possible after this cutoff date as to when they are scheduled to appear. All witnesses must include with their written statement a summary of the principal points included in the statement. The written statements must be typed on letter-

size paper (not legal size) and at least 50 copies must be submitted to the Committee.

Written Statements—Witnesses who are not scheduled for oral presentation, and others who desire to present a statement to the Committee, are urged to prepare a written position of their views for submission and inclusion in the printed record of the hearings. These written statements should be submitted to J. Michael Stern, Staff Director, Committee on Finance, Room 2227, Dirksen Senate Office Building not later than Friday, February 22, 1974.

The CHAIRMAN. The first witness this morning will be Mr. C. John Miller, the president of the Independent Petroleum Association of America, and Mr. A. V. Jones, Jr., president of the National Stripper Well Association. We are pleased to have you gentlemen here with us today.

I believe that you, for the most part, speak for producers within this country, do you not?

Mr. MILLER. Yes, sir, we do.

The CHAIRMAN. Then I would suggest that perhaps Mr. Miller would like to deliver his statement first and then Mr. Jones.

STATEMENT OF C. JOHN MILLER, PRESIDENT, INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

Mr. MILLER. Thank you, Senator Long.

My name is C. John Miller, I am a partner in Miller Brothers at Allegam, Mich., an independent oil and natural gas exploration and producing organization. I appear here today as president of the Independent Petroleum Association of America, a national organization of domestic independent oil and gas producers and explorers with some 4,000 members in every producing area of the United States.

At the outset, I would like to briefly discuss the vital role of the Nation's independent explorers and producers of oil and natural gas. Traditionally, the thousands of independents in the industry have accounted for 75 to 80 percent of the exploratory or wildcat drilling directed at finding new reserves of these fuels.

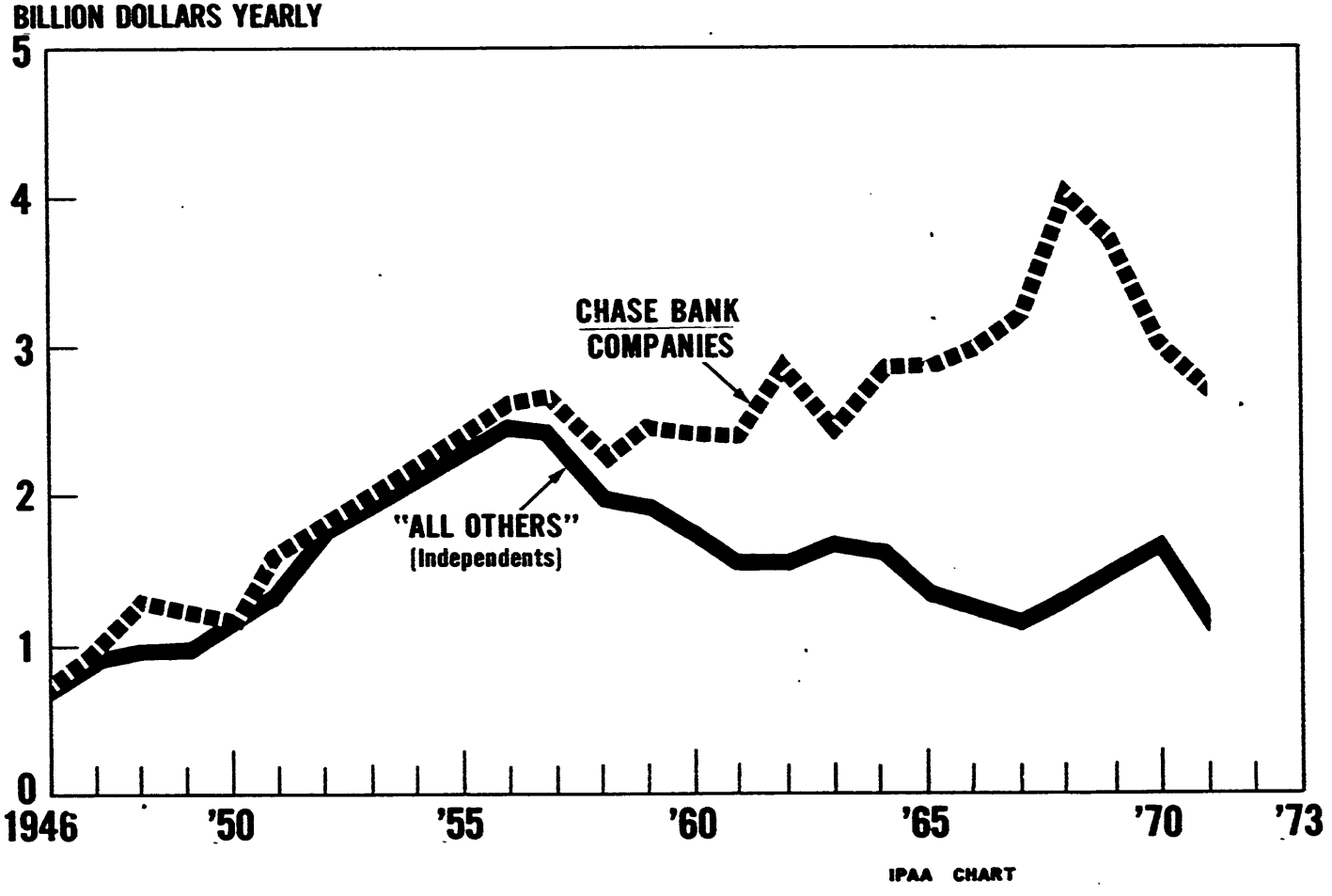
It should be recognized that our country achieved a position of energy sufficiency because, on balance, Federal and State laws and policies served to encourage thousands of domestic producers to participate in petroleum exploration and development.

The United States became the largest oil and gas producing and consuming country primarily because of the multiplicity of effort made possible only by the participation of thousands of independent explorers onshore in the lower 48 States.

In 1956 there were over 16,000 exploratory wells drilled in the United States. At that time, there were over 20,000 independent producers active in exploration activities.

But, a steadily eroding economic climate persisted since that time which caused a decline in exploration and development expenditures by independent producers by more than 50 percent since 1956, and the number of exploratory wells drilled reflected this decline, also decreasing by more than 50 percent.

EXPLORATION-DEVELOPMENT EXPENDITURES



Mr. MILLER. To illustrate, see a chart entitled "Exploration Development Expenditures," information on expenditures for exploration and development in the United States is available for the group of larger companies covered by reports of the Chase Manhattan Bank and classified as the "Chase Bank Companies," as compared with the expenditures by the thousands of independents.

Approximately the same total amount was spent by each group from 1946 through 1955 with the Chase group averaging $1.4 billion and the "all other" group averaging $1.3 billion. Both groups substantially increased these expenditures during this period.

The CHAIRMAN. If I may interrupt you, I wish we had a big copy of that chart so that everyone could see it. It is a very impressive chart.

Go right ahead.

Mr. MILLER. Thank you, Senator.

A drastic change, however, took place from 1956 to 1971. The majors increased exploration and development expenditures slightly during this period while expenditures by the thousands of independent producers declined over 50 percent from $2.45 billion in 1956 to $1.20 billion in 1971.

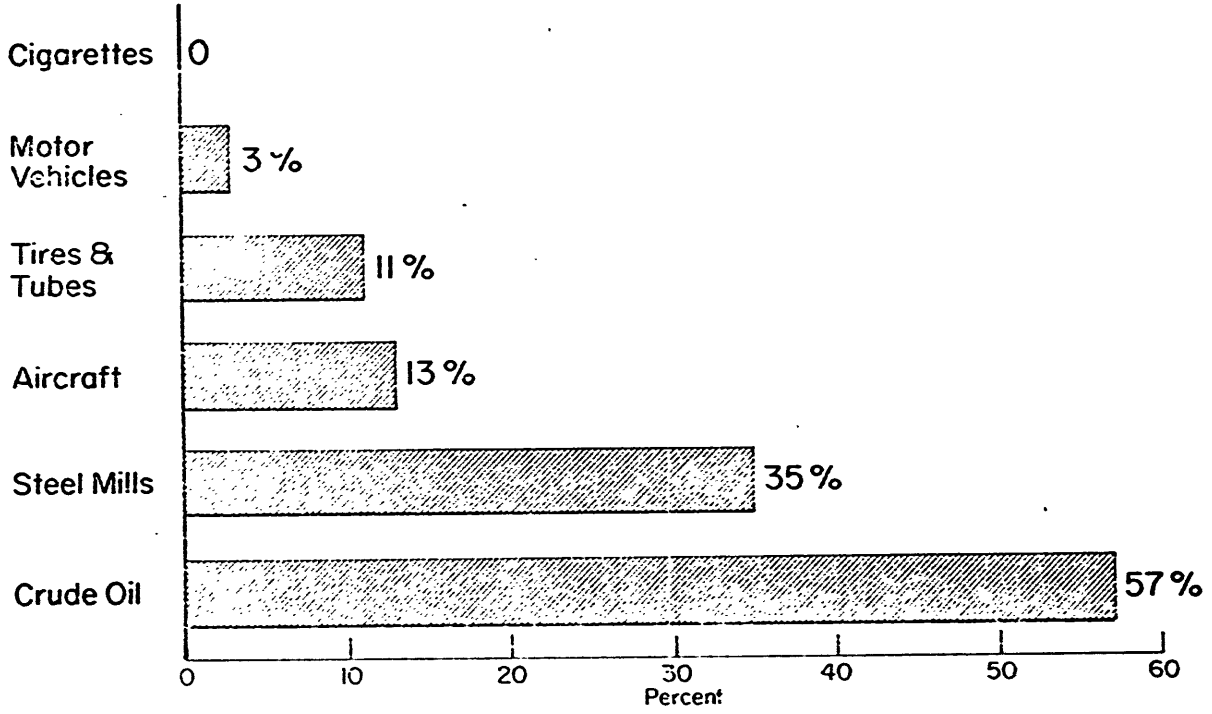
This country has the resource base, the technology, and know-how, and an industry with the will to solve its energy problems.

The lacking ingredients have been economic incentives, which have progressively eroded. From its abundant, remaining but undeveloped sedimentary basins, the United States has the potential to develop significant new conventional oil and natural gas resources.

In the short term, these petroleum fuels can be developed far quicker and at a much lower cost than any alternative energy resource. For the remainder of this century, crude oil and natural gas will continue to supply the bulk of our energy needs.

Again, I emphasize that if we are to maximize development under such policies, the independents now active—and potentially active—will and must play a major role as they always have. In this connection, the traditional role of independents has been a tremendous competitive influence in the domestic petroleum industry.

PERCENT OF U.S. PRODUCTION BY MEDIUM & SMALL COMPANIES IN 1971 (excludes 8 largest producers)



Sources: U.S. Dept. of Commerce and IPAA

This is illustrated by the attached chart, "Percent of U.S. Production by Medium and Small Companies," which shows that medium and small companies in domestic crude oil production control a far greater percent of production than do their counterparts in other basic industries.

Mr. Chairman, I would like to stress once more that the quickest and cheapest way of providing new energy sources is to revitalize the thousands of independent producers in the lower 48 States who have the ability and the will to explore for and produce the oil and gas necessary to meet our needs.

I would like to comment briefly on the scope of the challenge of restoring energy independence for the United States.

In 1974 total U.S. demand for liquid petroleum fuels will approximate 18 million barrels daily.

Our production of all petroleum liquids will be about 10.6 million barrels a day. Our dependence on foreign oil, therefore, exceeds 7 million barrels daily—representing a doubling of imports since just 5 years ago; the previous doubling in our import volume took 13 years.

It is clear from these facts that the United States has a monumental job of catching up in development of its energy resources.

The decline in reserves and availability has stemmed from 17 years of declining exploration for these fuels. We did not get into our energy supply dilemma overnight; we cannot get out of it overnight.

Total demand for petroleum liquids is growing at about a million barrels daily per year. To the extent that natural gas demand is unfilled, that energy requirements also is transferred to foreign oil, further accelerating our dependence upon others for essential fuels supplies.

Because we are beginning from a minus position, with a dependence of foreign supplies for about 40 percent of our liquid petroleum needs, the challenge of regaining energy independence is a monumental one—requiring massive capital expenditures and Government policy incentives that will serve to induce such expenditures.

Recent investments in domestic oil and natural gas exploration have approximated $5 billion annually. This level of expenditures ought to be doubled as soon as possible and perhaps tripled within a few years.

The key question, then, is: What is the source of these massive quantities of capital?

The largest single source of such capital has traditionally been the internally generated funds of oil companies. And it is obvious that the critically needed increase in such funds can only be derived from the sale of crude oil and natural gas at higher prices.

So, recognizing the past depressed economic conditions of the domestic petroleum industry and the urgent need for massive capital expenditures in domestic exploration and development, if we are to achieve an acceptable level of energy self-sufficiency in the short term, it is with dismay and alarm that producers view the present demands for rolling back crude oil prices and taxing so-called "windfall" profits.

Now I would like to examine the economic conditions which existed in the domestic petroleum industry since the late 1950's in order to

demonstrate that the Nation's producers are not reaping windfall profits or receiving excessively high prices at the present time.

Economic conditions in the domestic producing industry deteriorated steadily from 1957 to 1972, primarily because of steadily decreasing real prices for crude oil and natural gas.

The real price of domestic crude oil in constant 1973 dollars declined $1.31 a barrel or 27 percent in the period 1957–1972, while the combined price of both oil and natural gas at the wellhead, with gas expressed in crude oil equivalent, declined $1 per barrel or 31 percent.

Not only was the combined price of crude oil and natural gas decreasing, but the costs associated with drilling and producing activities were increasing substantially during this period.

Confronted with these persistently eroding real prices during this period of rapidly accelerating costs, domestic oil and gas producers progressively curtailed their exploration activities and many thousands chose simply to sell out or quit.

So, given the falling real prices and higher costs, it is clear that the domestic producing industry was in a depressed economic state by the end of 1972 and that a substantial improvement of the price of both crude and natural gas was needed just to offset the effect of the steadily declining prices and higher costs and to reverse the declining exploration and development trends.

The CHAIRMAN. In other words, can we say that one reason for our shortage in productive capacity now is that this Nation's policies and the way they have been administered have been more or less directed toward liquidating the independent producers in this country for the past 5 years?

Mr. MILLER. That is essentially true.

The policies that were in force froze the price of oil. There was a period of time from 1958 to approximately 1968 when there was absolutely no increase in the price of a barrel of crude and we all know what the costs were during that time.

The CHAIRMAN. During that time your costs were going up.

Mr. MILLER. Substantially and dramatically and this policy drove half the independents right out of business.

And the rate of drilling in the United States was directly affected to that proportion and also the rate of active rigs declined from a high in 1956 of about 2,600 operating rigs to a low of 850 rigs during March of 1971.

The CHAIRMAN. I have thought that a great deal of our problem developed not because of the oil import quota system but because it was not used the way it was intended. It was intended to be used to maintain the domestic petroleum industry. Instead, it would appear that it was being used in such a way as to put half the independents out of business.

Mr. MILLER. During 1973 the Government permitted the price of crude oil to rise. According to the Federal Energy Office the average price of controlled domestic crude oil is $5.25 per barrel; the average price of uncontrolled crude oil which includes new and stripper production is $9.51 per barrel; and the average price of all domestic crude is $5.95 per barrel.

The increased prices have brought forth an increase in the activities related to domestic petroleum operations. The number of active rotary

rigs at the end of January 1974, for example, had risen by 12 percent over the same period in 1973.

And there have been numerous reports, in the traditional producing areas of the country, of former producers who quit the business during a 15-year private recession experienced by independents, now getting back into active exploration programs.

It is our conviction that if current prices and existing tax incentives are maintained and improved, the story of the returning wildcatters will be repeated over and over again, resulting in significant increases in domestic petroleum supplies.

Although there is a timelag between increased exploration and production, there is some evidence already that domestic supplies are being increased.

U.S. crude oil production declined steadily from 9,637,000 barrels daily in 1970 to 9,077,000 in September 1973, a decrease of 560,000 barrels a day. Preliminary figures indicate that this trend has been reversed, with production in January 1974 increasing to approximately 9,200,000 barrels per day.

Yet, in spite of the tangible indications of increased domestic activity by independents which has been caused in large part by long overdue improvement in domestic crude oil prices, there are many, including some Members of Congress, who are demanding a rollback in domestic crude oil prices.

It is my firm conviction that such an action would result in less domestic crude and higher product prices for the consumer in the relatively near future.

Less domestic crude oil would be the inevitable result of a price rollback because the independents would not be able to finance the greatly increased exploration activity which is required if we are to attain an acceptable level of energy self-sufficiency.

In fact, a price rollback hurts the independent producer to a far greater degree than the major oil company. This is so because independents drill 80 percent of exploratory wells and it is estimated that they operate 80 percent of the stripper wells.

Most of the oil which the major oil company sells is old or controlled oil.

But the price rollback would only apply to new and stripper well oil.

To approximate the financial loss to the independent due to this rollback, new and stripper oil produced by independents constitutes approximately 1.9 million barrels of the 9.2 million barrels of oil produced each day.

The price of this oil would be rolled back from $9.51 to $5.25 per barrel, a reduction of $4.26 per barrel which would deprive the independent segment of over $3 billion per year, a large portion of which would be spent on domestic exploration and development.

The professed reason for the rollback is to save money for the consumer through lower product prices.

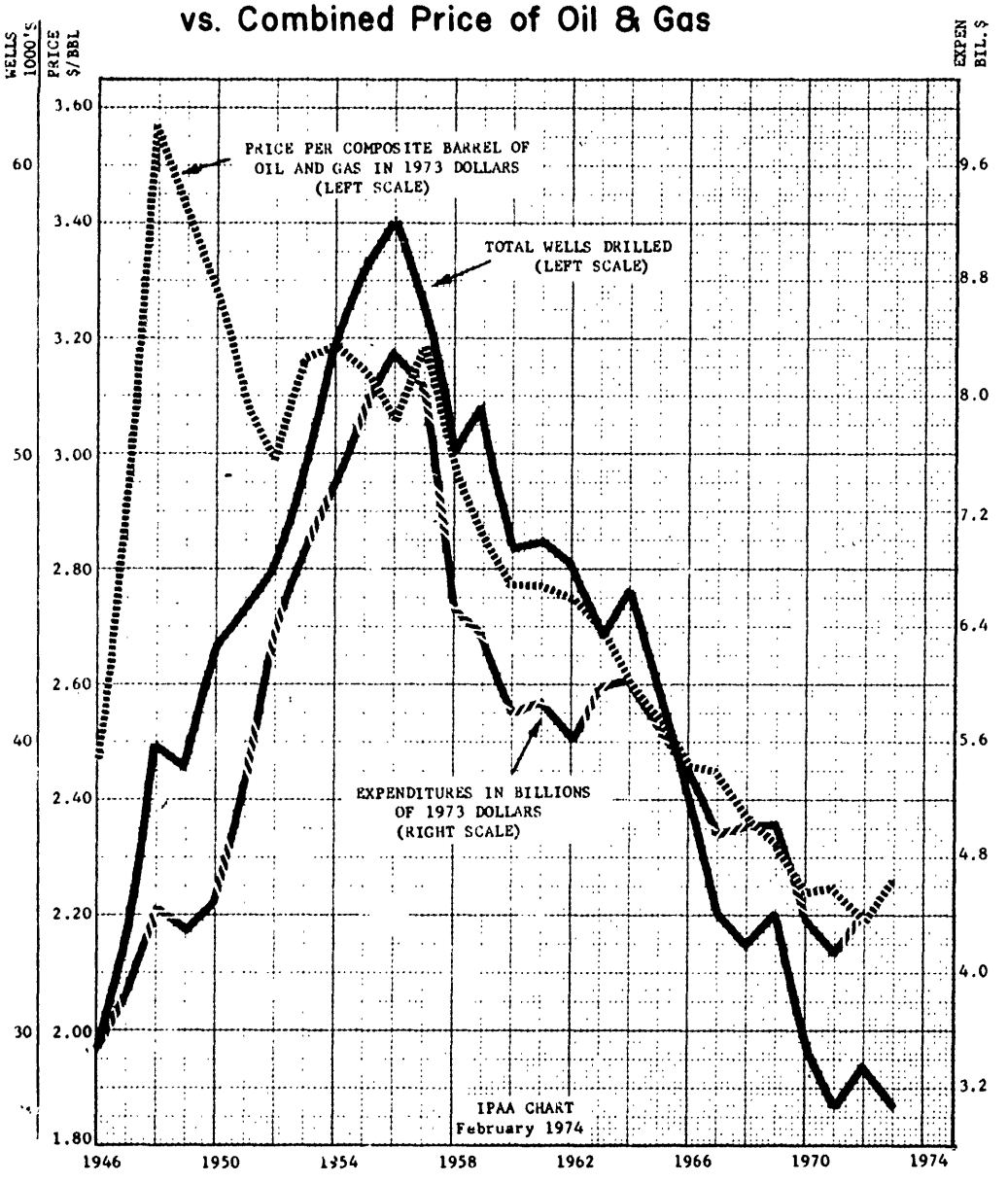
Our figures show that this rollback would apply to less than 15 percent of the total supply of domestic and imported oil, and would only result in a possible temporary savings to consumers of less than 1 cent per gallon on all oil products.

But, if the supply of domestic oil shrinks due to the depressed exploration activity, the shortfall must be made up from much

higher priced and insecure supplies of foreign crude oil costing $10 to $20 per barrel. So the consumer would not reap a meaningful savings in the short run and will most certainly be forced to pay a higher price in the long run as needs are met by a higher percentage of higher cost foreign oil.

There is a clear relationship between oil and gas prices and levels of U.S. exploration and development. The industry always has reinvested the funds from increased prices and will continue to do so without any Government requirement.

U. S. Petroleum Exploration & Development Expenditures vs. Combined Price of Oil & Gas



Mr. MILLER. The close relationship between oil and gas prices and the level of domestic exploration and development from 1946 to 1973 is pictured on the chart entitled "U.S. Petroleum Exploration and Development Expenditures vs. Combined Price of Oil and Gas."

This chart also shows the total number of wells (oil, gas, and dry) drilled in the United States. Expenditures and wells drilled, in turn, determine the volume of oil and gas reserves found and developed and the resulting levels of production.

Unusual conditions at any given time can and have resulted in deviations from the long-term relationships between price, exploration and development, reserves found, and production.

For example, the country was confronted with an oil shortage following World War II as a result of wartime price controls and shortages of materials.

As shown on the chart, substantial price increases, over and above the long-term relationship between prices and expenditures, occurred in 1947 and 1948. As a result, expenditures for exploration and development were encouraged greatly and domestic supply was increased so that shortages were overcome.

Prices decreased and the long-term price/supply relationship was restored. This is comparable to the situation that exists today.

Shortages are now critical, and there is a need for extraordinary incentives to increase domestic supplies. For the short term, prices may have to exceed levels based on long-term relationships. Otherwise, shortages could become more acute.

Today's average price for domestic crude oil is not excessive in terms of generating funds and incentives needed to expand U.S. petroleum exploration, development, and production.

These activities should be doubled, or perhaps tripled, if we are to restore our energy independence. Today's average crude oil price of $5.95 per barrel has stimulated increased activity that will result in increased supplies. It may well prove to be inadequate, however, to attain an acceptable degree of energy dependence.

A rollback in prices, on the other hand, unquestionably would reduce supplies and cause higher prices because of increased dependency on high cost foreign oil.

In this connection, there has been understandable concern as to increases in the price of oil products to the consumer and speculation that we may be facing gasoline prices of 75 cents or even $1 a gallon of gasoline. In this regard, it is pertinent to keep in mind that the current average price of domestic crude oil is only some 6 cents a gallon over the 1972 price. Obviously, since the average price of gasoline in 1972 was 36 cents, domestic crude oil prices have not been, and will not be, the cause for 50 cents, 75 cents, or $1 prices for gasoline. Sharply higher gasoline prices can be attributed to high prices of imported foreign crude oil, not domestic crude oil prices, and higher charges for refining and marketing. A rollback of domestic crude oil prices would not solve the problem of increased prices for gasoline, home heating oil, jet fuel, and industrial fuels.

Several excess or windfall tax proposals have been offered. I would like to make some general observations about these proposals.

First, as was pointed out above, the recent increases in the price of crude oil are not considered to be excessive or windfall by the producing segment of the domestic petroleum industry. Therefore, as to this segment of the industry, no such legislation is necessary.

The IPAA opposes such legislation as being counterproductive since the enactment of such legislation would result in a loss or the threat of a loss of risk capital at the very time when exploration and development expenditures must be doubled or perhaps tripled if we are to achieve an acceptable degree of energy self-sufficiency. The consideration and enactment of new tax legislation is always accompanied by a period of uncertainty and fear which will result in a drying up of vitally needed exploration funds.

Second, it seems grossly unfair to single out the domestic petroleum industry for the imposition of windfall taxes. Certainly any such legislation should apply equally to everyone.

Third, this type of legislation should not be enacted unless and until enough time has passed to adequately assess the full impact of higher crude oil prices on domestic exploration and development activities.

Although we applaud these hearings as a constructive step to an assessment, we feel that it is entirely too early to make a final determination as to the existence of windfall profits.

All experience with so-called windfall or excess profits taxes has demonstrated that this entire theory is inefficient, ineffective, and counterproductive.

In addition, there is mass confusion as to what constitutes an excess profit or how to tax an excess profit.

For example, the administration's proposal actually is a tax on prices. Senator Gravel has proposed an excise tax on production. The provision adopted by the House in December is actually a seller's refunding procedure. All these approaches have been erroneously publicized as excess profits provisions.

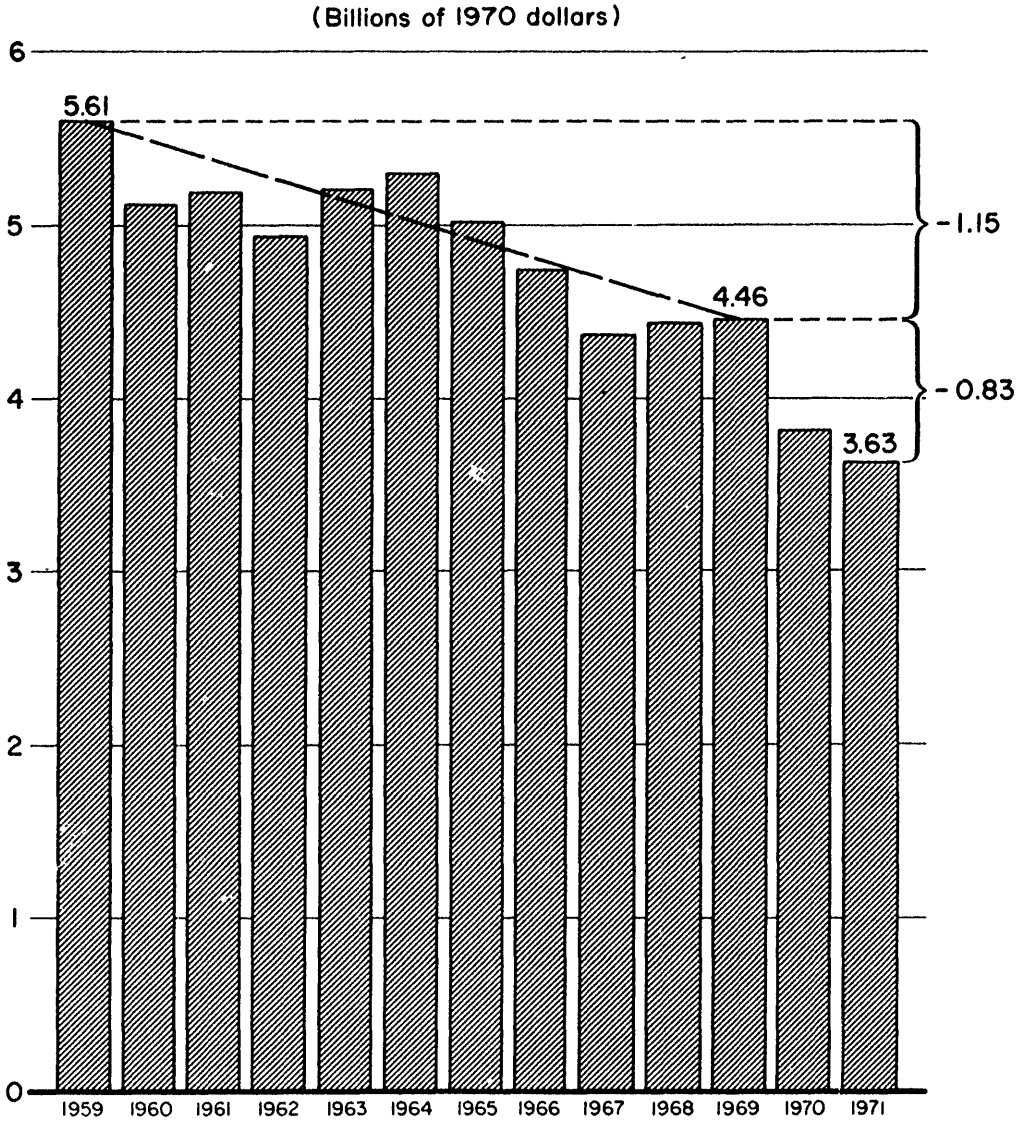
Because of this confusion of approaches, and because our Government never before in its history has adopted an excess profits tax for a single industry, we strongly oppose windfall or excess profits legislation as unnecessary and counterproductive. We believe such legislation would serve to severely impede domestic oil and gas exploration and development at the very time that greatly expanded efforts to develop our petroleum resources should be high on the list of national priorities.

A major criticism of windfall profits tax legislation is that it tends to remove or reduce the risk capital from the domestic petroleum industry at a time when greatly increased amounts of this capital are needed to increase exploration and development activity. This is also a criticism of other tax reform proposals presently before this committee.

The so-called limitation on artificial accounting losses (LAL) and the changes in the minimum tax income (MTI) both could have the undesirable effect of diminishing the flow of risk capital into exploration. Even the threat of the enactment of such legislation tends to dry up these funds.

Likewise, any further reduction in the depletion rate for oil and gas, or any change in the provision for expensing intangible expenditures, would remove vitally needed risk capital from the industry.

U.S. PETROLEUM EXPLORATION AND DEVELOPMENT EXPENDITURES 1959-1971



Note Excludes offshore and North Slope lease bonus payments as not contributing directly to development of reserves

IPAA CHART
March 1973

Mr. MILLER. The Tax Reform Act of 1969 resulted in a loss of $650 million per year to the oil industry. The attached chart entitled "U.S. Petroleum Exploration and Development Expenditures 1959–1971" dramatizes the direct and immediate impact on exploration and development expenditures occasioned by the enactment of this legislation.

One can notice the precipitous drop of expenditures in 1970 and 1971 at a much greater rate than in years prior to the enactment of the legislation which reduced the depletion allowance from 27½ percent to

22 percent. This reduction in expenditures could not have come at a worse time since it accelerated the present energy crisis.

In conclusion, actions by the Government to roll back crude oil prices, reduce the profitability of producers, or increase the tax burden on domestic production, would be counterproductive to the basic and pressing need to increase U.S. supplies of oil and natural gas.

This leads to the central question at issue: With many in Government calling for reversing our declining energy supply position, which need has the greatest priority, tax increases and price reductions or more energy?

If the answer is more energy, then I believe Congress ought to give the present tax system, in combination with improved crude oil prices, a reasonable time to bring forth critically needed increases in domestic energy supplies.

Thank you.

The CHAIRMAN. Thank you very much.

As I understand it, you are not complaining about the $5.25 limitation on the old oil.

Mr. MILLER. That is correct.

The CHAIRMAN. In other words, you feel that those who had oil are getting a fair price at $5.25. What you are speaking to is the fact that those who go out and, particularly in areas that are not all that promising, such as Oklahoma, north Louisiana, Arkansas, a great portion of Texas, that they ought to be permitted to have the incentive that they have at this time if they find something, even though it might be a marginal well, that the price would be such they would have a reasonable chance of making a profit at it.

Mr. MILLER. That is correct.

Senator, as I did testify here, we would not presume to say that the present price of old oil will be sufficient to care for the needed exploration that we have to have in the near future. But we did say, as we have evidence at this time, that the present prices have brought on a resurgence of activity.

The CHAIRMAN. Well, my impression was that since the price of oil for stripper wells and new oil went up, about everybody I know who had been retired from the oil business is now looking around to see if he cannot find supplies to drill or find some pipe—secondhand if need be—to try to find some oil. In other words, they have all looked upon the price rise as a new lease on life and an opportunity to go out and try to produce some oil.

Now, what you are saying here is that if you are going to roll the price back to $7 or something in that area that those people probably will reverse themselves again and decide they had better stay out of the oil business.

Mr. MILLER. I think we are seeing a trend in that right at the present time. We had a rig count up to 1,440 during the month of December, and it is now softened to 1,350; and this indecision, this continual sniping that is coming into the industry is making many of the people reconsider the plans that they had made. We can cite instances, specifics, across the country in every oil-producing area that operators have come back into business. They have leased lands, started to rework old wells and put together new drilling plans, and these things will come to a screeching halt if we have this rollback—not out

of spite, but due to the fact there will not be the dollars to do the job.

I just fail to see why there cannot be a recognition of the fact we have three very obvious lines in this industry: One is the rate of capital expended, and immediately following that is the rate of drilling activity, and immediately following that is the rate of oil and gas found. If we take this money back out of the exploration effort, those other two lines have to come down with it. You cannot get away from it.

The CHAIRMAN. I have seen some independents go about deciding whether they can remain in the oil business. What they tend to do is to compute how much money they have made out of a well since the last time they reworked it, and if they did not make enough money to pay for the last time they reworked it, then they conclude it would not make enough money next time.

Now, if the price is to be increased, then I would think anybody who would shut down some marginal well will take another look and say, "Hold on just a minute. It may very well be at this new price I might be able to make a profit."

How much has the activity by independents increased since the price of oil went up? Do you know that?

Mr. MILLER. I cannot put a number on it and state the experience, but I can tell you that it is of large magnitude.

Every operator across the country has gone back to work. A number of those who had actually quit the business—some had gone into Canada and other areas to operate and others had just quit—have been reactivated and, as I say, I cannot put a number on it, but we can chart the increase in rig activity, which is a direct response here.

The CHAIRMAN. Can you tell me to what extent the independents are plowing back their increased earnings into drilling more wells and finding more oil and producing more?

Mr. MILLER. We have made various inquiries into this. As you are very much aware, many independents are not public companies, and they do not have stockholders and publish annual reports and so forth. But it has been demonstrated time after time that the independent sector is plowing back almost every dollar they take in. I can cite you many instances where they are plowing back far more than they have taken in. This is not unusual at all.

The CHAIRMAN. My impression of the independents' operation is that every independent is out looking for pipe. In other words, if they could find the pipe they would be drilling a lot more than they are even right now, but the steel industry apparently made its plans based on the activity it could foresee in this country, and it did not anticipate the boycott nor was it in position to anticipate the fact that the boycott would bring a higher price for oil, which in turn would bring a whole lot more activity in drilling for oil. Therefore, the steel is not there and the pipe is not there to provide for producing all the new wells that the independents would like to drill.

Is that a correct assessment from the point of view of the independents?

Mr. MILLER. Yes, it is, Senator. We are addressing ourselves to this problem right now. We have a materials study committee being formed to work in connection with the NPC study and API study to determine where the pipe is stored in inventory and whether it is

disproportionately allocated. Perhaps it needs to be reviewed as to its allocation and use.

We are also desirous of having a situation available where the steel mills can roll profitably the oil company tubular goods.

The CHAIRMAN. I visited with some representatives of the steel industry recently, one of whom I have known for many years, a long-time friend. He said, "I might be able to help provide some casing or something of that sort, but if you know somebody who wants pipe, do not send him around." They just do not have it.

Is that about the situation for a lot of independents?

Mr. MILLER. Yes, it is a very tight situation. We have had some very constructive action taken—for instance, Lone Star Steel back in September announced a plan whereby they would receive applications from independents and if you had a State-issued permit that could certify you had a contractor ready to go, then they would make available a certain amount of surface pipe and continue to furnish increments of pipe as you needed it—for exploration, not for development.

This was certainly a gesture in the right direction, and it has enabled some independents to drill some wells. We would like to see this plan enlarged upon and other producers included in it.

The CHAIRMAN. Thank you very much.

Mr. Jones.

STATEMENT OF A. V. JONES, JR., PRESIDENT, NATIONAL STRIPPER WELL ASSOCIATION

Mr. JONES. Thank you, Mr. Chairman.

My name is A. V. Jones, Jr. I am a partner in A. V. Jones & Sons of Albany, Tex., and we are an independent oil and natural gas exploration and producing firm. I appear here as president of the National Stripper Well Association, which is an organization concerned with extending the productivity and usefulness of marginal domestic oil wells that represent approximately one-sixth of our producible petroleum reserves in the lower 48 States.

In addition, I am here to support the position of the Independent Petroleum Association of America and to augment its statement by discussing the importance and economic potential of stripper well production in the United States and how both are affected by Government policies on the related subjects of petroleum prices and taxes.

In an address on January 21 to the National Association of Home Builders, the Director of the Energy Policy Office, Mr. William Simon, stated succinctly the primary reason that the United States is now confronted with critical domestic energy shortages:

> We have consumed an ever-increasing amount of oil and gas at prices well below their replacement cost, and today we confront a long overdue bill for past self-indulgence.

The production and use of billions of barrels of oil and trillions of cubic feet of natural gas at prices below replacement costs has been a fact of life in the domestic petroleum-producing industry since the mid-1950's. This has occurred because the overriding Government policy has been to hold oil and natural gas prices very low. This was done directly through rigid wellhead price regimentation in the

case of natural gas. It was done indirectly through administrative coercion under the price surveillance provisions of the oil import quota system and directly under economic stabilization programs since August 1971, in the case of crude oil.

In periods when domestic crude oil prices were permitted to move in consonance with prices in the economy generally, the domestic industry consistently reinvested $2 of every $3 of its gross income from crude oil sales. I believe that, given the chance, it will recycle current revenues at or above this ratio and that it will do so without any Government persuasion or coercion to do so, through punitive taxes or other means.

I believe this will happen, because it has always happened when prices were adequate and prospective profitability was such as to attract reinvestment and outside venture capital into petroleum exploration.

The decision was made by those in charge of economic stabilization to permit controlled domestic crude oil prices to move up, only nominally in mid-1973 and by $1 a barrel on December 19, 1973—less than 2 months ago. That price now averages nationally about $5.02 a barrel.

In addition, the Federal Energy Office permits newly found or increased production to be sold at a free market price.

In addition to "new" oil represented by increased production on existing leases, a matching barrel-for-barrel volume of "old" oil is released to be sold at a free market price.

In the Alaska pipeline and allocation bills adopted in the last session, Congress also exempted production from stripper wells from present price controls.

All exempt oil—new and released crude plus stripper production—now selling at free market prices approximates one-fourth of U.S. crude oil production or about 2.2 million barrels daily. About one-half of this volume is accounted for by production from stripper wells averaging 10 barrels daily or less.

As of January 1, 1973, the United States has 359,471 stripper wells producing an average of 3.13 barrels daily per well.

Evidence of the increasingly adverse economic circumstances that have confronted operators of these marginal wells is evident in the accelerated rate of abandonments of these wells over the past 20 years. This trend is shown clearly in the following comparisons of average well abandonment for 5-year periods since 1952.

Stripper well abandonments (5-year average, 1952–71)

	Average wells per year
1952–56	11,507
1957–61	12,460
1962–66	15,145
1967–71	17,030

The last year over 18,000 wells were plugged, making in excess of three barrels per day or in excess of 60,000 barrels per day per year plugged as a result of economic conditions.

Producing oil wells are abandoned for one reason: that is because the cost of operation surpasses the revenue. The accelerated rate of well abandonments in the period since 1956 is attributable to two irrefutable facts:

(1) The real price of domestic crude oil in constant dollars eroded progressively in this period; and

(2) Operators of marginal producing properties had to contend with, and try to absorb, constantly accelerating operating costs throughout the period.

The importance of stripper wells to the total oil supply rests in their number, not in the average producing rate of these wells. When 10 gallons of gasoline are sold, more than a gallon of that product originated from a stripper well. The crude oil reserves underlying U.S. stripper wells total about 4.88 billion barrels of oil or about a sixth of total proved domestic reserves, excluding the Alaskan North Slope. Premature and permanent abandonment of these wells for economic reasons, therefore, would mean a loss to the Nation of significant amounts of crude oil reserves.

Just as a deteriorating cost-price condition can and does cause premature abandonments, improved economic conditions can significantly extend the life of marginal producing properties and encourage workovers as well as secondary efforts to improve output and—in many cases—double or triple ultimate recovery.

Under free market pricing on one-fourth of U.S. production exempt from price controls by the FEO and by Congress, some, but by no means all, of the exempt oil is selling for as much as $10 a barrel. Compared with the depressed prices that have been paid for domestic crude oil since the mid-1950's, this is a very large increase. Before actions are taken impulsively to roll back this price or apply so-called windfall profits taxes to domestic production, however, the current price behavior should be evaluated in light of a number of considerations, including:

1. The controlled price of domestic crude oil still applies to the great bulk of production and averages about $5.02 a barrel, less than one-third of the price of much imported oil.

2. The free market price applies only to marginal production and new production plus an equal volume of old oil, and serves the essential purposes of (*a*) stimulating development and production of an increased crude oil supply, and (*b*) extending substantially the recovery from, and production of, thousands of marginal wells.

3. Under the so-called two tier pricing system and the stripper well exemption provided by Congress, the price behavior of exempt oil provides a useful gauge on free market responses at a relatively low overall cost and in a way that will maximize new exploration and recovery efforts.

The free market price has operated only a relatively short time, but the domestic industry already is responding with increased exploration, development, and oil recovery programs, which I believe will provide long term energy supply benefits that will far outweigh the costs of permitting the free market to operate on new and marginal crude oil production. I know the results will far outweigh the costs of domestic crude oil in terms of the average price of about $6.50 per barrel—because that price is far below alternative supplies that can be obtained anywhere by any means.

Now I would like to speak specifically of the impact of free market pricing on the economics of the more than 350,000 marginal wells. I believe this impact, overall, will be to increase recovery from stripper fields in the United States by hundreds of millions of barrels and

that such a result will be to the long term benefit of American consumers.

As of today, tens of thousands of wells in the United States are idle, having been shut down because their operating costs exceeded the revenues. Many of these wells could have been reworked with the result of substantially increasing their output, but again this was not done because the cost outweighed the economic benefits. So this very large number of wells was shut down during the period of the 1960's and early 1970's when domestic crude oil prices were depressed at unrealistically low levels.

Because of the exemption from price controls adopted by the Congress, there is today a resurgence of activity in the oil-producing areas of the United States to reactivate and rework these thousands of abandoned wells. Unless Congress or the Administration now takes actions which effectively would reverse these efforts, I believe the next 2 to 3 years will see the reactivation of thousands of these wells with the result of increasing U.S. production from these abandoned properties by as much as 250,000 barrels daily or more. In addition, an equal or larger amount will be forthcoming from increased secondary recovery operations, and substantial additional quantities from advanced recovery technology.

Before the recently improved economic climate brought about by long overdue price improvements, the domestic industry was spending about $25 million a year on research into advanced oil recovery methods. Unless the economic outlook is altered adversely by price rollbacks or tax changes, it is my opinion that this research outlay will be tripled in a relatively short time, with the result that significant increases in domestic crude oil production will result from innovative future recovery programs.

It should be borne in mind, Mr. Chairman, that the oil originally in place in known reservoirs in the United States is estimated at about 410 billion barrels, of which about 135 billion or roughly one-third is classed presently as recoverable, including 100 billion barrels already produced. Of the remaining two-thirds, or 275 billion barrels, classed as nonrecoverable, there are knowledgeable estimates that as much as perhaps 100 billion additional barrels will be ultimately recovered over time, given the right economic incentive to induce the advanced recovery research and technology.

If this outlook proves even half right, I believe the benefits would far outweigh any gain that consumers could expect from a price rollback on marginal production, or that the public would gain from taxing windfall profits with no clear definition of what constitutes such a profit. The free market has been in force on the exempt portion of domestic production for only a brief time. Action this soon to roll back prices or impose new taxes would assume that increased industry revenues will not be reinvested in exploration and in intensified recovery efforts. Such an assumption, at this early date, is not valid, and the rising tempo of activities now under way by independent producers leads me to conclude that it is a false one.

Because of our worsening energy supply position, I hope the Congress will be extremely cautious in evaluating proposals that would reduce exploration and development expenditures, or discourage maximum efforts to bring on the very large potentials from secondary and advanced oil recovery programs. Instead, I believe Congress

should consider what it could do to encourage these industry efforts in the United States, and to that end, I wish to suggest consideration of three specific actions that would enhance the long term outlook for recovery and production from known U.S. oil reservoirs by tens of billions of barrels:

First, provide a special investment tax credit for secondary and advanced recovery programs as well as for exploration and development expenditures.

Second, I think we should remove the 50-percent limitation on percentage depletion, which would primarily benefit the stripper well or marginal producer in the United States.

Third, we should retain the exemption of stripper wells from Federal price controls and allocation programs incorporated by Congress in both the Alaska pipeline and allocation bills adopted in the last session.

Thank you, sir.

The CHAIRMAN. There are one or two points I would like to ask both of you about. I guess the one I wanted to ask about first would be answered by Mr. Jones, since he knows more about stripper wells.

Ordinarily, if a producer drills what he regards as a good well, he has enough gas pressure down there to push the oil on out so he doesn't have to pump at that point. Is that correct?

Mr. JONES. That is correct, sir. That is what we call the primary stage of production. You have the reservoir, natural reservoir energy which will allow the production to come into the hole and actually reach the surface.

The CHAIRMAN. All he has to do is control the valve to see how much oil is coming out of the well.

Mr. JONES. He can control that production somewhat. There are reservoirs that are sensitive to production but essentially the oil is produced by its own natural energy.

The CHAIRMAN. When the pressure drops——

Mr. JONES. He has to install expensive bottom hole equipment which is necessary to pump the oil to the surface.

The CHAIRMAN. When he has pumped as much as he can pump out, he still has about two-thirds of the oil left in the ground.

Mr. JONES. Probably more than that but at least two-thirds of the recoverable oil is left in the ground.

The CHAIRMAN. All right. There is a lot of that oil he can get out under a method that is known as water flooding, is that right?

Mr. JONES. Water flooding, or any of the numerous secondary recovery methods that are available to the industry now.

The CHAIRMAN. Water flooding—that means if he has 10 wells in the field he takes some of the wells and pumps water down them.

Mr. JONES. He would probably take half of the wells and pump water and repressure the reservoir and bring the oil to the well.

The CHAIRMAN. And hope the water will float some of the oil up to the top that is still down there.

Mr. JONES. That is correct, sir.

The CHAIRMAN. Can you give me any idea as to what the cost of producing oil by water flooding would be compared to the cost of producing it by simply cracking the valve on a good well?

Mr. JONES. Well, of course, I think the answer is probably obvious. The problem is it varies a lot from reservoir to reservoir. We couldn't come up with a dollar figure on it.

The CHAIRMAN. Can you give us a percentage figure?

Mr. JONES. Generally figuring the actual lifting cost from natural flowing primary production versus water flood lifting costs would be almost triple, sometimes four or five times.

The CHAIRMAN. All right.

So if you are using secondary recovery methods your costs would be three or four times.

Mr. JONES. Your costs would be three or four times as great as primary, right.

The CHAIRMAN. So under those circumstances if the Nation really needs that oil, and particularly if you are going to pay the Arabs that same price for it, and you are trying to achieve self-sufficiency, wouldn't you be justified in paying a great deal more for oil produced by those recovery methods than produced by primary methods?

Mr. JONES. That seems logical to me, sir, and to many people involved in the oil business particularly on the stripper well secondary recovery stage. It looks obviously at this rate somewhat below what the Arabs are demanding for this oil it only makes good sense to bring about this domestic oil production.

The CHAIRMAN. Would there be a considerable number of wells in this country, small though many of them are, that could not afford to produce oil at the $7.09 prices but who could produce it at the $10 price?

Mr. JONES. There is a lot of oil, as I say in my statement, I am saying tens of thousands and possibly as high as 50,000 to 100,000 of those wells that have just been abandoned in the country because they weren't economical. We can bring this type of oil on immediately, and this oil would be available to us at a price lower than the world price at this time. That is one thing we would like to see possibly in this bill that exempted the stripper well. We think these service wells that are involved in the water flood exploration and everything should be included as part of the well. They are costly to maintain, and should serve as much as the producing well in establishing a stripper well.

The CHAIRMAN. I would like to ask both of you gentlemen what your estimate is of the effect on exploration if Congress provides additional credits for exploration and secondary and tertiary recovery. Suppose Congress provides additional incentives such as investment credit for exploration in secondary and tertiary recovery?

Mr. JONES. I might start, sir. I think this is the thrust of what I was saying at the end of my statement there, that there are billions of barrels, hundreds of billions of barrels, literally that are available to us in the already discovered reservoirs if economic incentives are there. I assume the public is not going to accept price increases as much possibly as some kind of economic incentive such as a tax credit.

The CHAIRMAN. Well now, suppose at the same time the Congress drastically reduces or totally eliminates the oil depletion allowance? If they provide some additional investment credit of the type which has been discussed—you heard the administration's suggestion—and, at the same time, either drastically reduces or eliminates the oil depletion allowance.

Mr. MILLER. The oil operators perhaps could learn to exist with this. As I testified here, the independents have drilled approximately 80 percent of the exploratory drills in the domestic United States, the lower 48 I should say, and if the depletion allowance is taken away a large number of those wells will not be drilled because the independents do rely and use investor capital to drill a large number of these wells. Without that incentive for that investing group those dollars will not be available. This tracks right back into the entire body of my testimony, it would dry up that source of capital and immediately work a decline in the exploratory drilling and also in our rate of finding oil and gas.

The CHAIRMAN. Would that be the same answer for you, Mr. Jones?

Mr. JONES. I would say so; yes, sir. This is one thing the domestic independents—I heard some of the larger companies saying maybe the depletion allowance, they don't need that. That is their talking and not ours, because this has been one of the incentives that has induced people to put money in this business, and it is a way that we return our capital and we don't have any foreign oil, we don't have any filling stations, we don't have any way to make money without some type of situation like this. I wish they would speak for themselves, and let us speak for ourselves, because we have got to have this type of thing.

The CHAIRMAN. Well, I take it that you would have to remind them that they hadn't had their people being put out of business.

Mr. JONES. No, sir, they hadn't had half their people put out of business and that is the reason I think they are talking something pretty dangerous there.

The CHAIRMAN. Mr. Miller, are you aware of the fact that 29 percent of the production of crude petroleum in the continental United States is coming from wells that were not in production at the time that price controls were instituted? In other words, we are talking about stripper wells that have been brought back in since the increased petroleum price. This fact was stated by Dr. Dale Jergensen of Harvard University recently, rather than by the industry. That is a rather surprising figure to me.

Mr. MILLER. I would not accept that figure without some supporting evidence, Senator.

The CHAIRMAN. It sounds high to you?

Mr. MILLER. It does sound high to me. We are certainly aware that a large number of wells have gone back into production. We know that it will make a dramatic impact on our current rate of domestic production but I don't believe the number is at that level at this time.

The CHAIRMAN. Given a year or two at the prices you have now, do you think that you could perhaps equal that figure?

Mr. MILLER. I think we can exceed it.

The CHAIRMAN. That is you and the others.

Mr. MILLER. Absolutely. The industry will exceed it. As we put stripper wells back on production that are not now producing, and as we rework those that are now producing but need remedial work as we take on innovative steps and take on secondary recovery, and as we continue acceleration of domestic exploration we should make a larger impact than the number used by the gentleman.

The CHAIRMAN. I saw the figure here when times are good $2 out of $3——

Mr. MILLER. Gross dollars.

The CHAIRMAN. 2 out of 3 of the gross dollars are being plowed back. It sounds to me that the amount of money being plowed back in good years by the independents would actually exceed their profits.

Mr. JONES. When you start talking about independents' return on capital, sir, and you put all of them in there, you have got a negative so it wouldn't look like a very economic situation. The situation exists that, the nature of the business is that, some people have got to make a lot of money out of it to induce everybody to play. More than half the people don't make anything, in fact, they lose, so there isn't any return on capital in general. But there is an economic incentive to go out and find a good oil well but it has got to be enhanced to keep people doing it as costs go up.

We have experienced since the prices have gone up recently a dramatic increase in every service that we use. Our service and supply people were discounting that $10 oil, they said it is going to be here. If we get a rollback in that oil it is going to shut the thing down just as quick as it turned it on.

The CHAIRMAN. If we control domestic oil prices while the international price is higher than the U.S. price how much do you think we will be saving the consumer on a gallon of gas?

Mr. MILLER. I don't know that I catch the scope of that question entirely, Senator. If we control it as it is at the present time?

The CHAIRMAN. Well, if, suppose we control it at $7 a barrel, since that is what we are going to be asked to vote on.

Mr. MILLER. If we roll back the present crude oil that is over $7 down to a $7 level?

The CHAIRMAN. Right.

Mr. MILLER. What would we save the consumer?

The CHAIRMAN. That is right.

Mr. MILLER. The answer is so near nothing that it would be less than a cent a gallon. We have made calculations on the basis of rolling it back to the $5.25 as Senator Jackson's bill proposes and then the President has to come to the Congress, I believe, and try to go back to the $7.09. Now that rollback would equate to about $4.26 a barrel on roughly 2½ million barrels, and mixing that across the entire stream of use of about 18 million barrels a day I think we will come out to something in the general range of a cent a gallon.

The CHAIRMAN. Would you give us an idea as to how much did you say in your statement the average price of oil produced domestically is today?

Mr. MILLER. I used in my testimony, Senator, the FEO price, I think they read into the record last Friday or one of the days recently, and they used the price of $5.25.

The CHAIRMAN. No, but that $5.25——

Mr. MILLER. Is the control price.

The CHAIRMAN [continuing]. The control price, but how much is it averaging? I think you had the figure in your statement somewhere.

Mr. MILLER. $5.95 for all oil.

The CHAIRMAN. $5.95. All right. So that means then there is a difference of about 70 cents between the control price for the old oil and the price that is being charged averaging the old and the new oil together.

Mr. MILLER. Yes, sir.

The CHAIRMAN. I am led to believe that for every dollar you add to the price of oil you increase the cost at the pump by 2½ cents. Now it would seem to me that if you are selling oil at $5.25, there would be about 70 cents difference and that might be enough to justify upwards of 2 cents difference at the pump, or almost that much. But you would have to keep in mind, of course, they talk about rolling it back to $7.09, and so I would assume that what you are talking about is only about 1 penny a gallon—assuming that you would continue to get the same production that you are getting at the existing prices. Is that a safe assumption?

Mr. MILLER. Well, first of all, Senator, you would have to take that portion that you are rolling back and mix that across the entire usage of the country.

The CHAIRMAN. Yes.

Mr. MILLER. So that you would then, I believe, come out with a savings of something less than a cent a gallon as you put it across the entire spectrum of use.

The CHAIRMAN. Do you have wells operating today that would not be able to operate at the $7 price?

Mr. MILLER. Absolutely.

Mr. JONES. That is particularly the case with the stripper well. As we pointed out, you can bring on oil with money in this phase better than anything else, and there are a lot of wells that are being brought on at the $10 figure, so the same logic would hold that if you roll the price back to $7, particularly on the stripper well, this well would become uneconomic and a person can't produce this oil at below what it costs him in lifting costs.

The CHAIRMAN. So then you would have to anticipate that this rollback would mean less drilling in this country and it would also mean that there would be some wells shut down that you presently have operating.

Now, insofar as you shut down wells and have to replace those barrels with foreign oil, what is the price of foreign oil now?

Mr. JONES. About $11, I think, $10 to $11 is the figure that you hear quoted for all long-term contracts. Spot prices as high as $15 to $20.

The CHAIRMAN. So insofar as you have to replace our domestic oil with the foreign oil, if you can get it, then that would mean that you would actually be losing money as far as the consumers' part is concerned. He would be paying more for foreign oil than he would for the American oil.

Mr. JONES. No question about it. To lower our price and replace it with more expensive foreign oil would equate it to larger expense at the pump for the consumer.

Mr. MILLER. If he could get it.

Mr. JONES. If he could get it.

The CHAIRMAN. So if I understand your statement, there are undoubtedly wells that would be forced to close if they can't make a profit held at the $7 price. We are talking about the stripper marginal wells.

Mr. JONES. No question about it.

The CHAIRMAN. And there will be less drilling activity in hopes of people finding better wells.

Mr. JONES. That is correct.

The CHAIRMAN. In other words, the independents so far have not had the funds to go out so far to drill in the gulf and Alaska because the costs are too great.

Mr. JONES. Too great.

The CHAIRMAN. They have been confined to the lower 48 States and in those areas your testimony, I take it, is that they will have to shut down quite a few wells; wells they had planned to open up will not be opened up.

Mr. JONES. I think that is more dramatic possibly than would stop right at the planning stage to open up those tens of thousands of wells that are available to us, they would just shut that down immediately.

The CHAIRMAN. Some have contended, and I would like your view on this, that it doesn't make a lot of sense to let the producers of the so-called "new oil" have the benefit of the higher price for one barrel of new oil for every barrel of old oil that they produce. What is your view on that?

Mr. JONES. Well, I think the way it was designed was to give an incentive on old leases for, particularly for secondary recovery and tertiary recovery. To get people to go into these old leases and build proper production up and they gave as a bonus not only could you sell the new oil that you got but they would match it with a like amount of the old oil to give you the money to go in and spend this type of thing, inject polymers into reservoir and various exotic methods. It was a way of stimulating additional development of old reserves, go in and drill additional wells inside these tight reserves in some of the areas and this was done to stimulate production, and I think it is, I think we have shown, we are gratified after a period of almost constant decline in Texas for many months, that it looks like we have leveled off the decline. We say it is because of these incentives, particularly of the stripper well, some of the secondary recovery projects to get in there and spend additional capital money.

Mr. MILLER. I think as an additional comment to what Mr. Jones said before, this oil may be 3 to 5 times more expensive to obtain than the new oil so far as lifting and handling costs are concerned, and in recognition of these problems this gave them this new oil and released oil situation.

The CHAIRMAN. Well, thank you very much, gentlemen. I certainly appreciate your testimony here today. I think you have brought us some very useful information.

Mr. MILLER. Thank you, Senator.

Mr. JONES. Thank you, Senator.

The CHAIRMAN. Next we will call Mr. George S. Wolbert, Jr., vice president of the Shell Oil Co., accompanied by D. R. Milton, vice president for taxes, and R. C. Thompson, comptroller.

STATEMENT OF GEORGE S. WOLBERT, JR., VICE PRESIDENT, SHELL OIL CO., ACCOMPANIED BY D. R. MILTON, VICE PRESIDENT (TAXES), AND R. C. THOMPSON, COMPTROLLER

Mr. WOLBERT. Mr. Chairman, my name is G. S. Wolbert, Jr. I am a vice president and associate general counsel of Shell Oil Co. However, my appearance here is due to the fact that until December 1 I was vice president-finance of Shell Oil Co., for 3 years and previous to that time treasurer. You already mentioned my colleagues.

With your permission, I should like to have my statement entered as a whole in the record and then I won't have to burden you with a full reading of it but if you will live with my syntax I will just highlight it as we go along.

We are very grateful, of course, to be here and participate in your evaluation and discovery of rates of return and profits by oil companies. We have arrayed our testimony in a series of appendixes which we hope will be a helpful way of aiding you in that endeavor.

One comment I think we should make. We understand the thrust of your investigation to as much as possible confine itself to purely petroleum endeavors and simply the U.S., the United States.

The CHAIRMAN. I am not trying to limit it to that extent, but I was hoping in the course of these hearings that you could separate out the foreign profits from the domestic profits so we can see where they are. Since we are going to be asked to vote on something that only involves the domestic producers, we ought to know what this picture is.

Mr. WOLBERT. Yes, sir. We have no difficulty with that, sir, because we have made a correction for foreign because our foreign part is a discrete figure and it is small. The figures are set forth in appendix H.

What we have done actually in these appendixes is to present total company figures as they are so you can have tiebacks and the others are domestic which are purified with respect to foreign.

The point I am making is we do have chemical operations with these and I think it would actually be less useful to you to try to strip out a notional chemical industry and leave just a petroleum industry because we have so much interface and transfer figuring it would be difficult to derive. We consider ourselves one line of business.

Turning to rates of return which appears on appendix A we have examined the rate of return on shareholders' investments by year 1964 through 1973. As I say, we have both total company and domestic.

Another use incidentally for using total company, we had on hand appendix B, which we think is an interesting exhibit. That was on the total company basis. As you can see from "A" it is not that much different as far as this eyeball rate of return and seeing where these relative figures are.

You will note that the return on total capital is a line which roughly parallels but which is lower consistently than the shareholders' investment. I don't suggest that this is a more meaningful ratio than the shareholders' investment return. I simply say that you get deeper and deeper in debt as we have to raise more and more money and this becomes a more important ratio to examine.

We also have plotted on here in the dots all manufacturing companies' return which again you see as you look at later years they are over our return, and from the last about 10 years, 1964 on, the utility companies' return on shareholders' investment.

You might ask why do we have this. First, I think you get a visceral reaction when you look at it and you see we are down below in these latter years even the utility company return. One kind of gut reaction says, "Well, what excess profits?"

The CHAIRMAN. Is this your overall operation you are speaking of here now?

Mr. WOLBERT. Yes, sir.

The CHAIRMAN. All right, with respect to the overall operations of the Shell Oil Co., even though you had a good year, you are saying that

your return on shareholders' investment is substantially below the average manufacturing corporation's, and that your return on capital is even worse than that?

Mr. WOLBERT. Yes, sir. In the last several years it is certainly, let's say, it is aggravated from 1970 on.

The CHAIRMAN. And that is the case even with the latest figures you have?

Mr. WOLBERT. Yes, sir.

The CHAIRMAN. What are your latest figures at the point where that line runs off the graph? Where were you at that point?

Mr. WOLBERT. Well, in 1973 I think we barely managed to get above the manufacturing corporations—excuse me, the utilities but we didn't make the manufacturing corporations.

The CHAIRMAN. So you are making more than the regulated utilities, but you are making a lot less than the manufacturing corporations generally——

Mr. WOLBERT. Yes, sir.

The CHAIRMAN [continuing]. Of which you are one. You are a manufacturing corporation.

Mr. WOLBERT. Yes, sir, and, of course, that brings me to the point that I would like to make, the fact that we do have to compete with these gentlemen for capital funds and the investor is going to look at us and say what sort of an investment is Shell Oil Co. vis-a-vis the public utilities, and we thought that might be a useful way of trying to build up a notional, what do you want to call it, rule of thumb or eyeball rate of return that we might reasonably expect and not be subject to criticism.

What we did is we took this long-term utility rate, 10 years, did an average of the median which was on the order of 11.5, and we then said to ourselves, all right, an investor looks at the discounted cash flow, how would our rate of return have to compare with a utility of an equivalent discounted cash flow, and you take the leadtime difference, where we have our long leadtimes, and that means to have the same kind of a discounted cash flow as this utility we would have to have a higher rate of return to be an equivalent in the investors' mind. We estimate this is—I have got to admit this is not the most precise number but it is a decent estimate—about 1½ to 2 points higher than the utility to put us in an equilibrium situation but that only takes us to the situation where we are equal to the utility.

At this point the investor is saying to himself, with a rate of return equilibrated to that discounted cash flow these are a "comme ci comme ca." First, do I want to invest in a high-risk oil company when I can put it in a public utility, so you have to look at it again.

The CHAIRMAN. It is sort of like saying, why would you want to invest that money in Shell Oil Co. when you can buy a certificate of deposit in a bank which can raise you just as much?

Mr. WOLBERT. I am glad you raised that because in recent times you could do better with savings and loans than with some of the companies in the industry; yes, sir.

With this buildup then with 11½ percent utility return plus 1½ points I raised for the equilibration of discounted cash flow and a factor to 1½ to 2 points of risk premium you are talking about a 15-percent rate of return which we think you would have to have to be attractive or compete with the utilities or other companies.

The CHAIRMAN. The point has been made that it doesn't help the cause of energy self-sufficiency for major companies to buy circuses, but on the other hand, if the circus is making more money than the oil business, can you blame them for going into the circus business?

Mr. WOLBERT. You have two answers to that. Of course, we have to attract a sufficient rate of return to make ourselves sufficiently attractive to investors. On the other hand, you can't be running around with your eye off the ball.

We are basically an energy company and our expenditures so show we are and that is exactly what we are in. Oil and gas these days are probably going to have to be viewed in the light of the fact that we will have to have other alternate sources of energy. For example, we just bid on the Colorado so-called CB tract so we are looking at oil shale but I think you would agree with me we are talking about the same thing. It is not a circus; it may be a disaster as it may turn out, but it is not a circus.

The second point I would like to make about this measure I spoke of I don't want anyone to really cast that in bronze and say it is a figure for all times. What it is it is an average of medians. Let me illustrate: In 1969–73 we were down to about 10.64 percent; if there was a company equivalent, over that period of time to 18 percent you couldn't say it was making excess profits because by the very nature of median you have to have some below and some above so you have to have centricity.

Second, it has to be an average over a period of time. If you cynically disregard bad years and suddenly say, "We are going to get on to you with a surplus profits tax on the first good year you have," you are never going to be at the level you want. So those two things need to be taken into consideration.

The CHAIRMAN. Arriving at that line you have there.

Mr. WOLBERT. Yes, sir.

The CHAIRMAN. How do you handle, for your purposes on your return, your depletion item and how do you handle your intangibles?

Mr. WOLBERT. Let me make sure I understand your question. Those are in here, if that is what you mean.

The CHAIRMAN. I have this in mind. It is often contended that because companies pay taxes on a basis that permits 22 percent depletion allowance, that their earnings appear to be less because they are permitted to take that deduction. But it is my understanding that when it is computed whether investment is good, or bad it is computed on a depletion rather than on a percentage basis.

Mr. WOLBERT. I am a little dull here. What I am getting back to I really think is the investor is not going to care so much about the components of this thing so long as it does represent the rate of return that will equilibrate to the discounted cash flow, that is the thing he is interested in. If you mix the components up, the mere fact we have a depletion segment and someone else has another advantage is going to even out in his mind. His eye is on that end result, what is the rate of return and discounted cash flow. I hope I have answered your question.

The CHAIRMAN. I am not sure the audience understands either the question or the answer.

Mr. WOLBERT. It does give you the chance to say obviously without that depletion we would be well below on this rate of return.

The CHAIRMAN. Yes.

Mr. WOLBERT. That may clarify some people's minds.

The CHAIRMAN. Yes.

[The following additional material relative to the question raised by the chairman was subsequently received by the committee from the Shell Oil Co.]

SHELL OIL CO.,
Washington, D.C., February 14, 1974.

COMMITTEE ON FINANCE,
U.S. Senate, Dirksen Senate Office Building,
Washington, D.C.

GENTLEMEN: In the course of Shell Oil Company's appearance before the Committee on Finance on February 13, 1974, the Chairman inquired about the following point:

> I have this in mind. It is often contended that because companies pay taxes on a basis that permits 22 percent depletion allowance, that their earnings appear to be less because they are permitted to take that deduction. But it is my understanding that when it is computed whether investment is good, or bad, it is computed on a depletion rather than on a percentage basis.

We would like to supplement our response to this point with a fuller explanation of the effect of the percentage depletion allowance on our earnings and our rate of return on shareholder's investment.

The percentage depletion allowance is a deduction which we take to determine taxable income only.

The effect of the percentage depletion deduction, for Shell, is to reduce our taxable income and, therefore, to reduce the amount of federal income tax payable for the year. Income tax expense is, of course, one of the expenses deducted in determining Shell's earnings for the year. A lower income tax will mean a smaller amount of tax expense to be deducted and, hence, higher earnings. So the percentage depletion deduction results in higher reported earnings.

We stated above that the percentage depletion allowance is a deduction taken to determine taxable income only. In computing Shell's book net income (earnings) the deduction taken for depletion of wasting oil and gas properties is an amortization of Shell's acquisition costs (which approximates cost depletion). As a matter of interest, if our allowance for percentage depletion as calculated for tax purposes for 1973 were deducted in lieu of the book amortization amount in determining earnings, our rate of return for 1973 would drop substantially (i.e., to the area of 6–7%).

We would also like to add to the record a comment which we should have made at the hearing. Mr. Miller and Mr. Jones spoke of the importance of the percentage depletion allowance to the independents, and the possibility that major integrated companies might feel differently. Percentage depletion is important to Shell Oil Company. For two reasons. First, we recognize that the independent producer is an essential element in a viable oil industry in the United States. Secondly, without percentage depletion the increase in our federal income tax would have a serious effect on our rate of return. For example, the loss of percentage depletion in 1973 would have reduced our net profit by 24%. Our rate of return on shareholder's investment would then drop to approximately 9.5%. In 1972 our rate of return would have been approximately 7.5%. These rates of return would not support the ongoing search for energy that this country needs to approach self sufficiency.

Very truly yours,

D. R. MILTON, *Vice President.*

Mr. WOLBERT. Going on to this, I think I have to say one more thing: This was a historical approach, and a historical approach I think has validity so long as the rate of inflation during this period of history that you are accumulating is such that an investor, as he examines his alternatives, feels reasonably confident he can accommodate that rate of inflation that trends with his calculations. But the minute he feels he has lost control of it, that he is uncertain about the future of his investment, the return has to go up in order to make it attractive for him. I think that point is going to be made again a couple of times but it is a very important point.

In appendixes C and D we have done a number of ratios that we felt were of interest to the committee. We did do one thing in C. We added in addition to the net income to taxes ratio which is stated in a way I have not seen before, so I thought maybe if we made taxes to net incomes before taxes it would be a more familiar ratio and that is five in appendix C. I think it is a little more familiar to people who think in terms generally of these ratios, and, as you can see, looking down those years, just take the domestic 1968, 36.2 percent; 1969, 38.3 percent; 1970, 46.1 percent; 1971, 44.1 percent; 1972, to 45.9 percent, and 1973, 44 percent. I think that sort of speaks for itself.

Appendix D to which I referred is our capital expenditures and exploration expense. Note in the earlier years, and I am speaking of 1964, 1965, we were outspending our internally generated funds——

The CHAIRMAN. According to that No. 5 there in 1973, for example, your taxes were 46 percent of your net income before taxes, is that correct?

Mr. WOLBERT. 1972, sir, was the 46 percent figure, 45.9 percent.

The CHAIRMAN. Then in 1973 it is 44 percent.

Mr. WOLBERT. Yes, sir.

The CHAIRMAN. You say that is exclusive of the excise tax and the sales taxes.

Mr. WOLBERT. Yes, sir.

The CHAIRMAN. What taxes would that be?

Mr. WOLBERT. It would be income taxes, severance taxes, and property taxes.

The CHAIRMAN. How much of that is Federal?

Mr. MILTON. The Federal income tax element in 1973 is about $112 million which works out to a rate of tax of about 25 percent of net income before tax.

The CHAIRMAN. But this industry is at the State level, and it is my understanding that at the State level is one of the heaviest taxed industries.

Mr. MILTON. That is true, and our property tax and severance taxes total about $90 million in the year 1973.

The CHAIRMAN. Fine, sir.

Mr. WOLBERT. Going on, sir, we were requested to talk about or to list our dividends paid out of earnings. I have done that in appendix E. I do not propose to talk about that unless you have questions.

We then come to what is perhaps really one of the highlights of this examination, and this is the question of our ability to generate the capital required for ongoing investments. As you realize we have somewhat of a problem here with the SEC. We couldn't make projections or estimates and say this is what our earnings are going to be. In the first place we would not be able to with the changing circumstances; but what we did was to create a model and say we will set down two cases. The first case is a case where we say we look back at our historical average rate of earnings and just say this is going to be our constant rate of earnings over the next period from here to 1985; run them assuming a capital structure of 62-percent equity, 25-percent direct debt and 13-percent indirect debt, and see what kind of capital generation we will have available for on-going investments.

I might add that the first case is the 12.2-percent case and it is table 1, appendix F.

The second case was, it was suggested to us as well, run 50 percent above that rate, that is, 18.3 percent and run that same type of calculation and see what happens.

You will see at the total of case 1 we had capital expenditures of $12.9 billion, plus the indirect expenditures of $2.2 billion for a total of $15.2 billion that would be made available if the projection came through for capital investment.

If we were able to achieve an 18.3-percent rate of return we increased that to $17 billion capital expenditures, plus about $3 billion of indirect for a total of $20 billion.

Now these figures, of course, are the figures that come from the model.

Table 3 is simply the difference which shows that if you are able to achieve the 18.3 percent you are some $5 billion more capable of investing for future energy developments than if you were held down to the historical 12.2 percent which, of course, kind of suggests we have been slipping behind in the game here with the 12.2 percent which is our historical.

I think the problem——

The CHAIRMAN. Let me see if I understand this: You are saying that in order to attract the capital that would be needed to do what you think is expected of your company if you are going to do your share in meeting this energy crisis you need to be making about 18 percent.

Mr. WOLBERT. Well, I haven't quite come to that. What I said by table 2 was if I were able to earn 18 percent I would be able to invest some $20.2 billion. Since you have raised the point, it is my next one I would like to go on to how does it come up with the necessary capital—can we do the job with it—which is certainly the point of it.

The CHAIRMAN. Yes.

Mr. WOLBERT. NPC's, the National Petroleum Council's, estimate of the national petroleum industry's capital requirements for this period, 1971 to 1985, was $278 billion. That was in 1970 dollars. I call them 1970 vintage dollars. If we are going to do our 8-percent share, and we have just assumed 8 percent because that is about our standing with respect to the rest of the industry, if we do that share that is about $22 billion 1970 dollars. Well, we have already gone part of the way here from the time the NPC made its projections, and we have made $2 billion direct and indirect expenditures from 1971 to 1973. You have to drop those out and get a then unfulfilled amount, how much more do we have to do in this period, and our calculations were $22 billion in 1974 dollars that had to be raised in order to do our share. That then relates back to appendix F, sir.

With $22 billion requirements, if we were talking only about our historical average earning power, we would fall $7 billion short. Even with 18.3 percent return we would be numerically $2 billion short.

I must say, however, if we can acquire and maintain an 18.3-percent rate I suspect we will be able to go out, we could go out, and raise some equity money in addition to this 25 percent direct debt.

The CHAIRMAN. You could borrow the money, you mean.

Mr. WOLBERT. Yes, or from shareholders.

The CHAIRMAN. That basically gets back to the way it was explained to me by the Chase Manhattan people; you are saying the same thing as explained to you by the National City Bank.

Mr. WOLBERT. We took the National Petroleum Council's figures, and like every one of these airy-fairy kind of figures you kind of like to get a cross fix, so you start with Chase's figure of $1.3 trillion.

The CHAIRMAN. That is worldwide.

Mr. WOLBERT. That is worldwide, yet then you correct for the domestic, it used to be 50–50, now it is about 30 percent domestic so it gives you $390 billion. You take our 8-percent share of that and that is $31.2 billion so it is a slightly larger amount; so I am not overstating my case I believe, with NPC's figures, certainly in the light of Chase Manhattan's.

The CHAIRMAN. The way it was explained to me, to meet the present world energy requirements was going to take about $1.325 trillion I think.

Mr. WOLBERT. Yes, I said $1.3 trillion.

The CHAIRMAN. It may change but I wouldn't argue it by the time figures get that big. Now, the way it was explained to me was if the companies can make about an 18-percent profit, they can generate enough money to pay for half of that out of earnings, and the bank would be willing, and the other lenders would be willing, to lend the other half of it. But I would assume they would take the view if you couldn't make that kind of profit they wouldn't have the money to lend to you.

Mr. WOLBERT. That is what happened. Of course, on our side we don't have the dramatic impact the gentleman representing the smaller companies would have. We are a little bit larger and we can get drained over a little bit longer period of time but that is in fact what happens to us. That is the record of our investments made during this period of time the debt-equity ratio has gone up. We have financed drilling with outside loans. It is no coincidence that in these early days—appendix D, I am referring to now, capital expenditures as a percent of internally generated funds—we were living above our income. We followed that each year for 3 years with a $150 million outside borrowing and then followed it up in 1968 with a $300 million equity issue. So there is where it was coming from. We were, if I may use the expression, eating on what people say we have, fat, but we were certainly consuming ourselves in the process.

The CHAIRMAN. You were using up your inventory more or less.

Mr. WOLBERT. Using up everything, sir.

The CHAIRMAN. Yes.

Mr. WOLBERT. Well that basically is my story.

We did put in appendix G the percentage of U.S. petroleum products supply derived from foreign crude. You can see it is in 1973 in the 20-percent area. That goes from day to day depending on the whims of foreign governments. That, sir, is the gist of my prepared statement.

The CHAIRMAN. Would you mind summarizing to me about what you said in the fourth part of your statement here?

Mr. WOLBERT. Oh, yes.

The CHAIRMAN. That appears on page 38.

Mr. WOLBERT. There was considerable interest, of course, because of circumstances, about fourth quarter earnings. We said a short answer

in our case is that our earnings actually decreased, I repeat, decreased, by 2 percent over the fourth quarter of 1972.

The CHAIRMAN. How did that decrease come about? It seems to me as though that is a quarter everybody is speaking of as being the lush quarter up to this point. How did you come to lose money at this time, or at least to make less than you made before?

Mr. WOLBERT. Basically what is happening we are incurring costs to import foreign materials and we have a timelag of 30 days before we can pass that on under the Cost of Living Council rules, so we are holding that difference for a month, and that got to our fourth quarter earnings.

The CHAIRMAN. In other words, you were not able to pass on the increased costs of the raw materials going into your product.

Mr. WOLBERT. Yes, sir. That is a 30-day lag and as the costs go up of course the amount of the lag goes up.

The CHAIRMAN. I see in 1973 you imported 20.6 percent and I wonder if you could live with some kind of arrangement that would require you to either have capacity to replace that in the event that it is cut off from us, to have some sort of standby capacity to provide additional energy if that is cut off or if you could live if they cut you off, well, about that 20.6?

Mr. WOLBERT. Sir, this is a race. We are going to have to run faster and faster just to keep up. And that is the basis of maintaining these rates of return to get the capital because we are going to have to go out and get several things. Of course, you have to have prospects and re-review earlier prospects which, before the domestic crude price increases we have had, were unattractive, and then we say, "All right, under these new conditions, will they be attractive?" May I say something which may not have occurred to you and that is to say we tend to think in terms of stripper wells but we don't think in terms of offshore, and yet the same principle is equally applicable.

We are reviewing several of our blocks off Louisiana where we could not have justified the platforms and developments. We know there are hydrocarbons there we could not produce profitably before, but if we get the right price we will be able to do it. Of course, the effect of a rollback will just go the other way.

The CHAIRMAN. So, based on the price that you are receiving for new oil at this moment, you would be able economically to drill some leases you bid in and some locations you bid in in the Gulf of Mexico. If the price is rolled back you would have to reconsider.

Mr. WOLBERT. Some of it will not pass the new test, that is correct, sir.

The CHAIRMAN. In other words, that is because the further out into the water you go the more expensive it gets, and the deeper down you drill the more expensive it gets.

Mr. WOLBERT. Everything increases as you know, sir.

The CHAIRMAN. Well now, if I can just mention the one point that strikes me about your testimony as I understand it, you feel—and this is the same thing as the New York banks have been telling us—that to do this job, the energy companies will have to make about an 18-percent return, which is better than the average for all manufacturing, in order to attract the investment capital to do that job and also to earn the money that would make it possible to pay off the loans.

Mr. WOLBERT. Yes, sir.

The CHAIRMAN. And that based on the last figures that you have so far, you are not coming anywhere near that.

Mr. WOLBERT. We are not going to cut it.

The CHAIRMAN. So, actually, based on what you have shown me here, it has been 20 years since you made anything approaching that return.

Mr. WOLBERT. Those were the halcyon days, yes, sir.

There is one other factor, sir, if I may pursue the trend of your thought just a bit. You have to realize that these figures in the absolute always kind of look large to people. But this business, if we are going to do the job and produce the energy, we are talking about higher and higher replacement dollars and that is the thing we have to look forward to. It is that rise in replacement costs.

The CHAIRMAN. What would the impact of the proposed rollback we are considering in the Senate right now be on the price of the gasoline at the pump? Can you compute that?

Mr. WOLBERT. Let me kind of talk around it. I don't want to be evasive but I want to bring in some of the things you have to think about. First, you have to ask yourself is if you roll back domestic crude what are you doing. Are you really going to help the consumer. The marginal oil is still going to come in from foreign sources, and as powerful as the Congress is I don't think it can roll back the Arab's prices or the Iranian price. That oil is going to come in.

[The following additional material relative to the question raised by the chairman was subsequently received by the committee from the Shell Oil Co.:]

SHELL OIL CO.,
Washington, D.C., February 14, 1974.

COMMITTEE ON FINANCE,
U.S. Senate, Dirksen Senate Office Building,
Washington, D.C.

GENTLEMEN: At the hearings before you on February 13, 1974, the Chairman asked the undersigned (transcript pp. 69–70): "What would the impact of the proposed rollback we are considering in the Senate right now be on the price of the gasoline at the pump? Can you compute that?"

Upon reading the transcript I find that my answer was not fully responsive to the question. In order to remedy this omission I submit the following answer which is intended to supplement my remarks to the Committee.

"In determining the impact on the price of gasoline at the service station pump if there was a rollback of domestic uncontrolled (i.e., new, released and stripper well) oil to $5.25 per barrel, certain assumptions must be made. We have made these assumptions on the basis of industry, not Shell Oil, figures. These assumptions are as follows:

1. Present Federal Energy Office pass through regulations remain unchanged:
2. Crude oil imports equal 26 percent of total intakes and imported crude oil prices remain constant at current levels (you will note my questioning of this assumption at page 70 of the transcript; however, to derive even a notional retail pump decrease, we must assume that increases in foreign crude oil prices do not wipe out any decrease);
3. Uncontrolled domestic crude is 25 percent of total domestic crude, or 18.5 percent of the total crude input.
4. Uncontrolled domestic crude price is $9.75 per barrel;
5. All uncontrolled prices would be rolled back, to $5.25 per barrel in one case and to $7.09 in the other.
6. Gasoline equals about 50 percent of total product outturn and raw material cost changes would be spread equally over the entire product slate on a volume basis.
7. Other non-raw material cost increases could not be passed through.

Using these assumptions, a rollback to $5.25/bbl. would provide about a 2.0¢/gal. price reduction at the pump; a rollback to $7.09/bbl. would provide about a 1.2¢/gal. price reduction.

Prospectively, we cannot state categorically whether imports will increase or decrease in volume or what import price levels will be, although recent events suggest that, to the extent domestic production is diminished, higher priced foreign crude, which may or may not be available, must be resorted to. Also, we would speculate that domestic price rollbacks would probably reduce domestic supply. Further, reduction of refinery throughputs to the 76.3 percent level projected by the Federal Energy Office for the months of February, March and April will likely reduce profit margins to levels which would justify increased product prices wholly apart from raw material costs passthrough."

Respectfully,

G. S. WOLBERT, Jr., *Vice President.*

The CHAIRMAN. If I might interrupt you, that was one thing that concerned me about the renegotiation proposal that we just got through voting on. I don't know how that House Commerce Committee planned to renegotiate with King Faisal over there, and I don't know of anybody who is able to do that. If they can regulate that fellow, I wish they would tell me how to do it. But so far all I can do is wish them well when they say they are going to run Iraq, Iran, and control the prices in the Near East. We have not a country over there except for Iran which is willing to even sell us any oil at all. How they are going to regulate them I can't understand, and that is part of the impossibility of some of these things that have been suggested around here.

Go right ahead.

Mr. WOLBERT. Then, the second part of this, and it is allied to it, is really the thing that might do something with the foreign countries, and they have at least talked in these terms, is they are going to eyeball the replacement or the alternate sources in the United States. If you roll back the prices on domestic crude in addition to the effects which have been testified to by the independent people and the one I threw in about offshore, you are also going to have a disincentive for your unconventional raw materials, for coal, we don't see coal coming in below about $8, unconventional at about $10. If you are going to hold oil prices down, how in the world are you going to spur alternates; we need all the sources to help us get the strain off the domestic situation and achieve a degree of self-sufficiency which will at least cause the gentlemen in other parts of the world to be more reasonable as we enter into these negotiations. So I think that point is also a valid one, sir.

The CHAIRMAN. What impact would the rollback have on your rate of return?

Mr. WOLBERT. Well, this, of course, is another difficult one. Obviously, it is going to reduce the rate of return. You have to ask yourself on what volume is this price going to operate. We would have had a reduction on 1973—all things remaining the same in 1973 except the change in the price; we would have dropped further below anything we could live with on a long-term basis. In addition to that we now have this problem of allocation, and our volumes are dropping. As you know, we went from about 85 percent after the turn of the year and under the allocation order we are down to about 76 percent, I forget what the actual figures are, it is in that order so your volumes are playing havoc with you as well. Further, by the time you get your resulting

higher unit costs in there, I don't think we can maintain a rational profit in the marketplace.

The CHAIRMAN. Thank you very much.

Mr. WOLBERT. Yes, sir.

The CHAIRMAN. I thank your associates also for presenting us with a great deal of information which I really think you need to make available to the committee and also to the Senate.

[The prepared statement with attachments of Mr. Wolbert follow:]

PREPARED STATEMENT OF G. S. WOLBERT, JR., VICE PRESIDENT AND GENERAL COUNSEL, SHELL OIL CO.

INTRODUCTION

My name is G. S. Wolbert, Jr. Although I am presently Vice President and Associate General Counsel of Shell Oil Company, my appearance is due to the fact that I was Shell's Vice President-Finance from November, 1970, until December, 1973, and previously served as Treasurer of the Company from October, 1968, until becoming Vice President-Finance.

We in Shell are grateful for the opportunity to participate in this Committee's development of information on the profits and rates of return realized by oil companies from their operations in the United States during the 10 year period 1964 through 1973. In order to provide as useful a document as possible we have arrayed in tabular appendices our data on the points which the Committee requested us to address. To the extent that analysis and comment on such data would appear to be warranted we have provided same in the text, arranged in order to correspond with the attached appendices.

Before entering upon a point-by-point discussion, I would like to make a general comment on our figures and their use to indicate the economic condition of enterprises engaged purely in petroleum operations solely in the United States. Broadly speaking, my company probably comes as close to fitting this description as does any integrated oil company of substantial size in the industry. However, we do conduct, within the Shell Oil corporate entity and in exceedingly close conjunction with our domestic petroleum business, a petrochemical venture whose revenues in 1973 accounted for about 13% of the company's total. While a facile mind can develop many distinguishing characteristics between the chemical and oil "businesses", the substantial amounts of products and services that are interfaced between these activities (averaging in excess of 20% of our chemical total costs and expenses) have caused us to consider ourselves to be conducting a *single line of business*. I might add, incidentally, that governmental agencies to whom we report or by whom we are regulated, e.g., the Securities and Exchange Commission and the Federal Energy Office, have accepted this conclusion. We gave serious consideration to attempting to extract from our numbers a derived chemical balance sheet and income statement so as to create a "purified residue" for the Committee's purposes, but the arbitrary nature of any allocation of shared facilities, utilities, and services and the fact that these allocations would change from year to year, thereby precluding comparability between years led us to the conclusion that it would be far more misleading to submit figures stripped of notional chemical financial statements than it would be to use our actual figures, with the mental reservation that they do contain an element that is not purely petroleum. We have made a separation between "Domestic" and "Total Company" figures by excluding from "Domestic" the following: (1) Profits from a foreign subsidiary in the years 1964 through 1970 whose operations primarily consisted of the purchase and resale of foreign crude. See Appendix H. (2) Losses primarily incurred in foreign crude oil exploration ventures in the years 1970 through 1973. See Appendix H. These are discrete numbers and can readily be broken out.

RATES OF RETURN

Turning now to the Committee's points of interest, we first examine the Rate of Return realized on Stockholders' Investment. Most analysts use this test as a proxy of industrial health and investor interest and we believe that it probably is the single most significant ratio. Appendix A shows Shell's rates, by year, for the period 1964 through 1973. Because we already had on hand certain comparisons which use our regular Rate of Return ("Total Company") we have

listed rates on both our normal company basis and on a "domestic" basis for the special purpose of this inquiry.

In Appendix B we show our "Total Company" return on Shareholder Investment against time and compared it with our Return on Total Capital. As you will note, the latter line is consistently lower than Return on Shareholders' Investment. While we do not urge this ratio as a supplanter of Return on Shareholder Investment, we do suggest that as our capital investment requirements cause us to borrow more and more money, the significance of this ratio will increase if we are unable to hold the line on our debt-equity ratio.

We also plotted two other curves, one showing the historical Rate of Return on Shareholders' Investment for all U.S. Manufacturing Corporations and the other showing such rate for U.S. Utilities. Unfortunately, the source of our data for Utility Companies only goes back to 1964.

Comparison of these curves serves two purposes. One provokes a visceral reaction that if our Rate of Return is below all U.S. Manufacturing and/or Utility Companies, we don't have an excess profits problem; what we should be concerned about is how we can get our earnings *up* to a level that will be attractive to the investor, which brings us to our second point. We must compete in a free capital market for funds to finance expansion. It is difficult to say *a priori* precisely what return will be required to attract funds because "investor expectations" is an abstraction which varies, among other things, with confidence, degree of risk and rate of inflation. We do have a benchmark, however, in public utilities. Because the cognizant regulatory agency is charged with seeing that utility rates are as low as possible to protect the consumer, yet sufficiently high to attract capital, these rates should set a floor upon which to construct an appropriate target for oil company returns. For utilities, rates over the past ten years have been so low, that by not being able to generate enough funds themselves; they had to get out in the market and borrow heavily so their coverage rate has gone down consistently, and many utilities have slipped in their rating.

An investor will appraise alternate investment opportunities by means of a discounted cash flow test. Because of differences in the operation of, and in appropriate methods of accounting for, a public utility and a company engaged in the oil business of equivalent discounted cash flow earning power will have different Rates of Return on Shareholder Investment. We estimate that because of the oil production industry's fast write-offs, long lead times between first exploratory efforts and production and the practice of expensing dry holes a company engaged primarily in oil and gas production would require about 3 percentage points higher rate of return than a public utility in order to equal the utility's discounnted cash flow earning power. As we go downstream toward refinery and marketing the gap is narrowed and we believe that an independent refiner/marketer would equilibrate about ½ point higher than the utility rate. We view our own business as being somewhere in between these two, say about 1½ to 2 points higher than a utility with an equivalent discounted cash flow.

Due regard must be given to the element of risk. If our company simply equaled the earning power of a public utility, we would have an exceedingly difficult time attracting capital. Surely the investor is entitled to, and will demand, a factor for risk. There is no consensus concerning the magnitude of this premium. We do have studies which evaluate the risk differential between an integrated oil company and a public utility to be about 2 percentage points.

Utilizing these concepts, we can construct a rule-of-thumb figure for a domestic integrated oil company. Starting with the 11.5% median Rate of Return on Shareholders' Investment which the gas, telephone and electric utilities have averaged during the past ten years, we add the d.c.f. equilibration factor to 1½ to 2 points, plus the risk premium of 1½ to 2 points to derive a total of around 15% for domestic integrated oil companies.

Lest this rough approximation be taken as an absolute, let me hasten to add that this figure is at best simply a measure of centricity—a 10 year *average* of *median* returns. Let me use our own figures from Appendix A to illustrate two points: first, Shell's domestic average of 12.35% for the 10 year period might be balanced by another company whose internal growth rate was faster than ours. Its 10 year average rate of, say, 16.65% could not be taken to indicate excess profits because by the very nature of a median, someone has to be above it; second, the depressed earnings experienced by Shell in the past five years (1969–73 average "domestic" return of 10.64%) would require five good years averaging around 18.35% to bring us to the 10 year average median we have targeted. This is a most important point. If we cynically disregard the bad years and impose a

so-called "excess profits" tax on the good years, there is no way that the industry can finance the on-going capital investments that will be required to meet even severely constrained consumption of, let alone normal demand for, energy in the future.

One final point before leaving the subject of Return on Shareholders' Investment. Up to now, we have approached investor expectations from a historical basis. This is a satisfactory technique so long as inflation trends are such that the investor feels confident of accommodating inflation in his calculations. If the trend causes the investor to become uncertain about the future value of his investment, his expectations are bound to rise substantially above the levels we have discussed.

CERTAIN INTERESTING RATIOS

In Appendix C we have tabulated separately for total company and for domestic operations, ratios derived from four comparisons: (1) net income to revenues (exclusive of consumer excise and sales taxes); (2) net income to taxes (exclusive of consumer excise and sales taxes); (3) net income to labor costs; and (4) net income (adjusted to reflect after-tax interest expense) to total capital (Shareholders' Investment plus long-term debts). These figures pretty well speak for themselves with perhaps one comment: our net income to taxes percentage fell 30% from 1968 (last year prior to the so-called Tax "Reform" Act of 1969) to 1972.

Appendix D lists yearly Capital Expenditures and Exploration Expense both in absolute dollar amount and as a percentage of internally generated funds (including exploration expense). It is no incidence that our 1964–67 spending/internal generation ratios were soon followed by three $150 million, 25 year debt offerings and a $300 million equity financing in 1968. We have trimmed back our expenditures since that time but, looking to the future, if Shell is to bear its share of the search for energy it must have an increased capacity to internally generate a higher level of funds as well as to attract additional investment from equity holders and long-term fixed obligation lenders. We will have more on this point shortly.

One important element in the attraction of equity investment is a stable dividend policy. Appendix E provides information on the dollar amount and percentage of petroleum earnings paid out in dividends by Shell during the period 1964 to 1973. Shell has not raised its dividend per share since 1969. On the other hand, despite the sharp decrease in its earnings during 1970 through 1972, it did not reduce its dividend. Serious consideration was given to cutting the dividend, especially in 1970 when the payout ratio rose to 68.2%. However, the investment community places heavy weight on certainty of dividend, and our examination led us to conclude that as a responsible company in a non-cyclical industry which was not faced with an impending liquidity crisis, we should keep faith with our shareholders and maintain the dividend until our circumstances dictated otherwise. I suspect that we were influenced, consciously or unconsciously, by the fact that although the dividend rate as a percentage of net earnings was high, the shareholder piece of the total revenue pie was down around 3.7% in 1970 to 3.3% in 1972.

SOME COMMENTS ON FOURTH QUARTER 1973 RESULTS AND RETAIL PRICES

Because of the production cutbacks and the embargo imposed by O.A.P.E.C. countries on shipments to the United States and the resulting shortage of gasoline, home heating oil and residuals there has been a wide interest expressed in Fourth Quarter Earnings and Retail Prices. The short answer in our case is that Shell Oil Company's earnings *declined* 2 percent from the Fourth Quarter of 1972. Except for the relief in the pricing restrictions on domestic crude oil last September through the two-tier pricing system, product price increases by the Company in 1973 were limited to passing through higher costs of purchased crude oil and products already incurred. While current regulations allowed a dollar-for-dollar pass-through of the higher costs of crude oil and purchased products, they nevertheless impaired our earnings as well as our margins because higher costs incurred in one month could not be recovered in higher prices until the following month. The effect of this time lag continues to grow while costs are increasing rapidly and this was reflected in our lower earnings for the last quarter of 1973. The impact of this delay in recovery precludes meaningful analysis of the effect of normal growth of sales, of inflation, of absence of soft markets or of greater profit margins.

With respect to gasoline prices, Shell moved dealer tankwagon prices nationwide during the last quarter 1973 as follows:

September 15, 1973, 0.9¢ increase.
September 29, 1973, 0.2¢ increase.
October 6, 1973, 0.6¢ increase.
November 9, 1973, 1.0¢ increase.
December 1, 1973, 3.2¢ increase.
December 5, 1973, 0.8¢ *decrease.*

The total increase of 5.1¢ was strictly in accord with Phase IV Cost of Living Council regulations. The above increases in the tankwagon price were purely pass through of increased raw material costs and no profit element to the refiner/marketer is reflected in them.

Dealers had the legal right to pass the above-mentioned increases on to their customers; however, they were not authorized to add to their retail margin prevailing on May 15, 1973, unless it was less than seven and one-half cents. We believe that the vast majority of our dealers have priced their products to the public in accordance with the regulations.

A LOOK AT THE FUTURE—CAPITAL REQUIREMENTS UNDER TWO SCENARIOS

In order to avoid any suggestion that we were making an estimate, projection, or forecast of future earnings that might run afoul of S.E.C. rules, but at the same time desiring to provide realistic order-of-magnitude numbers useful for the Committee's examination, we agreed with the staff to run two cases holding our Return on Shareholders' Investment constant at the 1964–73 average (12.2%) and at 1.5 times that average (18.3%). We also agreed that the capital structure would be 62% equity, 25% direct debt and 13% indirect debt. We decided also to use the historical average for dividend rate (53% of net income), as well as holding write-offs, working capital, deferred taxes and property sales and salvage at their historical fraction of net investment. Average interest on debt was 7% and repayment of new debt was assumed to commence 5 years after it was incurred and to take the form of 25 equal annual installments. All new indirect debt was treated as if it were a ten year lease with equal annual payments with discount rate of 7%.

The results of these two scenarios are displayed on Appendix F, Table 1 (12.2% Return assumed) and Table 2 (18.3% Return assumed). Table 3 is the difference between the first two thereby showing the *additional* Capital Expenditures that would be made possible if a 18.3% return was achieved rather than if a 12.2% return was realized.

Perhaps a comment on the results is in order. Under the 12.2% return case, only 15.2 billion dollars through 1985 will be available for capital investments; under the 18.3% case this rises to 20.2 billion dollars. Although the direct debt and off-balance sheet financing assumed are somewhat higher than Shell's traditional levels, they certainly seem practical although the quality rating of issues could be reduced to the AA/A range. The problem that these model runs throws up is not so much whether this amount of capital expenditure is reasonable to expect, but rather is it *enough to do the job?* The National Petroleum Council has estimated the U.S. domestic oil industry capital requirements for 1971–1985 to be 278 billion dollars of 1970 vintage. If Shell is to do its 8% share, its requirements would be 22 billion (1970) dollars. Subtracting our 2 billion direct and indirect expenditures for 1971–1973 and converting the remaining unfulfilled expenditures to 1974 dollars, Shell's requirements would be 22 billion (1974) dollars. Thus we see that the capital expenditure capability arising from continued historical levels will fall far (i.e., 7 billion dollars) short. Even at the 18.3% level, there is a 2 billion shortfall. However, it is reasonably safe to assume that a steady 18.3% rate of return over this time period would make possible an equity offering somewhere along the way. Once again, though, one must ask in terms of the present inquiry, "what excess profits"?

FOREIGN CRUDE OIL PURCHASES AND INVESTMENTS

In Appendix G we show the percent of total U.S. petroleum product sales derived from imported crude.

The Company's foreign investment base was negligible during the applicable period. Although we had foreign source income during 1964 to 1970, as detailed

in Appendix H, it was generated by a 100% owned foreign subsidiary engaged in purchasing and selling foreign crude oil which had virtually no capital investment. All earnings of this subsidiary were repatriated to the United States. Foreign oil exploration ventures commencing in 1970 and conducted to date are in the early stages and since practically all of exploration associated costs are expensed currently, very little capital investment is involved.

No debt capital was raised outside the United States. Equity capital of approximately $200 million was obtained from outside the United States in 1968; these funds were used for domestic investment.

At the moment, we do not have contractual relations with a foreign subsidiary involving a pricing problem. For this reason, we do not feel it is appropriate for us to engage in a detailed discussion of the possibility, under present tax regulations, of shifting U.S. profits to a foreign subsidiary. I content myself with simply making two observations. First, in the past the Internal Revenue Service has displayed ingenuity, persistence and resourcefulness in applying I.R.C. § 482 to this situation. Second, the new world crude situation with Governments as substantial crude sellers and everybody and his brother in the act as crude purchasers provides a much more informative marketplace.

CLOSING

The length of this statement devoted to addressing the questions propounded by the Committee already gives me distress. I do not intend to compound this distress by a wordy closing statement. I would like to reaffirm our appreciation of the opportunity to discuss these matters with the Committee. I would also like to leave one thought with you. We each have a fantastic task before us to bring the energy problem into manageable shape. We cannot afford many mis-starts or nonstarts. We need your help and we are prepared to assist you anyway we can. Let us resolve to work our problems out together.

APPENDIX A

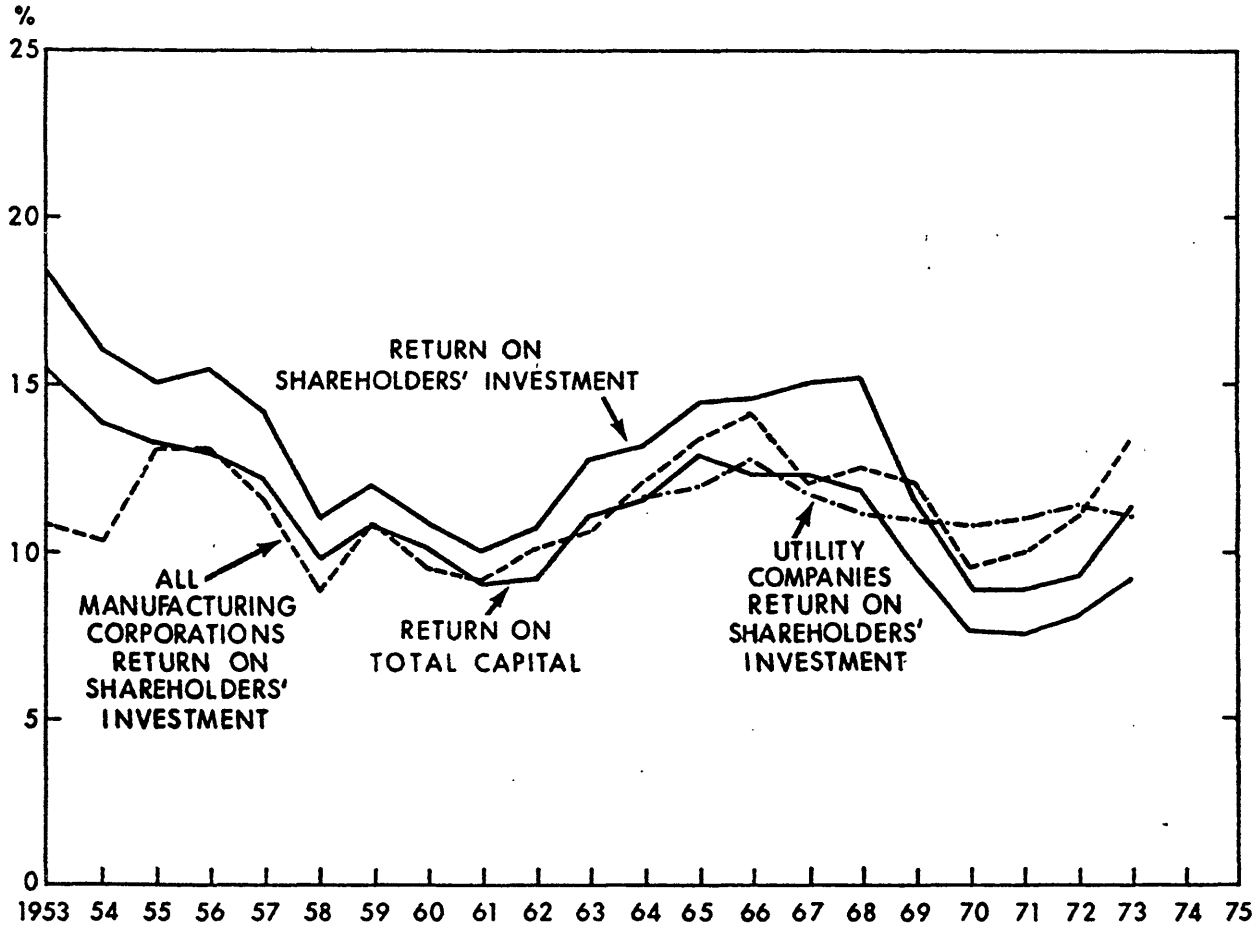
PERCENTAGE RATE OF RETURN, AFTER TAXES, AS A PERCENTAGE OF SHAREHOLDER INVESTMENT AT BEGINNING OF YEAR

Year	Total company	Domestic
1964	13.2	12.5
1965	14.5	14.1
1966	14.6	14.4
1967	15.0	14.4
1968	15.1	14.9
1969	11.5	11.4
1970	8.9	9.4
1971	8.9	9.7
1972	9.2	10.1
1973	11.4	12.6

Note: Aside from the chemical venture which was discussed in the preliminary general comment, Shell Oil has no other material investments against which to compare the return rates listed above.

Source: Calculated from annual report; "domestic" derived by subtracting foreign income and expenditures from annual report figures. The data underlying the above rates of return differ from FTC form "MG" figures. The FTC requested consolidation of subsidiaries on the basis of taxability under the Internal Revenue Code. For the years 1964 through 1969 the "domestic" rates are derived from figures comparable to FTC reports and for the years 1970 through 1973 the "total company" rates should be compatible with FTC figures. Effective the 4th quarter of 1973, the FTC revised their form so that net income would be the same as that used in our "domestic" calculation but the shareholders' investment would be "total company."

SHELL OIL COMPANY
RATE OF RETURN



APPENDIX C

PROFITABILITY RATIOS (EXPRESSED IN PERCENTAGES)

Year	Total company	Domestic
1. Net income to revenues (exclusive of consumer excise and sales taxes):		
1964	8.5	8.2
1965	9.1	8.9
1966	9.0	9.0
1967	9.2	9.0
1968	9.3	9.3
1969	8.1	8.1
1970	6.6	6.9
1971	6.2	6.8
1972	6.3	7.0
1973	6.7	7.5
2. Net income to taxes (exclusive of consumer excise and sales taxes):		
1964	180.4	189.8
1965	163.5	174.2
1966	163.5	171.0
1967	177.0	179.4
1968	171.6	176.0
1969	155.9	160.8
1970	117.5	116.9
1971	128.9	127.0
1972	119.1	118.6
1973	129.3	127.1
3. Net income to labor costs:		
1964	57.4	54.5
1965	64.6	62.6
1966	64.3	63.3
1967	65.5	63.0
1968	67.2	66.5
1969	57.8	57.3
1970	44.7	47.0
1971	45.3	49.2
1972	46.6	51.3
1973	58.3	64.8
4. Net income (adjusted to reflect after-tax interest expense) to total Capital (shareholders' investment plus long-term debt):		
1964	11.5	10.9
1965	12.9	12.5
1966	12.3	12.2
1967	12.3	11.8
1968	11.8	11.8
1969	9.5	9.4
1970	7.7	8.0
1971	7.6	8.2
1972	8.0	8.8
1973	9.2	10.2
5. Taxes (exclusive of consumer excise and sales taxes) to net income before taxes (percent).		
1964	35.7	34.5
1965	38.0	36.5
1966	37.9	36.9
1967	36.1	35.8
1968	36.8	36.2
1969	39.1	38.3
1970	46.0	46.1
1971	43.7	44.1
1972	45.7	45.9
1973	43.6	44.0

APPENDIX D

CAPITAL EXPENDITURES AND EXPLORATION EXPENSE

	Absolute amount (thousands)		Percent of internally generated funds [1]	
	Total company	Domestic	Total company	Domestic
Year:				
1964	$507,717	$507,717	120	122
1965	604,969	604,969	132	133
1966	640,968	640,968	133	133
1967	703,574	703,574	134	135
1968	642,383	642,383	112	112
1969	719,629	719,629	119	120
1970	717,444	693,490	131	126
1971	543,144	504,883	92	84
1972	689,547	641,696	114	105
1973	691,243	622,061	94	84

[1] "Internally generated funds" include funds provided from operations minus dividends plus exploration expense (geological, geophysical and land expenses plus lease rentals). These are financial book figures.

APPENDIX E

DIVIDENDS PAID OUT OF EARNINGS

	Dividends paid (thousands)		Percent of net earnings	
	Total company	Domestic [1]	Total company	Domestic
Year:				
1964	$90,798	$86,167	45.8	45.8
1965	103,194	100,098	42.5	42.5
1966	115,731	114,111	45.3	45.3
1967	128,280	123,405	45.0	45.0
1968	151,376	149,862	48.5	48.5
1969	161,778	160,160	55.6	55.6
1970	161,719	161,719	68.2	68.2
1971	161,738	161,738	66.1	66.1
1972	161,751	161,751	62.1	62.1
1973	161,704	161,704	48.6	48.6

[1] No dividends were allocated to foreign losses.

APPENDIX F

TABLE I.—SHELL OIL CO. ALLOWED FUTURE EXPENDITURES

CASE I.—RETURN ON EQUITY EQUAL TO 1964-73 AVERAGE—12.2 PERCENT

[In millions of dollars]

Year	Capital expenditures	New financing	New indirect debt	Total direct and indirect expenditures
1974	828	203	200	1,028
1975	899	222	229	1,128
1976	857	113	108	965
1977	908	123	117	1,025
1978	962	144	135	1,097
1979	1,017	150	147	1,164
1980	1,074	167	162	1,241
1981	1,141	172	182	1,323
1982	1,210	184	203	1,413
1983	1,280	192	225	1,505
1984	1,355	204	248	1,603
1985	1,435	218	272	1,707
Total	12,971	2,092	2,228	15,199

TABLE II.—SHELL OIL CO. ALLOWED FUTURE EXPENDITURES

CASE II.—RETURN ON EQUITY 50 PERCENT GREATER THAN 1964-73 AVERAGE—18.3 PERCENT

[In millions of dollars]

Year	Capital expenditures	New financing	New indirect debt	Total direct and indirect expenditures
1974	888	185	210	1,098
1975	1,029	265	240	1,269
1976	1,064	209	156	1,220
1977	1,116	175	146	1,262
1978	1,212	203	174	1,386
1979	1,316	217	193	1,509
1980	1,430	243	218	1,468
1981	1,553	262	244	1,797
1982	1,687	285	280	1,967
1983	1,832	308	313	2,145
1984	1,988	333	350	2,338
1985	1,255	360	390	2,545
Total	17,270	3,045	2,914	20,184

TABLE III.—ADDITIONAL EXPENDITURES PERMITTED BY 50 PERCENT HIGHER RETURN

[In millions of dollars]

Year	Capital expenditures	Indirect commitments	Total
1974	60	10	70
1975	130	11	141
1976	207	48	255
1977	208	29	237
1978	250	39	289
1979	299	46	345
1980	351	56	407
1981	412	62	474
1982	477	77	554
1983	552	88	640
1984	633	102	735
1985	720	118	838
Total	4,299	686	4,985

APPENDIX G

Percent of U.S. petroleum product sales derived from foreign crude

[Percent of imported crude quantities to refined product sales quantities]

Year:		Year—Continued	
1964	14.9	1969	11.3
1965	14.0	1970	9.5
1966	13.4	1971	13.9
1967	11.6	1972	16.5
1968	8.2	1973	20.6

APPENDIX H

Earnings/(losses) outside of the United States

[Earnings/(losses) in thousands of dollars]

Year:		Year—Continued	
1964	10,143	1969	2,788
1965	7,283	1970	[1] (12,222)
1966	3,666	1971	(20,956)
1967	10,713	1972	(26,341)
1968	3,274	1973	(37,137)

[1] Net: 91 income and 12,313 losses.

The CHAIRMAN. Mr. Charles Spahr, chairman of the board, Standard Oil Co. of Ohio.

STATEMENT OF CHARLES E. SPAHR, CHAIRMAN OF THE BOARD, STANDARD OIL CO. OF OHIO, ACCOMPANIED BY RICHARD B. NASH, MANAGER, INVESTORS RELATIONS

Mr. SPAHR. Mr. Chairman, I am Charles Spahr, chairman and chief executive officer of the Standard Oil Co. of Ohio. I have on my left, sir, Mr. Richard B. Nash, who is manager of our investors relations and who has had a great deal to do with the putting together of the report that I have submitted to you this morning.

Now the statement which I have submitted for the record presents my company's position regarding profit-limiting legislation as well as our responses to the questionnaire pertaining to domestic petroleum operations and investments and I will try to summarize this statement at this time in order to save you time.

It may be helpful for you to know that Sohio, as my company is commonly called, is a crude-deficient refining and marketing company serving Ohio and surrounding States and the Middle Atlantic States. Our domestic crude production amounts to about 7-percent of our 385,000 barrels per day refining capacity. We have a small interest in the Iranian consortium with liftings equal to about 5 percent of our refinery capacity. In terms of assets we rank about 17th in the industry. In 1970 we acquired east coast marketing facilities, two refineries, and valuable oil and gas leases on the North Slope of Alaska through a transaction with the British Petroleum Co., Ltd. Since then our main efforts have been directed to the development of our North Slope reserves, to obtaining a trans-Alaska pipeline permit, and to the realinement of the east coast properties which remain unprofitable as of this day. We also have investments in petrochemicals, coal, and fabricated plastics. We have developmental interests in oil shale, uranium, and tar sands.

I am particularly pleased to have this opportunity to personally respond to your questions. I feel they are good questions and I hope our responses will be helpful to you in your considerations of the problem of your study.

The results of your deliberations will have a very significant impact upon Sohio and the petroleum industry and upon the entire private enterprise system of the United States as well.

Before proceeding to the questionnaire, I would like to comment on the subject of profit-limiting legislation, whether it be additional taxes or some form of price control.

I am philosophically opposed to profit-limiting legislation. It is not the way by which our country became and remains the strongest in the world. I recognize that there are some who don't share my views in this regard. If those who disagree with me prevail, I believe that profit-limiting legislation should apply to all businesses, not just the energy companies. If our industry is to be the only one affected, it will be placed at a significant disadvantage in the competition for capital at a time when our capital needs are unprecedented.

I believe that the development of existing energy forms and the research and development of new energy forms need encouragement, not the prospect of a penalty if risk-taking investment is successful.

Correction of our energy deficiency can only come through investment of huge sums of money. We are a very capital intensive industry, as you know. The existence or even the mere threat of profit-limiting taxes will prevent the right kind of investment decisions from being made on a timely basis.

My company supports programs that would make this country more sufficient in energy. To this end I urge you to retain both the percentage depletion allowance and the deduction of intangible drilling costs for domestic development and production. These two incentives are particularly valuable to the independent driller and producer who has discovered most of our best oilfields in this country and whose efforts ought to be encouraged instead of discouraged at this time.

My company would support a requirement that the net tax benefits of these incentives be reinvested in a broad range of energy research or development to assure that the benefits of these incentives are being directed toward energy self-sufficiency.

In summary, I believe strongly that:

1. An excess profits tax or profit-limiting legislation will prove counterproductive to our Nation's needs for energy;

2. If our industry is deemed to have excess profits and taxed accordingly, then all of American industry should be equally taxed to create the same relative disadvantage in the capital markets;

3. Any excess profits legislation should provide for plowback exemptions for investments in energy development or research and there should be definitive provisions for termination. The reinvestments allowed for exemption should cover research, exploration, development, transportation, refining or upgrading, storage, and environmental protection for all energy forms;

4. A tax assessed at the wellhead can be counterproductive and discriminate against the small producer and the development of economically marginal wells, as has been discussed this morning;

5. Domestic investment incentives represented by the depletion allowance and intangible drilling costs should be retained but modified to require plowback of tax benefits in energy-related investments; and

6. The foreign tax credit should remain available to all American taxpayers. However, a review of payments to foreign governments with respect to amounts allowed as foreign tax credits is in order, I think.

Many of the foregoing thoughts and comments are contained in a statement that our company made to the Committee on Ways and Means of the House of Representatives. I respectfully request that your committee accept a copy of this statement and that it be made a part of the record of these hearings.

Now, I would like to address myself to your questions.

We have attempted to answer all the questions posed. To do so has required arbitrary assumptions and allocations. We believe they fairly reflect the intent of your questions. In the interest of saving time, I will give a summary answer to each question in the order in which it was asked and then presumably, sir, if you would like to expand upon any one of these answers we can do so together.

Sohio's average return on shareholders' equity in the petroleum business was 7 percent in the last 10 years, 4.6 percent in the last 5 years, and 4.6 percent in 1973. The return for other domestic invest-

ments was 3.8 percent, 5.6 percent, and 18.7 percent respectively for the same time periods. I submit these are hardly excessive returns.

The following additional profit ratios were requested:

[In percent]

	Average		
	1964–73	1969–73	1973
Net income as a percent of sales	5.7	3.8	3.8
Net income as a percent of taxes except excise taxes	120.1	122.8	106.4
Net income as a percent of payroll	45.9	32.5	32.3
Return on borrowed and invested capital	6.4	4.6	5.1

Refer to question No. 2, page 52.

Our exploration expense and capital investment in domestic petroleum assets averaged 180 percent of net income (after dividends) plus depreciation and depletion and exploration expenses during the last 10 years; 235 percent in the past 5 years and 230 percent last year. These ratios demonstrate, I think, that we have not diverted cash from the petroleum business.

The dividends payout ratio has averaged 50 percent in 10 years, 57 percent in the last 5 years and 42 percent in 1973. However, that has been a function of the variation downward particularly of our income, for we have not raised the dividend since 1969.

Sohio's fourth-quarter earnings before taxes, interest, and extraordinary items declined 80 percent from the fourth quarter of 1972. Sales volumes were down 20 percent, partly as a result of the sale of assets. Higher prices and reduced operating expenses failed to offset higher crude and product costs. We were not able to pass through on a timely basis $33 million of our crude and product costs.

1. Higher crude oil ceiling prices increase our costs and lower our profits until product prices can be adjusted to reflect the higher cost.

2. The year-to-year inflation between the fourth quarters of 1973 and 1972 was about 8.4 percent, so the real value of our earnings was reduced by that same 8-plus percent.

Our Ohio tankwagon price increased 7.97 cents between December 1972 and December 1973. Of this amount, .47 cent was required to recover from depressed prices and the remainder represented the passthrough of higher crude costs. There is no disparity in pricing to dealers versus our salary-operated stations.

A return 150 percent of that realized in the last 10 years (7.3 percent) generates $841 million more funds for investment. Our cash requirements during the next 5 years are expected to exceed the total generated in 12 years if we earned 150 percent of 10 years' average return and followed the constraints outlined in the question. Our program will require us to increase our direct and off-balance-sheet obligation by a greater degree than contemplated in that question.

In 1973, 46 percent of our product sales reflected our use of foreign crude oil.

We believe that present tax regulations provide no opportunity to shift United States profits to a foreign subsidiary.

Sohio has no foreign operations requiring investments, and we have raised no funds outside of the United States. Our one major investment was Canadian Delhi, Ltd., which was sold in 1972. We have significant foreign earnings from the Iranian Consortium and sale of petrochemical licenses.

Finally, the impact of the elimination of the percentage depletion allowance reduces our return about 10 percent. We have been a small producer relative to our total petroleum needs, as you can see, sir.

Now that completes my summary, Senator Long, and I will try to be responsive to any questions you have about it or the major statement.

The CHAIRMAN. What I find surprising about your statement here, according to what I read here, and I would like to ask if I have got this right, 1973 was supposed to be a very good year for your company, according to all these great prophets we have heard about. But I look down here and see domestic petroleum operations, 4.6 percent profit. Other domestic operations 18.7. Foreign operations 79.7. When you average it all together, all domestic and foreign, you come out with 8.1. The only impressive figure I find there is the foreign had a lot of profit, 79.7. The money is in foreign oil but I would think if I were one of your shareholders and looked down here and said, "Hey, slow down here. Part of my money you put into domestic petroleum only got 4.6 return. Don't do any more of that. Put it over here in the other domestic operations or in the foreign operations. Don't do any more drilling within the United States." If I was just an ordinary fellow with my money in your company I think that is what I would be telling you.

How can you justify putting any more money into domestic operation when you made four times that much in doing your other domestic operations and you made 20 times that much in your foreign operation?

Mr. SPAHR. Well, sir, perhaps I am an incurable optimist and perhaps my stockholders up until this time have been so, too.

Prior to 1969, we had demonstrated that we could earn a rate of return on total capital employed of 14 percent or slightly less during the 5 years before the end of that period. But in 1969—really on January 1, 1970—we completed that deal I referred to with British Petroleum Co., Ltd., which resulted in our acquiring all of their North Slope properties.

We had anticipated at that time, which was before the passage of the National Environmental Protection Act, that we would be able to invest the funds required to develop the North Slope and build the pipeline and get oil to market within 3 years, and we had expected that we would have had oil to market last year. But you know what has happened since. That pipeline isn't started. But as a consequence of the money we put in the development of the oilfield thus far and the pipeline, we have $400 million invested in Alaska that has not earned us 1 cent over this period of time and which has cost us money.

Now, this accounts for a large part of our problem domestically as you can readily see. Our stockholders have been convinced until

recently, at least while we have been delayed in completing that big job up there important to this country as well as my company, that we will get it done and that they will be rewarded for their patience, tolerance, and staying invested in our company. So this is the major reason why, the only reason why, they haven't said to me, "Charlie, stop it and spread your efforts in foreign lands."

The CHAIRMAN. Thank you very much for your statement here.

[The prepared statement of Mr. Spahr, and his statement before the Ways and Means Committee follows:]

PREPARED STATEMENT BY CHARLES E. SPAHR, CHAIRMAN OF THE BOARD AND CHIEF EXECUTIVE OFFICER, THE STANDARD OIL COMPANY

Mr. Chairman, my name is Charles E. Spahr and I am Chairman of the Board and Chief Executive Officer of The Standard Oil Company of Ohio. I am appearing today to provide the Committee my company's response to the questionnaire pertaining to domestic petroleum operations and investments.

It may be helpful for you to know that Sohio (as my company is commonly called) is a crude-deficient refining and marketing company serving Ohio and surrounding States and the Middle Atlantic States. Our domestic crude production amounts to about 7% of our 385,000 barrels per day refining capacity. We have a small interest in the Iranian Consortium with liftings equal to about 5% of our refinery capacity. In terms of assets we rank about 17th in the industry. In 1970 we acquired East Coast marketing facilities, two refineries, and valuable oil and gas leases on the North Slope of Alaska through a transaction with The British Petroleum Company Limited. Since then our main efforts have been directed to the development of our North Slope reserves, to obtaining a trans-Alaska pipeline permit, and to the realignment of the East Coast properties which remain unprofitable. We also have investments in petrochemicals, coal and fabricated plastics. We have developmental interests in oil shale, uranium and tar sands.

I am particularly pleased to have this opportunity to personally respond to your questions. I feel they are good questions and I hope our responses will be helpful to your considerations. The results of your deliberations will have a very significant impact upon Sohio and the petroleum industry and upon the entire private enterprise system of the United States as well.

Before proceeding to the questionnaire, I would like to comment on the subject of profit limiting legislation, whether it be additional taxes or some form of price control.

I am philosophically opposed to profit-limiting legislation. It is not the way by which our country became and remains the strongest in the world. I recognize that there are some who don't share my views in this regard. If those who disagree with me prevail, I believe that profit-limiting legislation should apply to all businesses, not just the energy companies. If our industry is to be the only one affected, it will be placed at a significant disadvantage in the competition for capital at a time when our capital needs are unprecedented.

I believe that the development of existing energy forms and the research and development of new energy forms need encouragement, not the prospect of a penalty if risk-taking investment is successful. Correction of our energy deficiency can only come through investment of huge sums of money. We are a very capital intensive industry. The existence or even the mere threat of profit limiting taxes will prevent the right kind of investment decisions from being made on a timely basis.

My company support programs that would make this country more sufficient in energy. To this end I urge you to retain both the percentage depletion allowance and the deduction of intangible drilling costs for domestic development and production. These two incentives are particularly valuable to the independent driller and producer who has discovered most of our best oil fields in this country and whose efforts ought to be encouraged instead of discouraged at this time.

My company would support a requirement that the net tax benefits of these incentives be reinvested in a broad range of energy research or development to assure that the benefits of these incentives are being directed toward energy self-sufficiency.

In summary, I believe strongly that—

1. An excess profits tax or profit-limiting legislation will prove counter productive to our nation's needs for energy;

2. If our industry is deemed to have excess profits and taxed accordingly, then all of American industry should be equally taxed to create the same relative disadvantage in the capital markets;

3. Any excess profits legislation should provide for plowback exemptions for investments in energy development or research and there should be definitive provisions for termination. The reinvestments allowed for exemption should cover research, exploration, development, transportation, refining or upgrading, storage, and environmental protection for all energy forms;

4. A tax assessed at the wellhead can be counter productive and discriminate against the small producer and the development of economically marginal wells;

5. Domestic investment incentives represented by the depletion allowance and intangible drilling costs should be retained but modified to require plowback of tax benefits in energy-related investments; and

6. The Foreign Tax Credit should remain available to all American taxpayers. However, a review of payments to foreign governments with respect to amounts allowed as foreign tax credits is in order.

Many of the foregoing thoughts and comments are contained in a statement that our company made to the Committee on Ways and Means of the House of Representatives. I respectfully request that your Committee accept a copy of this statement and that it be made a part of the record of these hearings.

Now, I would like to address myself to your questions.

Question No. 1

What was the overall rate of return, after taxes, which your company realized on stockholders' investment devoted to exploration, development, production, manufacturing, transportation and marketing of petroleum products in the United States?

(*a*) Where applicable, please give the source of this information.

(*b*) Are these figures for U.S. operations different from the figures used in preparing the reports to stockholders and information provided the Federal Trade Commission for purposes of preparing its Rate of Return in Selected Manufacturing Industries? If so, please explain.

(*c*) How does the rate of return on U.S. petroleum investment, as described above, compare with your rate of return on other investments?

APPROXIMATE RATE OF RETURN ON SHAREHOLDERS' EQUITY

[In percent]

Year	Domestic petroleum operations	Other domestic operations	Foreign operations	All operations, domestic and foreign
1964	10.6	7.4	76.1	13.5
1965	10.4	13.2	62.1	13.8
1966	12.7	.9	53.6	14.8
1967	15.7	(11.6)	55.2	14.9
1968	15.4	(.5)	41.7	13.9
1969	5.1	(.4)	55.9	5.6
1970	7.2	.0	41.2	6.9
1971	4.8	(.9)	73.4	5.3
1972	1.6	13.0	142.4	5.4
1973	4.6	18.7	79.7	8.1
Average:				
1964-68	13.1	(1.0)	54.8	14.1
1969-73	4.6	5.6	77.6	6.3
1964-73	7.0	3.8	66.5	8.6

Note: Figures in parenthesis indicate negative numbers.

Comment

Our corporate accounting records served as sources of data used in calculating the rates of return shown in the above table. We report to our shareholders in accordance with S.E.C. requirements with respect to line of business accounting. For this purpose we use earnings before income taxes, interest and extraordinary items. Since accounting records are not usually kept in a way that the data is

readily usable for computing the information you requested, it was necessary to make certain arbitrary assumptions and allocations. For example, shareholders' equity was allocated to each business segment based on its total assets less current liabilities relative to total corporate borrowed and invested capital. Corporate interest expense was similarly allocated. This is not done in any of our financial or tax records since we operate with a pool of capital concept. Most of any other data which required allocation followed our normal accounting procedures. The annual rates of return shown above are based on the average of the beginning and ending stockholders' equity. The data used in these calculations differs from that supplied to the Federal Trade Commission in that our report to the Commission does not reflect the arbitrary allocations to various business segments that we were forced to use in order to respond to your questions.

Sohio's record for the last ten years is composed of two distinct five-year periods. In the first period we were a regional refiner-marketer with domestic production amounting to 13% of our refinery runs. By the early 1960's we had made some fundamental decisions. We would seek to acquire petroleum reserves by acquisition since our finding efforts were not too successful; we would expand our marketing into states surrounding Ohio; we would expand our chemical activities, acquire a fabricated plastics business and enter the vending, motor inn and restaurant business. As the figures above show, we were successful in the petroleum business in the environment that existed in the second half of the 1960's. There were ample supplies of low cost crude oil and the product price wars of the early 1960's were ending. Our non-petroleum investments slipped into a loss position as we broadened our investments and the agricultural chemicals began to run into problems.

By the mid-1960's we recognized that our program of acquiring oil reserves was not progressing as fast as the oncoming crude oil shortage. We attempted mergers with several companies who owned large oil reserves but we were not successful. We acquired oil shale properties and have done developmental research in oil shale which is continuing. We identified the potential for coal at a time when many investors thought coal would have no future due to its environmental problems and the anticipated conversion of electric generation to nuclear fuel, and in 1968 we acquired the Old Ben Coal Company. Old Ben is a profitable operation. It has expanded its production 15% since we acquired it and it has a new mine under development. Old Ben's capital investments have equaled its cash generation since we acquired it.

With the crude oil shortage clearly in sight, we were anxious to acquire a major source of crude. When the North Slope of Alaska reserves were discovered we sought ways to participate. When The British Petroleum Company Limited approached us in late 1968 regarding a possible merger, we were receptive. By mid-1969 we had agreed to acquire a wholly-owned British Petroleum subsidiary which held the valuable North Slope leases and an East Coast marketing and refining business in return for a stock interest in our company. Despite the claims of others, we knew that the marketing and refining assets were not profitable at the time and, despite substantial realignments, they are still unprofitable.

The sharp decline in the petroleum return in 1969 shown in the column "Domestic Petroleum Operations" in the table on page 50 is caused by the inclusion of the operations of BP Oil Corporation although the transaction was not completed until January 1, 1970. The Department of Justice challenged the acquisition and we entered into a consent decree but too late to complete the transaction in 1969 as planned.

The continuing low returns from our domestic petroleum activities from 1969 to date reflect losses in the East Coast marketing and refining activities, competitive price wars in 1971 and 1972, and an investment of more than $400 million to develop the North Slope reserves and the trans-Alaska pipeline, on which we are receiving no return.

All of these factors served to reduce our return on petroleum investment to an inadequate level.

The returns for the years 1970 through 1973 include the effect of significant extraordinary gains or losses from asset sales or from withdrawal from various marketing areas of the East Coast.

Without these extraordinary items our returns for domestic petroleum activities would have been as follows for the period 1970 through 1973:

[In percent]

Year	Return as shown above including extraordinary items	Return without extraordinary items
1970	7.2	6.7
1971	4.8	4.9
1972	1.6	3.0
1973	4.6	3.0

It is not unusual that a corporation will often endure heavy expenses to develop a large investment as we are doing in Alaska. However, we need the prospect of good future profitability to carry this program forward. To set a profit limit based on our recent profit returns would be grossly unfair to our shareholders who have been waiting patiently for the start of North Slope production. It is still more than three years away.

Column headed "Other Domestic Operations" in the table on page 50 reflects the results of our chemicals, plastics and coal operations. In view of the low return on our domestic petroleum activities, we have been fortunate in that our chemical business has become profitable once again and coal continues to be profitable.

The column headed "Foreign Operations" in the table on page 50 includes the results of our interest in Iran, our Canadian operations and the licensing of Sohio inventions to foreign customers. We disposed of the Canadian operation in 1972. Since we have little if any investment in our patents, the rates of return for "foreign operations" shown on page 50 are not very meaningful but we have included them in the interest of completeness. Obviously, during recent years the results of "other domestic operations" and of "foreign operations" have been a big factor in the company wide level of profits.

Question No. 2

What is the rate of profitability to sales? To taxes, other than excise taxes? To labor costs? To total investment, including borrowed capital?

Year	Net income as a percent of sales	Net income as a percent of taxes except excise taxes	Net income as a percent of payroll	Return on borrowed and invested capital [1] (percent)
1964	8.3	109.2	54.6	9.9
1965	8.1	98.5	55.1	9.5
1966	9.3	132.5	69.0	10.9
1967	11.6	132.8	91.7	13.6
1968	11.4	114.4	88.8	13.6
1969	4.3	68.1	38.2	5.4
1970	5.8	276.2	50.6	5.5
1971	4.0	221.9	34.5	5.0
1972	1.4	62.5	10.9	2.6
1973	3.8	106.4	32.3	5.1
Average:				
1964-68	9.9	117.7	72.0	11.6
1969-73	3.8	122.8	32.5	4.6
1964-73	5.7	120.1	45.9	6.4

[1] Net income plus gross interest as percent of average borrowed funds, deferred items and shareholders' equity.

Comment

With respect to net income as percent of sales and return on borrowed and invested capital, the explanatory comments to Question #1 are applicable also.

The ratio of net income to taxes is almost self-explanatory. The tax burden on the petroleum business is substantial.

Labor costs in our company are undoubtedly higher relative to income than those of the typical petroleum company because we have always operated a significant number of our service stations with our own employees.

Question No. 3

What is the total of exploration expense and capital investment in petroleum assets, in dollars, year by year, and as a percentage of the sum of (a) earnings (after taxes and dividends) and (b) exploration items which were expense? Please indicate whether this table is based on income for tax purposes or for financial book purposes.

Year	Exploration expense and capital investment (millions)	Net income (after dividends) plus D. & D. and exploration expenses (millions)	Ratio of expenditures to net internal cash flow (percent)
1964	$44.3	$48.3	92
1965	69.6	50.8	137
1966	49.4	51.3	96
1967	48.5	58.8	83
1968	79.6	60.6	131
1969	169.5	56.7	299
1970	207.3	82.6	251
1971	159.9	69.3	231
1972	101.4	59.9	169
1973	179.3	77.9	230
Average:			
1964–68	58.3	54.0	108
1969–73	163.5	69.3	235
1964–73	110.9	61.6	180

Comment

The data used in this answer is that used for financial book purposes. We are including small amounts of oil shale and uranium expenditures in the above data. Per your request, we have modified the question to include depreciation and depletion as part of the cash generation from operations.

The data shows that Sohio has invested substantially more than its retained gas generation from domestic petroleum activities over the past ten years. Because of the heavy investments related to the North Slope and the low earnings, the cash generation deficiency has increased substantially. Based on our plans for developing the Alaskan operation, the deficiency will probably be even greater in the next few years.

Question No. 4

Provide information as to the dollar amount of petroleum earnings paid out in dividends during the applicable period and show dividends paid as a percent of U.S. petroleum earnings. Assume dividends are payable out of U.S. petroleum earnings in the same ratio as U.S. petroleum earnings are to total earnings.

Year	Dividends paid from petroleum earnings (millions)	Payout ratio (percent)
1964	$12.6	37
1965	13.7	39
1966	18.0	42
1967	24.4	43
1968	28.0	47
1969	27.6	70
1970	32.2	53
1971	29.0	67
1972	9.6	64
1973	18.6	42
Average:		
1964–68	19.3	42
1969–73	23.4	57
1964–73	21.4	50

Comments

Over the years Sohio has attempted to maintain a dividend payout policy of about 45%–50% of earnings. In recent years the ratio has fluctuated above this rate. Despite our large capital requirements and depressed earnings, we have maintained, but not increased, the dividend since 1969 in recognition of the importance of dividends to our shareholders, particularly those who have been long-time holders of our stock.

Question No. 5

Fourth Quarter—1973 Earnings and Retail Prices. Please provide an explanation for any increase in U.S. fourth quarter 1973 earnings over earlier fourth quarter earnings. In this connection, it would be helpful if the explanation were to include an estimate of the proportion of increase attributable to (a) normal growth in sales, (b) inflation, (c) absence of soft markets due to shortages, (d) increase in ceiling price of domestic crude, and (e) any other factor increasing profit margin. To what extent are higher gasoline prices at the pump in the fourth quarter attributable to increases in cost reflected in the dealer tank-wagon prices (explain the source of increase in costs) ? To increases in profit reflected in dealer tankwagon prices? To increases in the retail margin (differentiate between company controlled retailers and independent retailers) ?

Comment

We believe that the primary intent of this question is to identify the factors that caused domestic petroleum earnings to change. For this purpose we are using earnings before taxes and allocation of interest. Our 1973 fourth quarter earnings from domestic petroleum operations declined 80% from the like 1972 quarter.

We experienced a 20% decline in petroleum product sales volumes. About one-third of the decline can be attributed to the sale of our southeastern marketing properties to American Petrofina, Incorporated, at midyear. Our crude runs at our three remaining refineries were 8% lower than in 1972 due to crude shortages and our sales were on allocation.

Because of the numerous changes in our East Coast activities and the rapidly changing crude and product supply situation, it is difficult for us to completely trace the exact impact of each factor influencing our results.

Our records show that retail gasoline prices in the fourth quarter of 1972 were depressed enough to reduce our expected revenue during that period by about $5.5 million. This amount is the approximate equivalent of the price recovery that was experienced during the first five months of 1973. All of our subsequent price increases have only reflected cost pass through adjustments.

The combination of higher prices and lower volumes resulted in a 12% net revenue increase; however, higher crude and product costs increased by more than twice the amount of the revenue gain. Partially offsetting the loss between revenue and product costs were lower operating, depreciation and administrative costs resulting from the East Coast realignments and asset sales.

The lag in our ability to pass through crude oil and product cost increases had an adverse effect on our fourth quarter results. We figure that if we had been able to pass through higher crude and product costs when they became effective, we would have had $33 million more revenues in the fourth quarter.

Crude oil ceiling price increases of $.35 on August 20 and $1.00 on December 16 increased the revenues from oil production by about $1.3 million in the fourth quarter, but increased our costs of purchased crude oil by more than this because our domestic production is only 7% of our refinery needs.

Our approximately 80% decline in domestic petroleum earnings before taxes and interest allocation becomes an 87% decline in real terms if our 1973 earnings are adjusted for the 8.4% increase in the Consumer Price Index between the fourth quarter of 1972 and 1973.

The last part of the above question addresses the question of the impact of dealer tankwagon price changes on the pump price of gasoline. In Ohio the tankwagon price increased 7.97¢ between December 1972 and December 1973. Of this increase, 7.5¢ reflects cost of crude pass through under the Cost of Living Council regulations and .47¢ reflects recovery from depressed prices in December 1972. This latter amount could be described as the increased profit margin in the tankwagon price versus a year ago. Until 1973, we had not raised our posted tankwagon price since late 1970. As you know, we are not permitted to increase prices for other than crude and product cost increases.

When the price freeze was lifted in September, the regulations forced a disparity between company controlled station prices and dealer prices if full cost recovery was to be achieved. We raised dealer tankwagon prices in October and November a total of .4¢ more than at our company stations. This inequity was removed in December when the regulations were modified. However, many independent dealers have set prices that they have deemed necessary. Accordingly, there is a wide variety of Sohio branded gasoline prices ranging upward from our salary station price. Some of these higher pump prices are in accordance with the regulations; some may not be.

Because of the numerous realignments and sales of marketing territories in our East Coast operations, we are not able to provide a meaningful discussion of price changes in this operation. The data shows that the tankwagon price averaged 26.5¢ in December 1973, up 7.8¢ from 18.7¢ in 1972. All of this increase is attributable to crude and product cost pass through.

Question No. 6

Provide an estimate of your capital requirements in the United States for the period 1974–85, (a) assuming your rate of return on U.S. operations was the same as your average rate of return for the period 1964–1973; and (b) assuming your rate of return was one and one-half times your average rate of retun for 1964–73. Assume for this purpose that you will be able to borrow directly up to 25 percent of your financial needs and are able to use off-the-balance-sheet financing for 13 percent of your needs. What is your view as to the validity of such financing assumptions as applicable to the circumstances of your company?

CAPITAL AVAILABILITY AT 10-YEAR AVERAGE RETURN—7.3 PERCENT ON SHAREHOLDERS' EQUITY VERSUS 1.5x AVERAGE RETURN—11.0 PERCENT

[In millions]

Year	Case A assumes 1964–73 average return—Total funds from new B. & I. capital plus D. & D.	Case B assumes return 1.5x 1964–73 average—Total funds from new B. & I. capital plus D. & D.	Case B variance versus case A—Total funds
1974	$118	$152	$34
1975	123	162	39
1976	130	174	44
1977	136	186	50
1978	143	199	56
1979	150	212	62
1980	157	227	70
1981	164	242	78
1982	171	259	88
1983	180	276	96
1984	188	294	106
1985	196	314	118
Total	1,856	2,697	841

Assumptions: In addition to the assumption provided in your question, we made the following additional assumptions:

1. Dividend payout would be 45%.
2. Depreciation and depletion accumulate at rate of 5% of new borrowed and invested capital.
3. Rates of return were based on beginning of year shareholders' equity for this purpose.

Comments

This hypothetical exercise clearly demonstrates the importance of a higher return. Based on our situation, a return on shareholders' equity 50 percent higher than our average for the past ten years would generate $841 million more during the 1974–1985 period. It is interesting to note that a 50 percent higher return would bring our return to 11%, which is less than the average for our industry and manufacturing companies as a whole for the past ten years.

The above cases show that at our ten-year average return, we would generate $1,856 million in 12 years and we would generate $2,697 million at a 50 percent

higher return. To accomplish the development of our Alaskan reserves, to build our share of the trans-Alaska pipeline, and to modernize and expand our refineries will require expenditures between $2,000 million and $2,500 million in the next five years. We may need to arrange for tanker transportation, which would cost between $500 million and $750 million if we were to acquire the tankers. We are, therefore, planning to spend more in five years than the 150 percent case generates in twelve years. Needless to say, we will need to violate the borrowing constraints set out in your question if we are to accomplish our task, even if we are able to achieve the higher return. We can do this if lenders and investors are satisfied that profit limiting legislation will not make their investments unduly risky.

Question No. 7

What percent of your total United States sales of petroleum products during the applicable period were derived from foreign crude?

SOURCES OF U.S. SALES OF PETROLEUM PRODUCTS

[In percent]

	Derived from U.S. crude oil	Derived from Canadian crude oil	Derived from other foreign crude oil
Year:			
1964	92	8	0
1965	93	7	0
1966	88	12	0
1967	86	14	0
1968	83	17	0
1969	67	12	21
1970	76	9	15
1971	75	10	15
1972	71	13	16
1972	71	13	16
1973	54	16	30
Average:			
1964-68	88	12	0
1969-73	68	12	20
1964-73	74	12	14

Comment

Sohio has depended primarily on domestic sources of crude oil during most of its history. As crude oil sources near our refineries began to decline, we utilized increasing amounts of Canadian crude in our Ohio refineries. Our Marcus Hook, Pennsylvania refinery uses offshore foreign crude.

After mid-1972 we lost 100,000 barrels per day of our domestic crude oil supply which could not be entirely replaced by foreign sources so that our refineries are operating below capacity. Currently more than half of our product sales are derived from Canadian and offshore foreign sources of crude oil and products.

Question No. 8

Describe the typical situations in which you have contractual relationships with a foreign subsidiary involving a pricing problem. To what extent do you believe it possible for a United States company complying with the present tax regulations governing such relationships to shift United States profits to the foreign subsidiary? Do you recommend any alternative approach for regulation of such transactions to prevent the shifting of United States profits to foreign subsidiaries?

Comment

I believe that the present tax regulations as they apply to the oil industry and as they are interpreted provide no opportunity to shift United States profits to a foreign subsidiary. Our experience has been that the interpretation and enforcement of the regulations has been very tough. In audits commencing in the early 1960's we believe all companies in the industry were found to have priced foreign crude in a manner which was later deemed to be a violation of the regulations. We have been assessed additional taxes in this connection.

Since the present regulations prevent profit shifting, I have no recommendation to make regarding alternative means to prevent shifting of profits from the United States.

Question No. 9

Provide information as to investments and expenditures outside the United States during the applicable period. Relate this information to the sum of (a) earnings outside the United States and (b) net equity and debt capital raised outside the United States, during the applicable period.

FOREIGN INVESTMENTS

	Foreign investments (millions)	Foreign investments as percent of foreign earnings	Foreign investments as percent of equity or debt raised outside of United States
Year:			
1964	$2.4	30.4	
1965	20.4	178.4	
1966	2.0	14.3	
1967	2.5	17.8	
1968	2.3	21.5	
1969	2.4	18.6	
1970	2.0	23.9	
1971	3.0	23.8	
1972	1.4	5.0	
1973		Inf.	
Average:			
1964-68	6.0	51.8	
1969-73	1.8	10.3	
1964-73	3.9	27.0	

Comment

The principal foreign investment made by Sohio was our 1965 acquisition of a majority interest in Canadian Delhi, Ltd. Our interest in this company was sold to St. Joe Minerals in 1972.

The primary sources of our foreign earnings are the interest in the Iranian Consortium, in which our investment is small, and the sale of licenses in connection with Sohio inventions in which there is no book investment. No capital has been raised outside of the United States.

Question #10

Demonstrate what your rate of return on shareholders' equity would have been in each year if there had been no statutory depletion allowance.

RETURN ON SHAREHOLDERS' EQUITY ADJUSTED TO ELIMINATE STATUTORY DEPLETION

[In percent]

	Return from question No. 1	Adjusted return
Year:		
1964	10.6	9.5
1965	10.4	9.3
1966	12.7	11.6
1967	15.7	14.6
1968	15.4	14.3
1969	5.1	4.6
1970	7.2	6.8
1971	4.8	4.4
1972	1.6	1.2
1973	4.6	4.2
Average:		
1964-68	13.1	12.0
1969-73	4.6	4.2
1964-73	7.0	6.4

Comment

Although Sohio has not been a large oil and gas producer, the elimination of the statutory depletion allowance would have reduced our return by .6 percentage point or almost 10 percent in the average year.

As the response to Question No. 6 demonstrates, the leverage of the return on shareholders' equity is very important. We need a higher return, not a lower one.

This completes my response to your questionnaire. I will be happy to answer your questions.

PREPARED STATEMENT BY CHARLES E. SPAHR, CHAIRMAN OF THE BOARD AND CHIEF EXECUTIVE OFFICER, THE STANDARD OIL COMPANY

My name is Charles E. Spahr and I am Chairman of the Board and Chief Executive Officer of The Standard Oil Company of Ohio. I am appearing here today to provide the Committee my company's position regarding profit limiting legislation.

Before proceeding, it may be helpful for you to know that Sohio is a crude deficient refining and marketing company serving Ohio and surrounding states and the Middle Atlantic states. Our domestic crude production amounts to about 7% of our 385,000 barrels per day refining capacity. We have a small interest in the Iranian Consortium with liftings equal to about 5% of our refinery capacity. In terms of assets we rank about 17th in the industry. In 1970 we acquired East Coast marketing facilities, two refineries and valuable oil and gas leases on the North Slope of Alaska through a transaction with The British Petroleum Company Limited. Since then, our main efforts have been directed to the development of our North Slope reserves, to obtaining a trans-Alaska pipeline permit and to the realignment of the East Coast properties which remain unprofitable. We also have investments in petrochemicals, coal and fabricated plastics. We have developmental interests in oil shale, uranium and tar sands.

The results of your considerations will have a very significant impact not only upon Sohio and the petroleum industry but the entire private enterprise system of the United States as well. I hope to convince you of the importance of preserving investment incentive for our industry and our system. Alvin Toffler, author of *Future Shock*, in a recent article has said, "Now we are all so busy trying to cope with the immediate effects of the fuel shortage that we are running out of another commodity that may, in the end, prove quite as necessary to our survival. Seldom have we approached a crisis with so short a supply of perspective."[1] I hope my comments today will help provide some perspective in this situation.

Before discussing specifically the subject of petroleum industry taxation, I think it would be well for us to look at areas where we agree or where disagreement is at a minimum. I believe we can all agree that there is an energy problem. We need to conserve energy supplies both in the immediate time frame and over the long term. We need to develop new supplies from known, existing fuel sources. We need to develop new energy sources through research and development.

I believe we all share in the desire to solve this energy problem with the least possible impact on our economy. That means we need to supply essential requirements through temporary allocation programs; we need to make supplies available at prices consistent with the need to expand supplies from existing resources; we need to develop alternate fuel or energy sources; and we need to induce consumers to alter their energy demand patterns. It has been suggested that in terms of today's prices, $7 per barrel of domestic crude oil is probably the price that would meet these needs. I do not know whether this is right or not. However, I do believe that continuation of a multi-tiered crude oil price structure will serve to magnify the distortions that are becoming apparent in the marketplace.

I realize that any discussion that is concerned with price levels that will encourage new supplies while inducing conservation immediately provides grounds for disagreement. However, I believe it is very important that we give the marketplace as much opportunity to function in this regard as is possible since it is only through the marketplace that lasting solutions to any commodity shortage are found.

I am sure we can all agree that windfall or excess profits are to be deplored if they serve no useful purpose. Here again there is considrable room for disagreement when one tries to define an excess profit and to determine whether or not it serves a useful purpose.

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[1] *New Times*, "Current Myopia", January 11, 1974, p. 44.

For instance, many people believe that profits in real estate fall into the category of windfall profits. Inflation in housing prices has created substantial windfall profits; however, we all know that an equal or higher price is necessary to acquire new housing. As a result, the tax laws allow a taxpayer to defer any profit from the sale of his principal residence as long as he replaces it. This well accepted principle recognizes that the cost of replacement has gone up and that it would be inequitable to tax this windfall profit away since the individual would be unable even to maintain his housing standard under those circumstances.

This simple example demonstrates that there are windfall profits that serve a useful purpose in our system. In the housing markets they enable individuals to be mobile and upgrade their housing. In the commodity markets they bring forth additional investment and production. In agricultural commodities the time lag is a growing season, usually less than a year. In minerals and petroleum the lag between investment and production is longer but the same profit incentive must be present.

I am philosophically opposed to profit limiting regulations. I recognize there are some who don't share my views in this regard and if those who disagree with me prevail, I believe that profit limiting legislation should apply to all businesses, not just the energy companies. Our economic system is one of competition not only by suppliers of a commodity or a service but also one of competition by risk takers for the funds representing the savings of individuals and institutions. To single out a single industry for special tax legislation is basically unfair since companies in many industries are reporting unprecedented profits and the competition for funds is keen.

A further aspect to profit limits is the tendency to make strong companies stronger and to keep weak companies down. This occurs because a profit limit or ceiling enables the most efficient or lowest cost members of an industry to strengthen their competitive position through price reductions or extra spending on research, product development or sales promotion. The weaker members of an industry are kept in their weak position because a profit ceiling by definition means that an industry's average return on investment must decline. Even though a company theoretically has room to improve its return that is under an industry return ceiling, it is very unlikely that such will be the case.

I think you all recognize that investors base their decisions on prospects that they will be compensated for the risks they take. Lenders need assurance that the borrower will repay the loan with the agreed-upon interest, and the owner must be convinced that something will be left over to compensate him for his risk. If uncertainty is large, a lender will not make his savings available to us since he has numerous opportunities to invest elsewhere.

A recent action by Pennzoil Company is a case in point. I understand from the public press that Pennzoil has deferred a 200,000 barrel per day grass roots refinery project. It is reported that because of uncertainty over long-term crude supplies and "uncertainties over future U.S. governmental policy as to taxes and the basic structure of the domestic petroleum industry", the feasibility of the project was adversely affected.

Similar uncertainties exist for other members of our industry who are in the process of making investment decisions regarding refineries, deepwater ports, offshore leasing, pipelines and any other huge individual investments. Since these individually large investment decisions are always made in an uncertain world, additional uncertainties generated by governmental actions make them all the more difficult.

I urge you not to make our task more difficult than it already is with profit limiting legislation. The consumer will not be served in the short run and it will be disastrous to him in the long run if such actions are taken.

As further evidence of what uncertainties over governmental tax policies and the possibilities of punitive legislation can do to investor confidence, I cite the stock market price action as measured by Standard & Poor's for the oil industry between the first of the year and January 23, which coincides with the first week of the new Congressional session. While the Standard & Poor's 500 Stock Index declined .6%, integrated domestic companies declined 12.8%, the internationals 10.3%, and producers 13.9%. On January 4, 1974 Sohio common stock reached an all-time high of $86. When it became apparent that some members of Congress were coming back in a punitive mood and intent upon passing Senate bill 2589 with its horrendous windfall profits section, our stock dropped 30% to $60.50 on January 21, 1974. Those 25 points reduced investors' evaluation of Sohio by more than $900 million.

The Federal Energy Office is reported to have estimated that domestic energy investments will have to be $700 billion in the next ten years. If my industry is to succeed in raising these funds, it must not be put at a disadvantage in the competition for capital.

Our industry has a large investment task ahead of it, and Sohio is no exception. We estimate that we will have to spend between $2 billion and $2½ billion beginning this year through completion of the trans-Alaska pipeline in 1977. This is an average of between $500–$600 million dollars each year. Last year my company earned $74 million before extraordinary gains of $15 million. With depreciation, depletion and other non-cash charges of $80 million, we had cash sources from operations of $154 million, only 20–23% of our anticipated capital needs for each of the next several years after providing for dividends of $37 million.

Sohio must raise by far the largest amount of its needed capital in the financial markets. We estimate that our debt will reach 50% or more of borrowed and invested capital. We can do this only if investors are confident that we will be able to earn a reasonable return on that capital and that punitive or restrictive actions will not be taken by our government.

The industry also will be turning increasingly to external sources. Data gathered by the Chase Manhattan Bank shows the portion of total capital provided by debt had grown to 23% in 1972 from 13% ten years ago. The bank estimates that the industry will need to generate total funds of $1,350 billion during the 1970–1985 period. The bank has also estimated that earnings must increase 18% in each year 1970–1985, more than double the rate of the last ten years, if the $1,350 billion is to be raised and the debt ratio kept at prudent levels.

Any legislation that puts a ceiling on energy company profits will make a difficult financial job even more difficult, perhaps to the point that Sohio could not raise the money necessary to carry out our part of bringing the very much needed Alaskan oil to market.

Our economy no longer has excess capacity in any of its basic materials industries and it has shortages of not only energy but many other basic commodities. I think it may add perspective to the complex issue of excess profits if we look at the whole spectrum of corporate profitability.

A commonly used indicator of profitability is the return on shareholders' equity. This indicator avoids problems associated with the differences of capital intensity and capital structure among industries typical of other indicators. The following table shows the return on net worth for Sohio and the petroleum industry compared with manufacturing companies in general.

NET INCOME AS A PERCENT OF NET WORTH [1]

Year	Total manufacturing (a)	Petroleum production and refining (b)	Sohio (c)
1963	11.6	11.5	9.9
1964	12.6	11.5	12.6
1965	13.9	11.9	13.4
1966	14.2	12.6	14.1
1967	12.6	12.8	14.5
1968	13.3	13.1	13.0
1969	12.4	11.9	5.3
1970	10.1	11.0	6.8
1971	10.8	11.2	5.2
1972	12.1	10.8	5.3
Average 10 yr	12.2	11.8	8.5
1973	NA	NA	7.9

[1] Source: Cols. (a) and (b), American Petroleum Institute letter June 25, 1973, to Hon. Philip A. Hart, chairman, Subcommittee on Antitrust and Monopoly. API's source was First National City Bank. Col. (c) calculated by Sohio.

I believe the following conclusions can be drawn from the above table:

1. In the ten years through 1972 the oil industry's return on equity was below average at 11.8% versus 12.2% for all manufacturing companies.

2. Sohio, with a 10-year average return of 8.5% through 1972 and 7.9% in 1973, can in no way be conceived as being in an excess profits position despite a 55%

gain in net income in 1973. Our income after taxes but before extraordinary gains rose just 24% last year. The return on equity based on these earnings was only 6.5%.

Our annual report will show that our petroleum earnings before income taxes, interest and extraordinary items were lower in 1973 than any year in the last five except for 1972. We plan to report this information in a soon-to-be-released paid advertisement, a copy of which I have with me and which I am submitting for the record. As you can see from the data below, Sohio's earnings have benefited from the turnaround of our chemical and plastics business from losses to profits in the last two years as the result of strong demand for acrylonitrile, a new catalyst and improvements in agricultural chemicals. Additionally, we have benefited from higher royalty income resulting from the licensing of Sohio inventions.

EARNINGS BEFORE INTEREST EXPENSE, INCOME TAXES, AND EXTRAORDINARY INCOME

[Millions]

Year	Petroleum	Chemicals and plastics	Royalty	Coal
1969	$83.3	$−1.3	$16.1	$7.8
1970	71.2	−1.9	8.7	10.9
1971	66.7	−4.4	11.9	12.2
1972	55.4	11.6	21.3	11.5
1973	58.6	23.1	24.7	12.4

The unsatisfactory trend of petroleum earnings reflects losses totaling more than $150 million in our East Coast marketing and refining activities; petroleum product price wars during 1970, 1971 and 1972; and crude oil shortages and rapidly rising crude costs which we could not recover under the Cost of Living regulations in 1973.

During these five years my company made capital investments of more than $850 million in petroleum, coal, oil shale and uranium activities. We have $400 million invested towards the development and transportation of our Alaska oil reserves. As you know, legal delays have made productivity from the Alaskan investments three or four years away.

All indications from preliminary earnings reports are that corporate earnings in general were up about 30% last year and petroleum earnings were up something over 50%. On this basis, oil company return on investment would be marginally higher than industry in general.

The preliminary reports show very substantial year-to-year gains by many basic industries such as steel, metals and mining, paper, and chemicals. Examples are shown below:

Percent change, 1973 versus 1972

	Percent
Steel:	
Allegheny Ludlum	+ 95
Armco Steel	+ 48
Bethlehem	+ 56
Inland Steel	+ 28
Jones & Laughlin	+ 28
Republic	+101
U.S. Steel	+107
Metals and mining:	
Alcan Aluminum	+ 20
Alcoa	+ 1
American Smelting & Refining	+143
Kaiser Aluminum	+250
Kennecott Copper	+ 83
Reynolds Metals	+987
Texas Gulf Sulphur	+141
Paper:	
Georgia Pacific	+ 73
Mead Corp	+146
St. Regis	+ 48
Scott Paper	+ 47

Chemicals:

Allied Chemical	+ 45
du Pont	+ 42
Monsanto	+ 98
Olin	+ 60
Union Carbide	+ 40

Having discussed the need for adequate profits, the large financial requirements of my company and the industry, the adverse effects of excess profits taxes, and the fact that petroleum industry profits are not more than average for American industry, I would now like to talk about investment incentives that encourage the development of domestic energy sources. I believe that the development of existing energy forms and the research and development of new energy forms need encouragement, not the prospect of a penalty if risk-taking investment is successful.

There has been considerable attention focused on the oil depletion allowance by critics of the industry. It was reduced in the Tax Reform Act of 1969 from 27½% to 22% and there are proposals ranging from the elimination of the allowance on both foreign and domestic production to an increased depletion allowance. In between are proposals to eliminate depletion on foreign production, to reduce the percentage rate, and to provide plowback requirements.

Since we are adopting a national goal to become self-sufficient in energy, I urge you to retain the depletion allowance on domestic production as a valid and valuable investment incentive. A requirement that the net tax benefits be reinvested in a broad spectrum of energy research and development could be beneficial by assuring that this investment incentive is being directed towards energy self-sufficiency. Investments to be covered would include not only the production of energy but its upgrading to useful form, transportation and storage, and environmental protection.

Similarly, the deduction of intangible drilling costs for domestic development is a potent incentive that should be retained. A requirement that its net tax saving be reinvested as above would serve to assure that this incentive was being used in the intended manner.

Both the depletion allowance and the deduction of intangible drilling costs are particularly valuable to the independent driller and producer. These incentives give him a quick cash flow benefit so he can drill additional wells, and they give him access to venture capital that might otherwise not be available.

By contrast, I feel that a proposal to fix a windfall tax on crude oil at the wellhead has the potential for being counter productive, although not as damaging as some proposed excess profits taxes. The major problem I see with a per-barrel tax is that it doesn't discriminate between a low cost primary produced barrel or a high cost marginal barrel that might come from workovers or secondary recovery investments. Likewise, it strikes at the entrepreneur of this industry, the independent operator who has found most of our best oil fields in this country and whose efforts ought to be encouraged rather than discouraged at this time.

I know that much interest has been expressed regarding foreign tax credits. My company at this time is not a large factor in the production of oil. However, about 22,000 barrels per day out of its total production of about 50,000 barrels per day represent liftings from our interest in the Iranian Consortium. In addition, we license chemical processes in foreign markets. As a result, foreign tax credits are a matter of some importance to us. The principles of foreign tax credits should be preserved to avoid double taxation on income.

As in many tax or government regulations, legitimate practices in application of the law have developed with the blessing of our government, and as a consequence the distinction between foreign income taxes and other payments to foreign governments has become intermeshed in the case of the oil industry. My company does not object to a review of the question of payments to foreign governments with respect to their use as foreign tax credits. However, I urge that any such review not result in legislation that inhibits our ability to compete in foreign markets for either capital or the search for new resources. This matter is far more encompassing than the petroleum industry alone.

In summary, I believe strongly that:

1. An excess profits tax or profit limiting legislation will prove counter productive to our nation's needs for energy;

2. If our industry is deemed to have excess profits and taxed accordingly, then all of American industry should be equally taxed to create the same relative disadvantage in the capital markets;

3. Any excess profits legislation should provide for plowback exemptions for investments in any energy related operation and there should be a definitive provision for termination. The reinvestments allowed for exemption should cover research, exploration, development, transportation, refining or upgrading, storage and environmental protection for all energy forms.

4. A tax assessed at the wellhead can be counterproductive and discriminate against the small producer and the development of economically marginal wells.

5. Domestic investment incentives represented by the depletion allowance and intangible drilling costs should be retained but modified to require plowback of tax benefits in energy related investments; and

6. The Foreign Tax Credit should remain available to all American taxpayers. We have no objection to a review of the question of payments to foreign governments with respect to their use as foreign tax credits.

This completes my prepared remarks. I will be happy to answer your questions.

The CHAIRMAN. Next we will call Mr. John W. Partridge, chairman of the board of the Columbia Gas System. We are pleased to have you, Mr. Partridge.

STATEMENT OF JOHN W. PARTRIDGE, CHAIRMAN OF THE BOARD, COLUMBIA GAS SYSTEM, ACCOMPANIED BY JOHN P. CORNELL, VICE PRESIDENT AND CHIEF FINANCIAL OFFICER

Mr. PARTRIDGE. I am John Partridge, chairman of the board of Columbia Gas System. My associate, Mr. John Cornell, who is our chief financial officer, is with us.

We have submitted a statement for the record, and I would like to just briefly summarize that. Columbia Gas serves directly and indirectly 4 million natural gas customers in seven States and the District of Columbia. I would like to emphasize that I am talking about natural gas and not gasoline. We have nothing to do with gasoline. We have enough problems without that.

This presentation is directed to the supply and financing problems confronting Columbia, which are believed to be typical of the natural gas industry.

The current critical energy situation presents a deepening long-term problem that is certain to escalate with critical adverse impact on our economy for at least a decade.

If you will look at the chart over there, the top dashed line represents our limited restriction sales conditions. This means that in 1970 we started putting restrictions on additional sales, and about 2 years ago these restrictions were made complete, and that since that time we have not taken on any new customers whatsoever, even including our residential.

Now, the yellow is our estimate of supply from present sources, and you will see how that sharply drops off until in 1983 there is a very severe deficiency, and this deficiency, unless something is done about it, translates primarily into vast unemployment in our operating area, and again I think this is more or less typical of the entire natural gas industry.

However, we are not giving up, and we have extensive new gas supply projects underway which when and if implemented would greatly improve the supply situation.

Now, these supply projects that I just mentioned are represented by the blue, and you can see that that drastically will change the situation when and if these projects can be implemented, but we are going to

have some problems until about 1976 but from that period on the situation should improve to where we will certainly be able to take care of our present customers and we may be able to start taking care of some additional demands for this clean fuel.

The green line on top represents our normal historical growth pattern, and you can see that even with the gas supply projects we are working on, we still will not be able to take care of normal growth.

However, there are going to be some problems in connection with getting these projects underway, and one of the major problems is that they are estimated to cost over the next 10 years $6.4 billion. We estimate that we can generate about $3 billion of that internally, but that is going to require $3.4 billion to be financed externally, and this represents about a 300-percent increase in our normal financing efforts, and this is quite a massive problem.

There are two ways that we can obtain this outside financing: One is by the issuance of long-term debt, and the other is by the sale of equity. We have two very severe indenture limitations on the sale of long-term debt. First, our debt cannot exceed 60 percent of total capitalization. Presently it is 58.4 percent, so we don't have very much room there.

Second, earnings must be 2½ times total interest charges, including that of new debt, before we can issue any additional debt. Therefore, it appears that very large amounts of equity securities must be sold. This will be most difficult because utility stocks are not favored by the investors, and that is due to low earnings resulting from present regulatory practices; we are a regulated company. Columbia was quoted at 27¼ on February 8, which is under the book value of 27½. I think everybody will agree that issues of common stock under book value should be undertaken only in a dire emergency, and in time such issues are impractical if not impossible.

We come to our recommendations to the committee. In order to provide the necessary financial improvement needed to attempt to work out a program such as I have mentioned for exploration and development of energy supplies, consideration should be given to providing increased tax incentives until adequate energy supplies are available. This should apply to foreign as well as domestic.

The tax laws should be amended to provide for economic depreciation.

Also, Congress should enact legislation, including amendments to the Natural Gas Act, to provide for use of a trended original cost rate base for rate purposes and economic depreciation for book and rate purposes.

In addition to financial relief, if natural gas is to make itself more readily available and adequate, two other major legislative actions are required: Deregulation of the wellhead price of new natural gas, and the establishment and funding of a massive Federal energy research development and demonstration effort.

What is this going to do to the consumer? We prepared a chart in which we have tried to relate the effects of these measures that we think are necessary to the average consumer in our service area. The blue at the bottom relates to the impact of the economic depreciation and using a trended organizational cost rate base. This amounts to about 13 cents to the average residential consumer in our area.

The yellow or orange we estimate will be the result of the massive R. & D. program based on an energy tax which would result in a cost to our consumers of about 5 cents per million Btu's.

The red line is the total of those two plus the effect on our average consumer of deregulating new natural gas at the wellhead by placing a ceiling on such prices for new natural gas based upon the price of crude oil at the wellhead, and this chart is based upon the assumption that crude oil will be priced at $6 a barrel. So the indication is the red line, which includes the effect of the financial relief we need, the R. & D. and the deregulation of new gas, shows that that red line for a long time to come will not meet or cross the price of No. 2 oil that is being sold to consumers in our operating area.

To summarize the effect to the consumer I have one final chart——

The CHAIRMAN. Might I ask you a question based on that chart there?

Mr. PARTRIDGE. Yes, sir.

The CHAIRMAN. What do you estimate you would have to pay for gas in order to equate it with the price of fuel oil here in Washington. In other words, what would you have to pay for the gas to make the economics interchangeable so that you could just as well use crude oil for generating and for household heating as to use gas, if you were trying to equate them on a Btu basis.

Mr. PARTRIDGE. Right.

Well——

The CHAIRMAN. I think your chart indicates that, doesn't it?

Mr. PARTRIDGE. Yes; that is what we have tried to do.

The CHAIRMAN. I can't read that left-hand column though, because I am some distance from it. What would be the price when the price of gas would come into line with the price of oil? What would that price be?

Mr. PARTRIDGE. That would be about $2 per million Btu's. That would be with crude oil at the wellhead based upon $6 a barrel.

The CHAIRMAN. Well, I had a mayor from one of the cities of Louisiana trying to obtain gas in Louisiana who had figured it out on his local generating and distribution plant and oddly enough that is exactly the figure he told me. He said if he has to change from gas over to fuel oil, and he was hoping to avoid that, that he would be as well off paying $2 for gas as he would buying the fuel oil—if he could get it.

Mr. PARTRIDGE. If you can get it, and that is a big if, yes, sir. Yes; I think that is fairly close to it. I think $2 for our areas. I don't have the figures for Washington but in general that is the range.

The CHAIRMAN. His price of fuel oil I guess would be about the same as yours, so he could afford to pay $2 compared to the cost of changing over to using fuel oil.

Mr. PARTRIDGE. That is correct.

The CHAIRMAN. And the difficulty in his area as well as in yours is there are a lot of people who would be willing to provide him some gas if he could pay 70 cents to $1 for the gas—in fact, they aren't hoping to get $2. But he can't get it at that price because the interstate pipelines bring the Federal Power Commission into play which would then regulate them back to 40 cents with the result they just won't sell at that price. They would be willing to sell directly, and that is why Louisiana is now moving into a major program of con-

structing intrastate pipelines. They are just about through asking somebody to pass some law to give them relief to cure their own problem. But if that happens it is going to be less available to you up here, isn't that correct?

Mr. PARTRIDGE. Yes, sir; that is correct; less available to the country.

The CHAIRMAN. I would take it that your view is that you ought to be permitted to bid with anybody else, with any city in Louisiana or anywhere else, to pay the going price to get the gas you need to serve your customers.

Mr. PARTRIDGE. Yes, sir; the key to it is, whether it is Louisiana or the District of Columbia, we have got to get the right incentives. The gas is there, we have got to get the right incentives to explore and develop it and get it to market. It is just that simple. And rather than disincentives we need more incentives.

The CHAIRMAN. But the people who are using fuel oil, I take it, could actually obtain heat cheaper by gas if you are permitted to buy the gas and pay the going price for it.

Mr. PARTRIDGE. That is correct.

The CHAIRMAN. I want you to know it wasn't my vote that created that fiasco. I twice changed that so you could get the gas if you wanted it and you would have a lot more people producing it who are not producing it now, had I prevailed.

Mr. PARTRIDGE. That is right. I just wish there were more who look at it the way you do.

The CHAIRMAN. Our people in Louisiana are beginning to think they made a mistake by selling gas to people who had so much complaint they were making a profit; they would be satisfied if they built a fence around Louisiana and kept it down there, they feel there would be enough supplies down there to use it. Now, as you know, we have a shortage of gasoline in Louisiana.

Mr. PARTRIDGE. That is correct.

The CHAIRMAN. And that is because of the policy we have that people who have gas are not going to sell it for 25 cents or 40 cents if they are satisfied it is worth a great deal more than that by keeping it just where it is, in due course they will be able to make a better deal.

Thank you very much, Mr. Partridge.

Mr. PARTRIDGE. Thank you.

The CHAIRMAN. Did you explain that last chart you have there?

Mr. PARTRIDGE. Well, it is just a summary of the previous chart. It illustrates these three major areas I am talking about where we need help, financing Federal research and development, deregulation at the wellhead would add about 24 cents per million in 1974, which when added to our average cost to the average residential consumer at $1.16, means it would cost them $1.40 per million in 1974, and that gradually increases to $1.94 in 1983.

The CHAIRMAN. Thank you very much, sir.

Mr. PARTRIDGE. Thank you.

[The prepared statement with attachments of Mr. Partridge follows:]

PREPARED STATEMENT OF JOHN W. PARTRIDGE

The current critical energy situation should at long last convince Congress and the American public that the United States is in a deepening energy crisis with serious effects on our nation's welfare. However, we are concerned that

even with the necessary measures to provide partial and short-term help, there remains a tremendous undertaking to make the United States self-sufficient in adequate energy supplies. Until this is achieved, we will be increasingly dependent upon Eastern Hemisphere supplies with increasingly perilous uncertainties. We face, in fact, a deepening long-term problem that is certain to escalate with critical impact on our economy for *at least* a decade.

Because of this serious situation, it is urged that no Congressional action be taken that might in any way lessen incentives for finding and developing energy. Rather than taking any risk of discouraging such efforts, practical means must be found to encourage them.

This statement is directed to the supply and financial problems confronting the Columbia Gas System which problems are believed to be in general, typical of those of the natural gas industry.

It is not generally understood that in terms of capital investment, the natural gas industry is the sixth largest in the United States. It has an investment of $43.2 billion, operates 951.000 miles of pipeline, serves 43 million customers, 32% of the nation's total energy requirements, Natural gas and its synthetic mixtures is the cleanest and most efficient of all fuels.

The Columbia Gas System, the largest integrated natural gas company, is a supplier of natural gas in a seven state area extending from Western Ohio and Kentucky to the Atlantic Seaboard, including the Richmond-Washington-Baltimore megapolis. It serves directly or indirectly four million residental and commercial customers and approximately 10,000 industrial customers. In 1973, deliveries of natural gas totaled 1.35 trillion cubic feet of gas.

The System had a gross plant investment at original cost of $2.984 billion and a net investment after depreciation of $2.026 billion.

The System's capital accounts aggregate $2.086 billion made up of long term debt of $1.195 billion and common stock equity of $891 million.

GAS REQUIREMENTS AND SUPPLY OF THE SYSTEM

Because of the growing shortage of new gas supply, the Columbia Gas System in the spring of 1970 started a sales limitation policy which by the spring of 1972, was expanded to complete restrictions on all new sales, including residential.

On Chart 1 the top large dash line shows current market requirements continuing under the present sales restriction policy.

The bottom small dash line shows all the gas supply presently available.

It is obvious from this chart that if vast new supplies of gas are not found, the System will be increasingly unable to serve even the present restricted requirements. The impact after conservation by all customers, would be on industry with increasing adverse effects on the economy. Because of the unavailability of other forms of energy, industrial customers would be forced to curtail production and in many cases, eventually completely shut down operations, with growing increases in unemployment.

On Chart 2 the top solid line shows projected annual requirements if the normal growth rate would continue. This greatly understates the real demand, because it does not take into consideration the tremendous desire for the clean burning qualities of natural gas, in view of today's concern for protection of the environment. The restricted requirement line is the same as on Chart 1.

The gas supply line on Chart 2 projects the situation if current procurement efforts materialize. It should be noted that even with this, there will be deficiencies and resulting industrial curtailment at least until the latter part of 1976. Also there will not be sufficient supply thereafter to meet the historical growth requirements, much less the great demand beyond this because of environmental considerations.

Attached is Appendix A which tabulates the System's Major Procurement Projects upon which the supply projections of Chart 2 are based. They include synthetic gas plants, importation of LNG from Africa and South America; purchases and exploration from the Arctic Island of Canada to the Gulf of Mexico. and from Alaska to Labrador. It should be noted that most of these projects are in early planning stages and therefore considerable uncertainty exists concerning their implementation. All of these projects have one common denominator—tremendous financial commitments are required.

It is estimated that $6.4 billion of new capital will be required for this program during the period 1974 through 1983. Of this it is estimated that $3.0 billion could be generated from internal funds with the balance of $3.4 billion requiring financing by the sale of securities, long term debt and equity. This

would result in financing at a level about 300% over that experienced in the past 10 years.

THE FINANCING PROBLEM

The Sale of Long Term Debt.—Amounts of debt which can be sold are limited. First, under Columbia's indenture, debt cannot exceed 60% of total assets. Currently it is 58.4%.

Second, before issuing additional debt, earnings must be 2½ times the total interest cost, including interest on the debt to be issued. This requires that Columbia's earnings on its total investment be maintained at a high level, particularly in view of constantly increasing interest costs.

These indenture tests will limit severely the use of debt in financing the $3.4 billion of new capital.

Also, the rating agencies are scrutinizing new issues of debt very carefully. Undoubtedly Columbia, in order to maintain the A rating of its debt, must improve its capitalization ratio by lowering its debt percentage and must improve earnings in order to at least maintain its present earnings coverage position. If this is not done and the rating of Columbia's debt is lowered, the problem of financing will become even more difficult.

The Sale of Equity Securities.—Limitations upon the amount of debt which can be issued makes it clear that a very large amount of equity capital must be sold. Unless the current restraints upon the earnings and resultant growth in market values of Columbia stock are removed, this will be most difficult, if not impossible.

The Market Price of Utility Stocks.—Utility equity securities are not favored by investors. Most utility common stocks are selling close to or below book value. In the case of Columbia, current book value of the common stock is $27.46. On February 8, 1974 it closed at 27¼.

The unsatisfactory market evaluation of Columbia's common stock poses an awesome problem—the sale of common stock below book value should only be undertaken in a dire emergency. The previous comparison of book value and market value does not reflect what would occur if Columbia were to market a large block of new common stock. The announcement of such a sale would exert pressure on the market price and cause it to drop. In addition, substantial costs would be incurred in marketing the new stock. Using the market price at February 1, 1974, if new common stock equivalent to 10% of presently outstanding shares were sold, the net proceeds to be realized by Columbia would probably not exceed $24.50 per share which would be only 90% of the book value per share of the previously outstanding shares. Under current regulatory practices, the earning ability of common stock is related to its book value. Its market value is in turn related to earnings. Thus, when common stock is sold at less than book value, a downward domino effect begins which will accelerate and in time make common stock financing impracticable, if not impossible.

Factors affecting the low market price of utility stocks are such as:

(a) The investor's recognition of the inevitability of continuing inflation and the multiple adverse impact of inflation on utilities, which are high capital intensive.

(b) Failure of regulatory agencies to reflect the effect of inflation on the value of the investor's dollar in rate determinations.

(c) The uncertainty as to earnings because of the inordinate time to finalize higher rates.

(d) The constraints on improving existing levels of earnings because of ever increasing interest and operating costs.

If the natural gas companies, including Columbia, are to finance their substantial construction programs which will require the sale of large amounts of new common stock, investors' confidence must be restored. This will require substantial improvements in the levels of dividends and earnings, sufficient to raise the market value of common stock to at least 150% of book value.

RECOMMENDED SOLUTIONS TO FINANCING PROBLEM

If the greatly increased expenditures needed to obtain adequate gas supplies are to be financed, there must be drastic improvement in: (1) Earnings, and (2) Cash flow. *To Achieve this, Regulatory Rate Making Practices must be Modernized and Adequate Tax Incentives Provided.*

1. Rate Base and Rate of Return

Currently, the rate base used by the Federal Power Commission is original cost of the facilities. During a period of rapid inflation, this results in a continuous erosion of the investor's dollar. Thus, the Natural Gas Act should be amended to require the rate base of a natural gas company to be present value. This can be easily and quickly determined by trending the original cost of property to present value using appropriate indices. This proper rate base must be combined with adequate rates of return to make natural gas securities attractive investments.

2. Depreciation

Depreciation based upon original cost results in a failure to maintain or replace existing plant with existing capital. This is most unfair and unattractive to investors. In order to provide economic depreciation the tax laws and Natural Gas Act should be changed to provide that depreciation accrual rates shall be applied to the present value as determined in 1 above for book rate and tax purposes.

Attached is Appendix B which details the effect of Trended Original Cost Rate Base and Economic Depreciation. It shows that adoption of these rate making practices would result in an increase in earnings of $68 million and in cash flow from depreciation of $50 million. Such increases in earnings and cash flow would enhance the ability to finance the greatly increased expenditures required in the future.

EFFECT ON THE CONSUMER

In addition to the above, if the natural gas industry is to make its proper contribution to the obtaining of adequate energy supplies, two other major legislative actions are required to provide for:

1. Deregulation of well head price for new gas
2. A massive Federal Research and Development Program

Charts 3, 4 and 5, based on various prices of crude oil, project the total effect on the consumer.

Chart 4 based on $6/BBL crude indicates that the effect on the average residential customer in Columbia's service area would be as follows:

	Cents per million Btu	
	1974	1983
Financing	13	13
Federal R. & D.	5	5
Deregulation of well head price [1]	6	59
Total, increase	24	77
Average cost for 1973	116	116
Total cost	140	193

[1] The effect of the greater well head prices for new gas would be a gradual increase each year as the higher cost of greater volumes of new gas are rolled in with the cost of old gas.

The average consumer's present monthly cost of $16.92 would gradually increase to $28.17 in 1983.

This increase is in the public interest because it will help provide additional quantities of clean energy at a cost which at least for the next decade will still be less than the cost to the consumer for alternate fuels, oil or electricity, to the extent available. In other words, if natural gas is not available, the only alternatives are oil or electricity, which if available, would cost more than the increased price necessary to provide gas.

CONCLUSION

In view of the worsening gas supply situation and financial problems associated with providing an adequate gas supply, the public interest dictates the following recommendations:

1. To this Committee that (a) There should be no lessening in any way of tax incentives for exploration and development of energy supplies, but rather that

consideration be given to more incentives until adequate supplies are available. These tax incentives should apply to foreign as well as domestic efforts because every unit of energy produced world wide directly or indirectly help this nation's energy situation and because deliveries of energy to the United States are anticipated as a result of large exploratory programs in foreign countries, particularly Canada, and (b) the tax laws be amended so that depreciation deductions shall be based not on cost, but on trended value.

2. To Congress that legislation be enacted to provide:

(a) That companies subject to the jurisdiction of the Federal Power Commission be allowed rates based on—

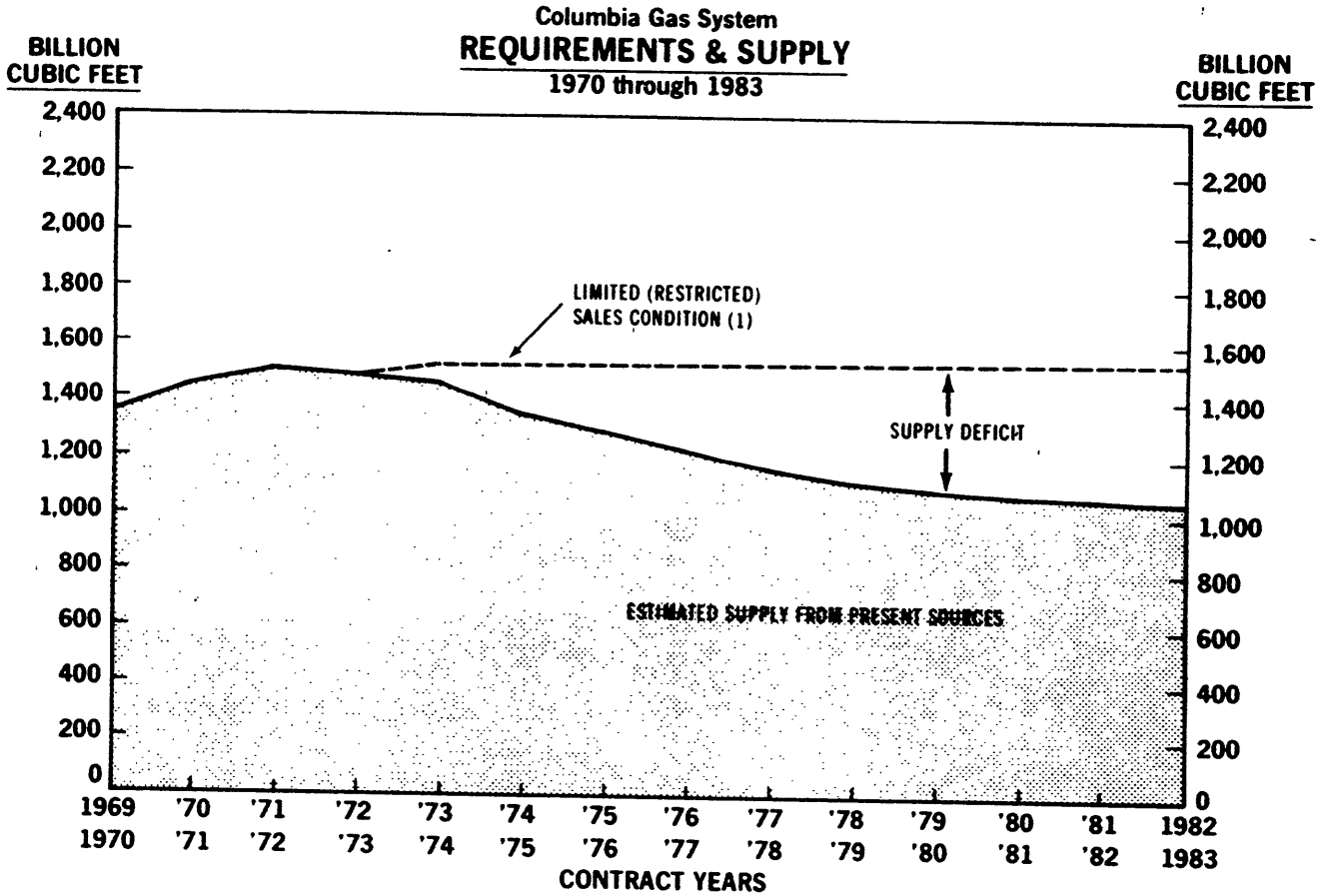
(i) a present trended value rate base and

(ii) depreciation accrual rates on the basis of present trended value for book and rate purposes.

(b) For deregulation of well head prices of new natural gas.

(c) For establishment of a massive federal research, development and demonstration effort.

CHART 1



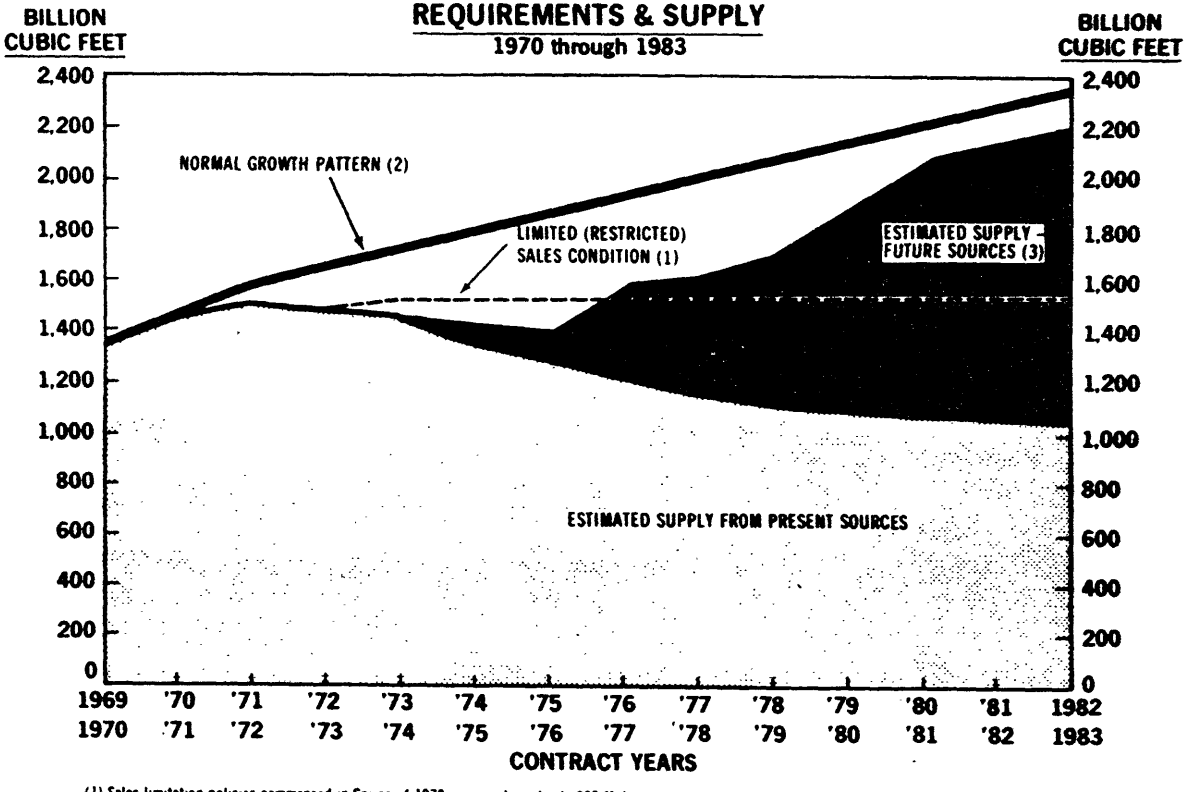
(1) Sales limitation policies commenced in Spring of 1970—new volume loads 300 Mcf or more per day not accepted. By Spring 1972 sales limitation policy had expanded to complete restrictions on all new sales.

CHART 2

Columbia Gas System

REQUIREMENTS & SUPPLY

1970 through 1983



(1) Sales limitation policies commenced in Spring of 1970—new volume loads 300 Mcf or more per day not accepted By Spring 1972 sales limitation policy had expanded to complete restrictions on all new sales.

(2) Normal Growth Pattern, 4.3% per yr.—Does not reflect greatly increased requirements to satisfy environmental need for clean burning fuels.

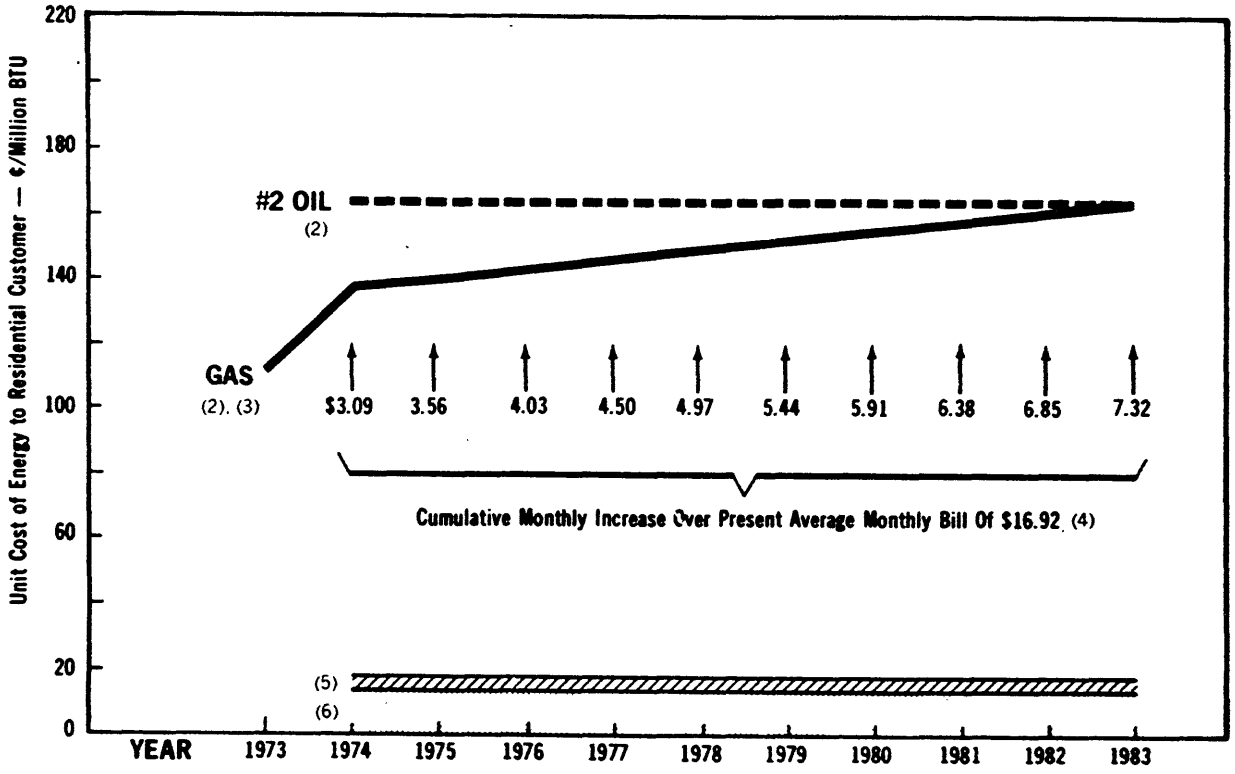
(3) Projects and exploration and development programs beyond 1977 are in early planning stages. Hence, a high degree of uncertainty must be attached to the projected volumes

1/29/74

CHART 3

A PROJECTION OF ESTIMATED AVERAGE RESIDENTIAL ENERGY COSTS IN THE COLUMBIA GAS SYSTEM SERVICE AREA[1]*

(Crude Oil At $4/BARREL And New Natural Gas At The Equivalent Value At The Wellhead)

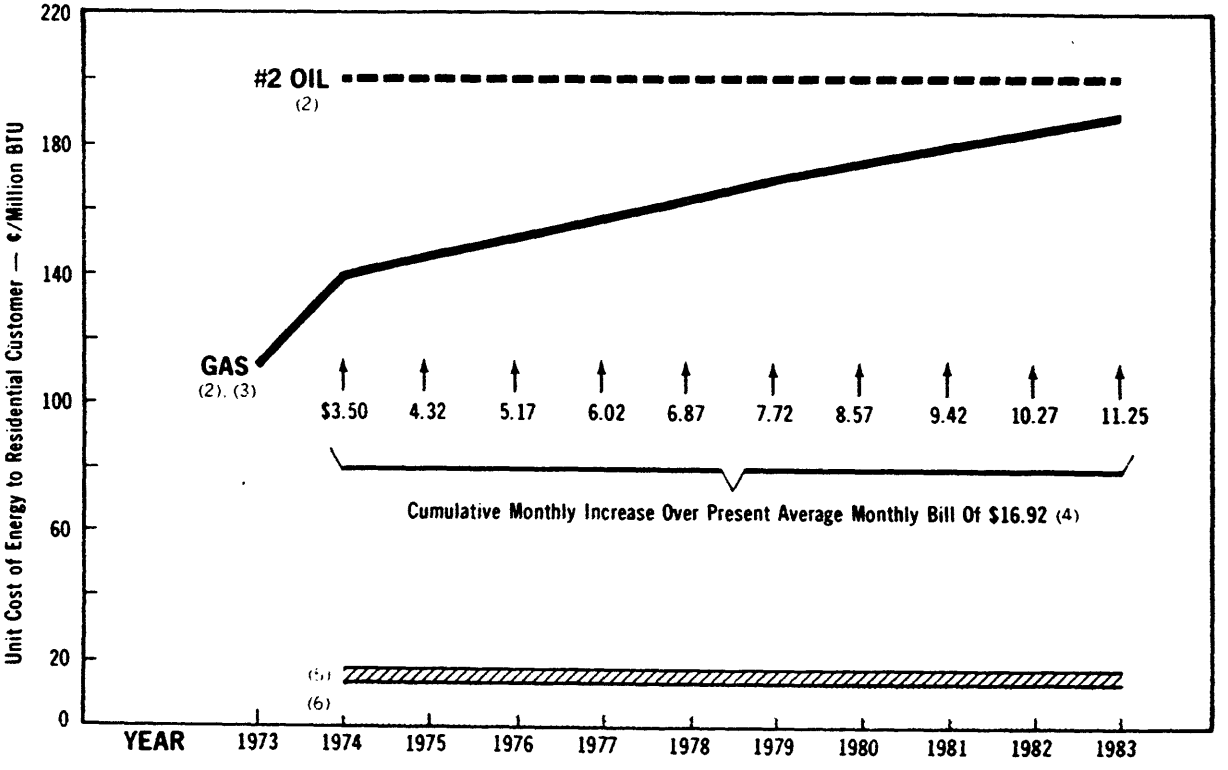


* See footnotes on sheet following Chart 5

CHART 4

A PROJECTION OF ESTIMATED AVERAGE RESIDENTIAL ENERGY COSTS IN THE COLUMBIA GAS SYSTEM SERVICE AREA (1)*

(Crude Oil At $6/BARREL And New Natural Gas At The Equivalent Value At The Wellhead)

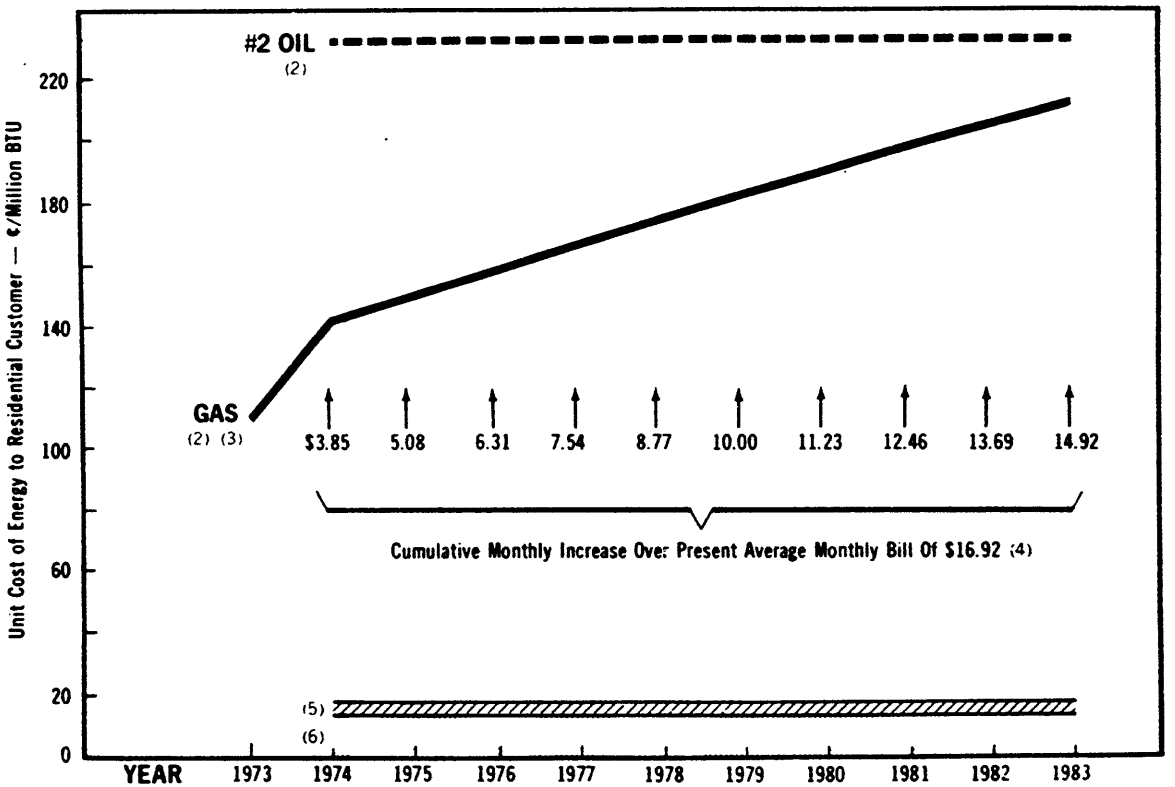


* See footnotes on sheet following Chart 5

CHART 5

A PROJECTION OF ESTIMATED AVERAGE RESIDENTIAL ENERGY COSTS IN THE COLUMBIA GAS SYSTEM SERVICE AREA (1),*

(Crude Oil At $8/BARREL And New Natural Gas At The Equivalent Value At The Wellhead)



* See footnotes on sheet following Chart 5

FOOTNOTES TO CHARTS 3, 4 AND 5:

(1) No provision has been made for the effect of inflation.

(2) Projection is based on a $0.90 spread between wellhead and residential gas price, and $0.90 between crude oil and #2 oil residential price.

(3) New natural gas rolled in at 7½%/yr. to reflect the volumes shown in the August 1973 report of Foster Associates Inc. "Impact of Deregulation of Natural Gas Supplies".

(4) Based on annual consumption for an average Columbia residential customer of 175 million BTU.

(5) Avg. federal energy R&D tax (oil and gas).

(6) Avg. effect of trended original cost rate base + economic depreciation (gas only).

COLUMBIA GAS SYSTEM

MAJOR GAS PROCUREMENT PROJECTS IN PROGRESS

Project Description	Date of Inception	Projected Annual Volume Available (Billions Ft³)	Estimated Date of First Delivery	Current Status or Results
LIQUID HYDROCARBON REFORMING				
GREEN SPRINGS The construction of a reforming plant at Green Springs, Ohio to produce 250 million cubic feet per day of synthetic gas (SG) from Canadian and domestic liquid hydrocarbon feedstocks.	Dec. 1, 1969	88	Mar. 1, 1974	Plant is currently undergoing start-up tests. Initial application to the FPC and hearings were held in 1970. The application to transport the SG produced was filed with the FPC on Feb. 20, 1973 and approved Jan. 7, 1974. The 1974 projected volumes available for delivery are below the design output of the plant due in part to contracted quantities of domestic feedstock not being made available under the propane allocation program.
APCO The construction of a reforming plant at Marcus Hook, Pa. by Apco SNG Corp. to produce synthetic gas for Columbia from imported naphtha.	Sept. 1, 1971	43	Late 1976	The project is dependent upon feedstock refined from crude oil originating from Arab countries. Because of the uncertainties of such feedstock, Columbia withdrew, without prejudice, pending FPC application relating to the project. The estimated date of first delivery assumes prompt reestablishment of feedstock contracts.
CROWN The construction of reforming facilities near Baltimore, Md. by Crown Central Petroleum Corp. to produce synthetic gas for Columbia from naphtha refined from imported crude oil.	Dec. 28, 1971	33	Late 1976	The project is dependent upon feedstock refined from imported crude oil originating from Arab countries. Because of the uncertainties of such feedstock, Columbia withdrew, without prejudice, pending FPC application relating to the project. The estimated date of first delivery assumes prompt reestablishment of feedstock contracts.
LIQUEFIED NATURAL GAS				
EL PASO The delivery of LNG from Arzew, Algeria by a subsidiary of El Paso Natural Gas Co. to Columbia facilities at Cove Point, Md.	Jan. 15, 1970	110	Late 1976	The Columbia LNG Receiving Terminal at Cove Point, Md. is currently under construction as are the Algerian liquefaction facilities. El Paso's LNG tankers have all been placed on order. Six tank ships are to be built in U.S. yards and three in French yards. Construction has commenced on the first ship. Columbia's application to the FPC for authorization was filed on Sept. 21, 1970 and final authorization received March 30, 1971.

Project Description	Date of Inception	Projected Annual Volume Available (Billion Ft^3)	Estimated Date of First Delivery	Current Status or Results
NIGERIA The importation of LNG to Columbia facilities at Cove Point, Md.	July, 1973	120	1979	Negotiations are currently in progress.
VENEZUELA The importation of LNG to Columbia facilities at Cove Point, Md.	July, 1973	110	1977-78	Preliminary negotiations are in progress.
U. S. OFFSHORE				
PHILLIPS et al., ADVANCES Columbia acquired the right to purchase gas that may be discovered and produced from nine offshore Louisiana lease tracts in return for Columbia cash advances to the producers.	Mar. 26, 1971	*	Began Late 1972	Columbia is receiving gas from two of the lease tracts involved. Exploratory drilling is continuing.
DECEMBER 1972 FEDERAL LEASE SALE Columbia and its non-affiliated bidding partners acquired the exploration and development rights on seven leases in offshore Louisiana and Texas. Columbia has the right to purchase all the gas that may be discovered.	Aug. 2, 1972	*	Late 1974	Commercial gas discoveries have been made on at least three of the seven tracts purchased in the December 1972 lease sale. Production platforms have been ordered for these tracts. Exploration drilling is continuing.
DECEMBER 1973 FEDERAL LEASE SALE Columbia and its non-affiliated bidding partners acquired the exploration and development rights on nine leases in offshore Mississippi, Alabama and Florida. Columbia has the right to purchase a significant part of the gas that may be discovered.	Dec., 1973	*	Late 1976	Exploratory drilling is to begin this Spring.
FUTURE OFFSHORE GULF OF MEXICO SALES Columbia plans to participate in future offshore lease sales.	-	*	-	Columbia will evaluate each future lease sale and will participate in those that offer the greatest opportunity to discovery and acquire additional gas reserves to help offset the decline of gas reserves from older southwestern production.

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* These projects are exploratory or wildcat programs that have very good potential, but it is not possible at this time to indicate the total gas reserves that may be discovered or developed.

Project Description	Date of Inception	Projected Annual Volume Available (Billion Ft^3)	Estimated Date of First Delivery	Current Status or Results
U.S. EAST COAST Columbia is participating in offshore geological and survey work in anticipation of Federal Offshore East Coast Lease Sales. Columbia intends to participate in such lease sales when they are held.	Apr. 1, 1968	*	Early 1980's	Extensive seismic and geological survey work has been completed under multi-company sponsorship. Evaluation of the data which was obtained is currently nearing completion.
U. S. ONSHORE				
APPALACHIAN Columbia has an accelerated drilling program in the Applachian area from which it has historically obtained gas. A significant aspect of the program is the exploration of the deeper horizons of the basin that appear to have good potential.	Dec. 3, 1969	*	Began in 1971	Production has commenced from shallow formations. One deep well was drilled with no commercial gas finds. Other drilling activities including additional deep tests are currently being conducted on various sites.
OTHER Columbia is participating in numerous exploration and development ventures in the Lower 48 States.	Jan., 1971	*	Late 1975	One deep well was drilled resulting in a commercial gas find. Other seismic and drilling activities are currently being conducted at various locations.
ALASKAN ACTIVITIES				
BP-SOHIO PRUDHOE BAY Columbia has the right to purchase gas from a Standard Oil Co. (Ohio) subsidiary's proven gas reserves on the Alaskan North Slope in return for Columbia cash advances.	Nov. 1970	219	1979	Delivery of the projected volumes available is totally dependent upon (1) the construction of the Trans-Alaska Oil Pipeline in that the gas is in solution with the oil and cannot be produced independent of the oil and (2) the construction of a gas pipeline system to transport the gas to Columbia's market area.
KEMIK Columbia with partners have drilled an exploratory well on the Alaskan North Slope approximately 60 miles southwest of the Prudhoe Bay discovery. Columbia has a call on a large part of the gas discovered.	Oct. 14, 1971	*	1979	Commercial quantities of gas are indicated as the result of drilling the first exploratory well. Seismic, location and feasibility studies are presently being made in preparation to drilling a second well.

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* These projects are exploratory or wildcat programs that have very good potential, but it is not possible at this time to indicate the total gas reserves that may be discovered or developed.

Project Description	Date of Inception	Projected Annual Volume Available (Billion Ft^3)	Estimated Date of First Delivery	Current Status or Results
CANADIAN ACTIVITIES				
PANARCTIC Columbia is a participant in the exploration and development of Panarctic Oil Ltd.'s leases in the Canadian Arctic Archipelago. Panarctic is a consortium of Canadian companies and the Canadian Government. Columbia has the right to purchase one-sixth of Panarctic's interest of gas discovered. Importation of gas to the U.S. is dependent upon approval of the Canadian Government and the establishment of a transportation system.	Aug. 1, 1971	*	Mid 1980's	Significant proven gas reserves have been found on four separate Arctic Islands. Additional exploratory drilling continues. As the results of the exploratory program warrant, major sums of money will be spent for development programs.
DOME PETROLEUM EXPLORATION Columbia is a participant in the exploration and development of primarily Arctic Islands and other Canadian land holdings of Dome Petroleum Ltd. Columbia has the rights to one-fourth of gas discovered. Importation of gas to the U.S. is dependent upon approval of the Canadian Government and the establishment of a transportation system.	Nov. 13, 1970	*	Mid 1980's	A major discovery has been made on one of the Arctic Islands. Drilling continues under this exploratory program. As the result of the exploratory program warrant, major sums of money will be spent for development programs.
ELF Columbia is participating in the exploration and development of Elf Canada Ltd. holdings in the Western Arctic Islands.	Feb. 2, 1973	*	Mid 1980's	Drilling commenced on the initial exploration well in January 1974.
BP-LABRADOR SHELF Columbia is participating in the exploration of extensive offshore acreage, held by British Petroleum affiliates, off Canada's East Coast.	Feb. 7, 1972	*	Mid 1980's	Seismic and other geological work has been completed to determine the most appropriate location of the first exploratory well which is scheduled to be drilled in mid 1974.
OTHER Columbia, with partners, is conducting geological programs on selected acreage in the Canadian Arctic.	Aug. 14, 1972	*	Mid 1980's	Initial seismic work has been completed. In some instances, the Canadian Government has not as yet issued the exploration permits.

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* These projects are exploratory or wildcat programs that have very good potential, but it is not possible at this time to indicate the total gas reserves that may be discovered or developed.

Project Description	Date of Inception	Projected Annual Volume Available (Billion Ft^3)	Estimated Date of First Delivery	Current Status or Results
COAL GASIFICATION Columbia is active in research and development activities designed to accelerate the commercialization of coal gasification. These include participation in a joint research project sponsored by the Federal Office of Coal Research and The American Gas Association and an industry research program with 14 other energy companies being conducted in Scotland at an existing commercial gasification plant.	About 1946	-	Mid 1980's	Synthetic gas of pipeline-quality (high Btu value) has been produced by one of the pilot plants being run under the Industry/Government program. Encouraging results have been indicated in the production of pipeline-quality gas under the industry program in Scotland.
OTHER NORWEGIAN NORTH SEA VENTURE Columbia is seeking to acquire permits to conduct offshore Norway exploratory activities. The objective is to develop sufficient gas reserves to form the basis for an LNG trade from Norway. Authorizations will have to be secured from the Norwegian Government to export any gas that may be discovered.	Feb. 20, 1973	*	Mid 1980's	An application for exploration rights has been filed with the Norwegian Government and negotiations are currently underway.
PIPELINE PROJECTS GAS ARCTIC/NORTHWEST, NORTHERN BORDER The Gas Arctic/Northwest Study Group (11 U.S. and 16 Canadian companies) is planning a pipeline system to move Alaskan North Slope and Canadian Mackenzie Valley gas reserves through Western Canada, southward to the U.S. border near Monchy, Saskatchewan. The Northern Border Study group (6 U.S. pipeline companies) is planning a pipeline to deliver gas from the Arctic pipeline into the North Central States and Columbia's service area.	Dec., 1970	-	-	The Gas Arctic/Northwest Study Group plans to file in 1974 applications for the construction of the pipeline with various agencies of the U.S. and Canadian Governments. Application to the Federal Power Commission for the Northern Border Pipeline is also expected to be made in 1974. The gas purchased by Columbia from a Standard Oil Co. (Ohio) subsidiary on the Alaskan North Slope, and other gas reserves acquired in the area, are to be transported by the planned Arctic/Northwest Pipeline and the Northern Border Pipeline System to Columbia's market area.

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* These projects are exploratory or wildcat programs that have very good potential, but it is not possible at this time to indicate the total gas reserves that may be discovered or developed.

Project Description	Date of Inception	Projected Annual Volume Available (Billion Ft^3)	Estimated Date of First Delivery	Current Status or Results
UNDERTAKEN BUT UNSUCCESSFUL				
ESSO VENEZUELA The delivery of LNG from La Salina, Venezuela by subsidiaries of Standard Oil (N.J.) to Columbia facilities at Cove Point, Md.	Aug. 18, 1970	155	Unsuccessful	Project cancelled due to the inability to obtain authorization from the Venezuelan Government. The Agreement was terminated Oct. 1, 1971.
AMOCO TRINIDAD The delivery of LNG from Trinidad by Amoco International Oil Co. to Columbia facilities at Cove Point, Md.	Apr. 20, 1971	182	Unsuccessful	Project terminated Sept. 30, 1971. Columbia was unsuccessful in bidding for the LNG supply.

APPENDIX B

EFFECT OF TRENDED ORIGINAL COST RATE BASE AND
ECONOMIC DEPRECIATION AS OF DECEMBER 31, 1973
ON COLUMBIA FEDERAL POWER COMMISSION JURISDICTIONAL COMPANIES
(MILLION $)

	Rate Base			Required Increase In Revenue For	
	Plant Investment[1]	Accumulated Provision For Depreciation	Net Investment	Return[2]	Federal Income Tax[3]
Original Cost	1,448	510	938		
Trended Original Cost[4]	2,790	1,017	1,773		
Increase Due to Trending	1,342	507	835	68	63

	Economic Depreciation		
	Depreciation Base[1]	Composite Accrual Rate[5]	Depreciation Expense (Cash Flow)
Original Cost	1,448	3.7	53
Trended Original Cost	2,790	3.7	103
Increase Due to Trending	1,342		50

1/ Major Depreciable Plant Accounts - Represents 81% of Total Plant.

2/ Latest Allowed by FPC 8.15% which is wholly inadequate.

3/ At 48% Tax Rate.

4/ Based on Handy-Whitman Indexes as of July 31, 1973.

5/ Latest Allowed by FPC which is wholly inadequate.

The CHAIRMAN. The committee will meet at 10 o'clock tomorrow.

[Whereupon, at 12:25 p.m., the committee was adjourned until Thursday, February 14, 1974, at 10 a.m.]

PROFITABILITY OF DOMESTIC ENERGY COMPANY OPERATIONS

THURSDAY, FEBRUARY 14, 1974

UNITED STATES SENATE,
COMMITTEE ON FINANCE,
Washington, D.C.

The committee met, pursuant to recess, at 10:05 a.m., in room 2221, Dirksen Senate Office Building, Senator Russell B. Long (chairman) presiding.

Present: Senator Long.

The CHAIRMAN. This hearing will come to order.

The first witnesses today will be Mr. John E. Swearingen, chairman of Standard Oil of Indiana; Mr. Robert G. Dunlop, chairman of the board of Sun Oil Co.; also Mr. H. A. True, a partner of True Drilling Co.; and Mr. William L. Henry, executive vice president of Gulf Oil Corp., speaking on behalf of the American Petroleum Institute, Mid-Continent Oil & Gas Association, and Western Oil & Gas Association, and Rocky Mountain Oil & Gas Association.

Mr. Henry, you have got yourself quite a job.

Mr. HENRY. Yes, sir.

STATEMENT OF JOHN E. SWEARINGEN, CHAIRMAN OF THE BOARD OF STANDARD OIL COMPANY OF INDIANA, IN BEHALF OF THE AMERICAN PETROLEUM INSTITUTE, MID-CONTINENT OIL & GAS ASSOCIATION, ROCKY MOUNTAIN OIL & GAS ASSOCIATION, AND WESTERN OIL & GAS ASSOCIATION

Mr. SWEARINGEN. Mr. Chairman, the four of us, as you know, seated here at the table and, if I may suggest, we would like to present our testimony one after the other and proceed with the questioning after we have presented our testimony.

The CHAIRMAN. Very fine, sir. We will be glad to do that.

Mr. SWEARINGEN. My name is John E. Swearingen. I am chairman of the board of Standard Oil Co., Indiana, and I am appearing today on behalf of the American Petroleum Institute, Mid-Continent Oil & Gas Association, Rocky Mountain Oil & Gas Association, and the Western Oil & Gas Association. Also appearing are Mr. Robert G. Dunlop, chairman of the Sun Oil Co.; Mr. H. A. True, Jr., partner in True Drilling Co.; and Mr. William L. Henry, executive vice president of Gulf Oil Co.

Before addressing our present position in regard to energy supplies, I think it might be instructive to look back to the situation we faced last summer. In testimony before the House Committee on Ways and Means on June 11, 1973, I noted that the United States was facing the threat of a widespread shortage of fuels for the first time in its history, aside from temporary disruptions during periods of war. As I pointed out at that time, for a number of years our Nation has been

consuming both petroleum liquids and natural gas at a faster rate than we have been adding to our domestic reserves, and that domestic producing rates were actually on the decline. As a consequence, we have become increasingly reliant on imports to close the gap between shrinking supplies and steadily rising energy demands. This has meant turning increasingly to the Middle East and North Africa, where nearly 80 percent of all the free world's proved oil reserves are located.

In addition to the price this represented in terms of lessened national security, it was also becoming clear that the economic price of imported oil was undergoing a process of rapid escalation. The oil exporting nations had joined together to demand both higher taxes on production and substantial participating interests in the operations of the oil companies conducted within their territories.

The dangers were apparent. The concentration of present reserves in the Middle East and our growing necessity to rely on imports over the next 5 to 10 years at least, meant exposure to the possibility of supply interruptions resulting from actions taken on political grounds. But there was also a growing possibility of supply interruptions based on purely economic considerations. Many of the countries with the largest reserves were already receiving oil-derived revenues too large to be effectively employed internally. In such circumstances, a producing country could decide to limit production in its own economic interest.

I sincerely wish that subsequent events had demonstrated the concerns I expressed at that time to be unfounded.

The CHAIRMAN. If I might just interrupt you, you were not the only person saying that. I read articles in the Washington Post and the New York Times, as well as from elsewhere in the country saying the same thing. They had one here in Washington termed "Camel Power," which showed how the Arabs were going to have all this money and could dominate the whole financial world with it, but apparently nobody would read all of that.

Mr. SWEARINGEN. That is the unfortunate part of it, Senator.

Unfortunately, our worst fears have materialized. Political considerations have resulted in an outright embargo on Arab exports to the United States, and painful cutbacks in the quantities moving to Western Europe and Japan. The economic edge of the sword has cut even deeper. The price of Middle East crude has risen to the highest point in history, triggering price advances throughout the world.

Between 1970 and the end of 1973, the estimated share of production income commanded by the Persian Gulf nations for Arabian light crude has risen from slightly under $1 per barrel to $7. Even these numbers fail to tell the full story. This is only the government take on "equity" crude, the share owned by private operators. Under the so-called "participation" agreements enforced by the producing countries, they have taken over a rising share of total production. As their share has risen, so have the quantities they have to dispose of at any price the market will bear, and we have witnessed spot sales of limited quantities of these crudes at prices of more than $17 a barrel.

Not surprisingly, the success of these actions was felt beyond the Middle East. Venezuela is a major source of United States oil imports, and, as a member of the Organization of Petroleum Exporting Countries, followed suit. From an average of slightly over $1 per barrel in 1970 the government's take on Venezuelan oil has been increased to over $8 at the start of 1974.

The cost of U.S. imports from Canada has also been affected. Faced with sharply higher prices for the oil it imports into its oil-short eastern provinces, Canada imposed an export tax on oil moving to the United States from its producing western provisions. Although first imposed at a nominal level, it has climbed sharply in successive stages. Effective on February 1 of this year, the tax has been set at $6.40 per barrel, to which must be added the cost of lease bonuses and rentals, royalties, income and other mineral taxes which add nearly another dollar per barrel to the take at all levels of government.

Despite the alarming rise in the cost, the United States continued to increase the quantities of oil brought in—at least until the embargo of October 1973. Over the period from 1970 through the first 9 months of 1973, crude imports more than doubled, rising from a level of roughly 1.3 million barrels a day to 3.2 million. Imports of refined products rose from slightly over 2 million barrels a day in 1970 to nearly 3 million in the comparable period of 1973—an increase of nearly 50 percent. As a consequence, this nation's total petroleum imports rose from approximately 23.5 percent of total domestic consumption in 1970 to nearly 36 percent in the same period of 1973; that is, from one-fourth of the total to one-third of the total. To see our reliance climb to the equivalent of one barrel we consume out of every three as it did last year should be enough to alarm every member of this committee and the constituents you represent. I think this would be a matter of concern even if the continuation of supply were assured and we had some idea what the costs would be. Unfortunately, as we are discovering, neither of these essential aspects seems to be within our control.

As to supply, in the aftermath of the October war in the Middle East, the Arab oil-exporting nations announced significant cutbacks in production, along with the U.S. embargo. The initial reductions were set at 25 percent of September levels, and during November and December the result was a drop of approximately 5 million barrels a day in exports from the area at a time when demand for oil was rising steadily throughout most of the world. Effective in January, the Arab cutbacks were relaxed, but production was restored to only 85 percent of the September levels, and there has been no indication when full production may be fully restored—or even that it ever will be. The embargo on shipments to the United States has continued without abatement, however.

Among the results was a reversal in the previous steady rise in U.S. imports. Total imports declined from 6.5 million barrels a day in October to 4.9 million in mid-January, a decline of some 30 percent. The sharpest drop was in crude imports, which fell from 3.7 million barrels a day to only 2.2 million—a drop of over 40 percent.

Meanwhile, higher crude prices and refined product shortages have resulted in higher product prices worldwide. During 1973, quoted wholesale product prices at Rotterdam—the main source of imports of finished products to the United States from Europe—roughly quadrupled. Here at home, the Consumer Price Index employed by the Bureau of Labor Statistics showed a rise in 1973 from 37.3 cents per gallon to 44.7 cents per gallon in the case of gasoline, and from 19.8 per gallon to 29.1 cents per gallon in the case of No. 2 fuel oil. For the full year, this represented an increase of nearly 20 percent in the price of gasoline and 47 percent for fuel oil.

All of these factors—declining domestic production, cutbacks in imports, rising product prices, plus appeals for voluntary conservation followed by mandatory allocations—have operated to slow the rate of growth in U.S. oil consumption. From January through October of last year, consumption steadily exceeded the 1972 levels, month by month. By November, total consumption had slowed to about the level of the previous year. In December, consumption of 17.6 million barrels a day was more than 1 million barrels below the 1972 level of 18.7 million barrels a day. Precisely how much of these declines to attribute to conservation, either voluntary or otherwise, how much to higher prices, how much to weather, and how much to physical shortages, is impossible to say. In any event, the rates of growth to which we have been accustomed for so long have clearly been arrested.

As for the near-term supply outlook, the Nation's combined inventories of crude oil, jet fuel, and residual oil as of January 18 were some 16 million barrels lower than they were a year ago. Only distillate inventories were significantly higher, mainly because of warmer-than-normal weather and conservation efforts. A severe cold spell in key consuming areas would draw down these inventories rapidly.

In regard to what we are likely to experience over the remainder of the year, there are nearly as many predictions as there are forecasters. A great deal depends on the assumptions which go into the equation, both on the supply side and the demand side. However, there is general agreement that we are in for continued shortages. The main question has to do with their magnitude.

Assuming the selective oil embargo against the United States were to continue throughout 1974, my own company's latest projections point to a net shortage of crude and refined products averaging approximately 2.5 million barrels a day for the full year. This is the estimated shortage compared with intrinsic demand—the quantities expected to be consumed if there were no restrictions on supply. According to our best estimates, it should be possible to offset this degree of shortages through a combination of voluntary and mandatory limits on consumption.

Assuming the embargo were to be lifted in mid-1974, it is our estimate that the shortage could be reduced to approximately 1 million barrels a day. If this were to be the case, most of the shortage could be offset through voluntary conservation measures. While we would not have all the products we might want, it should be possible to get by with some determined belt-tightening.

Just what course the exporting nations will follow over the longer run remains to be seen. The Shah of Iran recently suggested to the

Persian Gulf members of OPEC that they set an oil price which would correspond to the minimum price that would have to be paid for shale oil or for liquefied or gasified coal, and he estimated this to equate currently with a minimum of $7 a barrel in government take for the Middle East producers. Other producing nations have other views.

In any event, I think the events of the last year have demonstrated conclusively that the United States can never again be assured of unlimited supplies of foreign oil and that foreign suppliers are determined to exact a full price for their oil. The days of unlimited cheap energy are over. We are going to have to pay more for energy and we are going to have to be less profligate in its use. Fortunately, the United States has a very large potential resource base, but development will be both costly and time-consuming.

Regardless of the pace of development, we are now in a period of genuine oil shortages and they are likely to be with us for a long time to come.

What concerns me particularly at this point is a failure to address the real issues before us. Our paramount national objective at this juncture should be to take the necessary steps to insure that we can increase the supplies of energy available from reliable sources.

However, in recent hearings before various committees of the Congress, the discussions have been concerned mainly with trying to find someone to blame for our current energy shortages and with debates over the present tax provisions affecting the petroleum industry. This is avoiding the real issue. The principal problem we should be addressing is not whether the oil industry, or any other industry, is currently paying the right amount of taxes—or who has contributed most to getting us into our present predicament. All of us have helped contribute to our dilemma—Government, industry, the media, and the public—and all of us are going to have to participate in efforts to work out a solution.

The real challenge is to take the actions needed to assure the flow of energy the American economy must have in order to function. Unless we succeed in doing this, we are going to face a serious decline in tax revenues from all of the revenue sources on which the Government relies to finance its activities.

While the problems of energy supply and demand are admittedly complex, our most pressing need is clearly to increase the supply. Measures which promise to help to increase energy supplies will serve the national interest; measures which will impede an increase in energy supplies, whatever other merits they may appear to have, will do the Nation a profound and lasting disservice. I strongly urge this committee to take this central fact into account in your deliberations.

Thank you.

The CHAIRMAN. Thank you very much, Mr. Swearingen, for what I believe to be a very logical and thoughtful statement. I will ask questions about it later on.

[The prepared statement with attachments of Mr. Swearingen follow:]

PREPARED STATEMENT OF JOHN E. SWEARINGEN, CHAIRMAN OF THE BOARD, STANDARD OIL COMPANY (OF INDIANA) IN BEHALF OF AMERICAN PETROLEUM INSTITUTE MID-CONTINENT OIL AND GAS ASSOCIATION, ROCKY MOUNTAIN OIL AND GAS ASSOCIATION, WESTERN OIL AND GAS ASSOCIATION

CONTENTS

SUMMARY

1. The United States is facing the threat of a widespread shortage of fuels for the first time in its history, aside from temporary disruptions during periods of war. For a number of years, we have been consuming both petroleum liquids and natural gas at a faster rate than we have been adding to domestic reserves, and domestic producing rates have been declining. As a consequence, we have become increasingly reliant on imports to close the gap between shrinking supplies and rising demands. From 1970 through the first nine months of 1973, our crude imports doubled and refined product imports increased nearly 50 percent—with total imports representing nearly 36 percent of total domestic consumption in 1973. In addition to the price this represents in lessened national security, the economic price of imported oil has risen sharply.

2. The relative stability in foreign crude oil prices which prevailed in the 1960's has vanished. Since 1970, the exporting nations have joined together to demand both higher taxes on production and substantial participation in the operations of the oil companies conducted within their territories. Between 1970 and the end of 1973, the share of production income commanded by the Persian Gulf nations for Arabian Light crude has risen from roughly $1.00 per barrel to $7.00. The government's take on Venezuelan oils has risen from slightly over $1.00 per barrel to more than $8.00. Canada has imposed an oil export tax, with the rate set at $6.40 per barrel effective February 1.

3. Higher crude prices have resulted in higher product prices. Quoted wholesale prices at Rotterdam quadrupled during 1973. In the United States, the BLS Consumer Price Index indicates a rise of nearly 20 percent in gasoline prices and 47 percent in the case of fuel oil during 1973.

4. In the aftermath of the October war in the Middle East, the Arab oil exporting nations announced significant cutbacks in production, and embargoes on shipments to the United States. As a result, total U.S. imports declined from 6.5 million barrels a day in October, to 4.9 million in mid-January, a decline of some 30 percent. The sharpest decline was in crude imports, which fell from 3.7 million barrels a day to only 2.2 million barrels a day, a drop of over 40 percent.

5. A combination of physical shortages, higher prices, and conservation efforts—both voluntary and involuntary—have slowed the rates of growth in domestic consumption. From January through October of 1973, consumption steadily exceeded the 1972 levels month by month. By November, consumption had slowed to about the level of the prior year. By December, total consumption of 17.6 million barrels a day was more than 1 million barrels below the December 1972 level.

6. As for the near-term supply outlook, combined inventories of crude oil, gasoline, jet fuel, and residual oil as of January 18 were some 16 million barrels lower than they were a year ago. Only distillate inventories were significantly higher, mainly because of warmer-than-normal weather and conservation efforts.

A severe cold spell in key consuming areas would draw down these inventories rapidly. Estimates of the average gross shortage of crude and refined products during the remainder of 1974 range as high as 2.5 million barrels a day.

Conclusion

Events of the last year have demonstrated conclusively that the United States can never again be assured of unlimited supplies of foreign oil and that foreign suppliers are determined to exact the full value of their oil—which, in the long run, will be measured by the cost of alternative sources of energy, such as synthetics. For both the short and long term, the oil shortage is real.

STATEMENT

Introduction

Mr. Chairman and members of the Committee: My name is John E. Swearingen. I am Chairman of the Board of Standard Oil Company (Indiana). Appearing with me are Mr. Robert G. Dunlop, Chairman of the Board of Directors, Sun Oil Company; Mr. H. A. True, Jr., Partner, True Drilling Company; and Mr. William L. Henry, Executive Vice President, Gulf Oil Corporation. We appear in behalf of the American Petroleum Institute, the Mid-Continent Oil and Gas Association, the Rocky Mountain Oil and Gas Association, and the Western Oil and Gas Association.

For purposes of reference, I might note that my own company ranks as the sixth largest oil company and the 12th largest industrial company in the United States, in terms of assets. Within the oil industry, we rank sixth in domestic oil production, fourth in gasoline marketing, and among the top three in production of natural gas. Approximately 72 per cent of our assets are concentrated in the United States, and, in 1973, 81 per cent of our total revenues were derived from the United States, 3 per cent from Canada, and 16 per cent from overseas operations.

Review of energy developments

Before addressing our present position in regard to energy supplies, I think it might be instructive to look back to the situation we faced last Summer. In testimony before the House Committee on Ways and Means on June 11, 1973, I noted that the United States was facing the threat of a widespread shortage of fuels for the first time in its history, aside from temporary disruptions during periods of war. As I pointed out at that time, for a number of years our nation has been consuming both petroleum liquids and natural gas at a faster rate than we have been adding to our domestic reserves, and that domestic production rates were actually on the decline. As a consequence, we have become increasingly reliant on imports to close the gap between shrinking supplies and steadily rising energy demands. This has meant turning increasingly to the Middle East and North Africa, where nearly 80 per cent of all the free world's proved oil reserves are located. In addition to the price this represented in terms of lessened national security, it was also becoming clear that the economic price of imported oil was undergoing a process of rapid escalation. The oil exporting nations had joined together to demand both higher taxes on production and substantial participation in the operations of the oil companies conducted within their territories.

The dangers were apparent. As I testified last June, "If U.S. dependence on imports is allowed to grow unchecked, we are likely to enter a new era in our dealings with our allies . . . For one thing, we will all be competing in the same markets for the supplies of energy we all must have to survive."

As I further stated, "The concentration of present reserves in the Middle East and North Africa, combined with our growing necessity to rely on imports over the next five to ten years at least, means exposure to the possibility of supply interruptions resulting from actions taken on political grounds. But there is also a growing possibility of supply interruptions based on purely economic considerations. We are dealing with a vital commodity likely to be in increasingly limited supply, while its price is rising. Many of the countries with the largest present reserves are already receiving oil-derived revenues too large to be effectively employed internally. In such circumstances, a producing country could decide to limit production in its own economic interest, and we have already had several demonstrations of such actions. All of these forces point to the necessity for the United States to do everything within its power to lessen our dependence on foreign supplies of energy."

I sincerely wish that subsequent events had demonstrated the concerns I expressed at that time to be unfounded. Unfortunately, the opposite has been

the case, and our worst fears have materialized. Political considerations have resulted in an outright embargo on Arab oil exports to the United States and painful cutbacks in the quantities moving to Western Europe and Japan. The economic edge of the sword has cut even deeper. The price of Middle East crude has risen to the highest point in history, triggering price advances throughout the world. The exporting nations are now receiving more income from lower production. As a result, there is less incentive for them to increase production. They have expressed interest in making their oil reserves—which in many cases are the only significant national asset—last as long as possible.

These developments have dramatically altered the energy outlook for the entire industrialized world. All assumptions that Middle East oil would be available to fuel economic growth in Europe and Japan and to help make up the growing shortfall in U.S. energy supplies now have to be re-examined. Not only do spiraling prices threaten the ability of the importing nation to pay for the oil they require, but we now face the possibility that the full quantities desired may not be available at *any* price.

While the impact of these developments on the United States has not been as severe as it has on Western Europe and Japan, it has been sufficient to demonstrate that we have entered a new era. The days of unlimited cheap energy are over. We are going to have to pay more for energy and we are going to have to be less profligate in its use. As I testified in my last appearance before this committee, it is important to remember that our own dilemma is man-made. The United States still has an abundance of potential energy sources to draw upon. In regard to oil and natural gas, we have a very large undeveloped resource base remaining offshore and in Alaska. There are also huge potential reserves in the shale deposits in the Rocky Mountain area. Our coal reserves are vast, and constitute a major future source of synthetic fuels through liquefaction or gasification.

Although the cost of either oil or gas from non-conventional sources will be higher than anything we have been accustomed to in the past, the point is that a secure resource base is there, awaiting development. In addition, our uranium reserves will support an accelerated program of nuclear electricity generation, and this source of power can be expected to take over a growing share of the load. However, it is likely to take at least a decade before we can look to non-conventional sources for an important contribution to the total energy flow. Meanwhile, we have the problem of immediate shortages of crude oil and refined products. I would like to try to summarize some of the principal challenges we face in this area and some of the forces behind our current dilemma. Pertinent data are included in a series of appendices, which will be referred to in the course of the statement.

Increased share of income commanded by exporting nations

The relative stability in foreign crude oil prices which prevailed in the 1960's has vanished. *Appendix A* shows the estimated increase in oil production income going to the exporting nations over the past four years. In the case of Arabian Light crude from the Persian Gulf, the host nations in 1970 were realizing slightly less than $1.00 per barrel as their share of the income from production owned by the private companies, as distinguished from the share owned by the host country. The share commanded by the Persian Gulf host nations rose in gradual stages to an estimated $1.70 per barrel in mid-1973—an increase in roughly 70 percent. By October 1, 1973, it had reached $1.77 per barrel.

Then, by unilateral decision on the part of the key Middle Eastern producing countries, it rose to over $3.00 per barrel. Dramatic as this increase was, it was overshadowed by a subsequent rise to no less than $7.00 per barrel at the end of last year. In other words, we have seen a seven-fold increase in the take of the Persian Gulf producing nations within a period of three years—from roughly $1.00 to $7.00 per barrel.

Even these numbers fail to tell the full story. The equity crude, the share owned by private operators, has been a declining portion of total production. Under the so-called "participation" agreements enforced by the producing countries, they have taken over a rising share of the production. As their share has risen, so have the quantities they have to dispose of at any price the market will bear, and we have witnessed spot sales of limited quantities of these crudes at prices of more than $17.00 a barrel.

Not surprisingly, the success of these actions was felt beyond the Middle East. Venezuela is a major source of U.S. oil imports, and because of its closer proxi-

mity its exports to us have generally commanded a higher price than those from the Eastern Hemisphere. Inevitably, Venezuela—which is a member of the Organization of Petroleum Exporting Countries—followed the suit led by the Middle East. From an average of slightly over $1.00 per barrel in 1970, the government's take has been increased to more than $8.00 per barrel at the start of 1974.

While not shown in Appendix A, the cost of oil imported from Canada has also risen sharply, primarily through the imposition of successively higher export taxes. As recently as November of last year there was no such thing as an export tax on oil moving to the United States from the producing provinces in the west, where most of Canada's proven reserves are situated. At the same time, Canada relies on imports from Venezuela to meet most of its needs for petroleum in the east, where the bulk of its population is. Faced with its own problem of sharply higher costs for petroleum imports, Canada responded with a tax on its own petroleum exports.

Although the tax was first imposed at a nominal level, it has climbed sharply in successive stages. Effective on February 1 of this year, it has been set at $6.40 per barrel. Although this may appear to be less exacting than the $7.00-plus a barrel currently going to Middle East producing nations or the $8.00-plus going to Venezuela, it is comparable. Unlike the major oil exporting nations, Canada levies a series of other taxes on oil and gas production similar to those we have here in the United States. In the case of Canada, lease bonuses, royalties, lease rentals, income and other mineral taxes bring in additional revenues of nearly $1.00 per barrel on oil produced there. In combination with its new export taxes, the combined take at all levels of government is roughly on par with other petroleum exporters.

These external forces have also resulted in higher prices for domestic crude, a subject which will be dealt with in more detail in the testimony which will follow. At the same time, more realistic prices for domestic oil and gas are already generating a response—in the form of substantially accelerated expenditures and efforts to find and develop new petroleum reserves within the United States. As I noted earlier, we still have large potential undiscovered reserves, and we are going to need them badly. We are also going to have to be prepared to pay the price it will take to insure that they are brought into use.

Increased volume and value of U.S. petroleum imports

Despite the alarming rise in the cost of imported oil, the United States has continued to increase the quantities brought in. When it comes to energy, we have no real option in the short term—nor do the rest of the industrialized countries. Energy is simply not a discretionary item in a modern society, and unless the flow continues we are not likely to have time to work out solutions for even our immediate problems, much less devise better formulas for the future. In our case, until we mount and carry through the effort that will be required to restore the nation to its former position of energy self-sufficiency, we will have to rely on imports for assistance.

Appendix B shows the trend in U.S. imports of crude oil and refined products from 1970 through the first nine months of 1973. Over this period, crude imports have more than doubled, rising from a level of roughly 1.3 million barrels a day to 3.2 million barrels a day. Imports of refined products rose from slightly over two million barrels a day in 1970 to nearly three million in the comparable period of 1973—an increase of nearly 50 per cent.

As a consequence, this nation's combined imports of crude and refined products rose from approximately 23.5 per cent of total domestic consumption in 1970 to nearly 36 per cent in the same period of 1973. I personally find it disturbing to have imports of anything as vital to our economy as oil reaching even the 25 per cent level. To see this reliance climb to the equivalent of one barrel out of every three we consume, as it did last year, should be enough to alarm every member of this committee and the constituents they represent. I think this would be a matter of concern even if the continuation of supply were assured and we had some idea what the cost would be. Unfortunately, as we are discovering, neither an assured supply nor the cost seems to be within our control.

As to the cost of these imports, the value was a little over $2 billion in the first nine months of 1970, according to Commerce Department statistics. This figure does not include freight charges, however, and the tanker charges for moving crude oil from as far away as the Persian Gulf to the east or gulf coast of the United States or refined products from Europe can be a major item in the ultimate cost to the consumer. Even on the conservative basis re-

flected in the Commerce Department's calculations, the value of these oil imports has nearly doubled since 1970, and approximated $5 billion for the first nine months of last year. The indicated effect on our balance of trade position for the first three quarters of 1973 was a negative $1.9 billion, versus the prior year. This was approximately six times the negative impact of only $336 million sustained in 1971. In addition, the period does not even cover the final quarter of 1973, during which the largest increases in the cost of imported oil took place.

The inflationary effects of these recent increases on the economies of Japan and Europe are already evident. As for the underdeveloped, non-oil producing nations, it is estimated that the additional cost of oil imports is likely to be so great as to outweigh the total amount of foreign aid they can anticipate. In such circumstances, even the United States is going to be forced to take a look at its books. According to the government's statistics, the value of the crude oil and products we imported in the first nine months of last year was nearly $5 billion, even before prices went through the ceiling. Can we afford the $15 to $20 billion now projected as our oil import bill this year? Not without serious repercussions on our trade balances and the rate of inflation to which we are going to be subjected.

Increased cost of refined products

Some of the product price increases which have followed the increases in crude prices I have noted have been, predictably, breathtaking. Because of the nature of trading in any commodity in international demand—with hundreds of sellers and even greater numbers of potential buyers—it is literally impossible to know even what an average price is at a given time. This is particularly true of the oil business. There are more players in the game than is the case in any other industry I could name. Just in the marketing end of the oil business, the participants range from the proprietors of individual service stations to national governments. As a result, trying to determine prices with any degree of exactness is like trying to generalize about weather. At any given point, it might be 15 degrees below zero in the Rockies and 50 above in Washington, with the rest of the country at various other levels depending on location and circumstances. You can develop a series of "average mean temperatures" for the United States, just as you can develop "average" prices for crude oil and refined petroleum products—either in the United States or abroad. But in the nature of things, such artificially calculated prices have to be used with caution, and they do not represent the true state of affairs in any given locality at any given time. However, they can serve to indicate trends.

In regard to prices for refined oil products, the trend is definitely upward, and *Appendix C* documents some of the changes we have been exposed to in the past year regarding overseas supplies. Subject to the caveats I have noted, the price trend has been clearly upward. On the basis of quoted prices, the wholesale cost of the gasoline available for export from Rotterdam, which is the main source of imports of finished products to the United States from Europe, roughly quadrupled last year. On an FOB basis, disregarding tanker rates, you could have contracted for some barge lots of premium-grade gasoline for about 15 cents a gallon at the start of 1973. By December, the reported price was over 50 cents a gallon—an increase of nearly 300 per cent, and the same was true in regard to regular grades. The quoted wholesale prices of low-sulfur heavy fuels increased even more rapidly. They rose from under nine cents a gallon (FOB) to nearly 50 cents a gallon.

With an increasing percentage of both crude and products coming from overseas, our domestic product prices also advanced, as indicated in *Appendix D*. During 1973, the weighted average price of gasoline used in the Consumer Price Index employed by the Bureau of Labor Statistics showed a rise from 37.3 to 44.7¢ per gallon in the case of gasoline, and from 19.8 cents per gallon to 29.1¢ in the case of Number 2 fuel oil. Overall, this represented an increase of nearly 20 per cent in the price of gasoline and 47 per cent in the case of fuel oil.

Appendix E shows the trends in domestic wholesale prices for refined products. Again, it is important to remember that these prices represent only spot sales, which are only a very small fraction of the total market since most sales are made on a contract basis. However, these spot sales indicate a clearly rising price trend. Between January and December of 1973, the wholesale price of premium grade gasoline rose from approximately 15 cents a gallon to around 25 cents—an increase of some 66 per cent. Regular grade motor fuel rose from

approximately 13 cents a gallon to about 23 cents—an increase of more than 75 per cent. The price of Number 2 fuel oil rose approximately 90 per cent, from roughly 11 cents a gallon in January to about 21 cents a gallon by December. These product prices reflect increases in crude oil costs which the Government allowed to be passed through as cost-justified price increases.

Arab oil production cutbacks

In the aftermath of the October war in the Middle East, the Arab oil exporting nations announced significant cutbacks in oil production, and these are detailed in *Appendix F*. With the single exception of Iraq, which has continued production at stable rates, the cutbacks have been generally observed.

Total production from this area in September of 1973 was at a level of approximately 20 million barrels a day. Reductions were announced in October, and throughout November and December production was reduced 25 per cent from the September levels in all the major Arab producing countries except Iraq. Saudi Arabia, Kuwait, Libya, Abu Dhabi and Algeria—plus a number of minor producing areas—all observed the restrictions. The result was a drop of approximately 5 million barrels a day in exports at a time when demand for oil was rising steadily throughout most of the world. Production in Iran, the only major non-Arab producing nation in the Middle East, has continued at high levels.

Effective in January, the Arab cutbacks were relaxed, but production was only restored to 85 per cent of the September levels, and there has been no indication when full production may be restored. As I noted earlier, there is little incentive to do so at this point, and a number of reasons not to do so.

Recent decline in U.S. petroleum imports

Even without the embargo on exports to the United States imposed by the Arab producing nations, this country would have felt the effects of the tightening in supplies abroad. However, it took some time before the effects became visible, in large part because of the 30 days required on the average to move cargoes from the Persian Gulf to U.S. ports. Shipments already under way were not affected by the embargoes.

Appendix G indicates the accumulating impact of the combined cutbacks and embargoes on U.S. petroleum imports. As we saw earlier, total U.S. imports of crude oil and refined products had risen steadily, year by year—nearly doubling between 1970 and 1973.

As the data indicate, our total imports reached a peak of 6,525,000 barrels a day in October of 1973, the month the cutbacks were announced. In November, the total volume declined to 6,281,000 barrels a day. Since then, imports have fallen to about 5,000,000 barrels a day. For the week ending on January 18 of this year, total import volume was only 4,982,000 barrels a day—a drop of about 30 per cent below the October level. The decline was in crude imports, which fell from 3,739,000 barrels a day in October to only 2,171,000 barrels a day—a drop of more than 40 per cent. The volume of refined product imports has remained relatively stable. On the basis of the most recent data available, product imports in the week ending January 18 averaged 2,811,000 barrels a day. This was slightly more than the October level, and only some 200,000 barrels a day below the peak level set to date. One of the major reasons for this better showing is that the partial restoration of Middle East production has freed supplies of refined products which otherwise would have moved to Europe from the Caribbean and other areas for use in the United States.

Nevertheless, the decline in total imports has serious implications, particularly since it had been the common assumption that we were going to be able to rely on foreign oil and products to close the widening gap between domestic supply and demand.

Reduction in rate of growth in U.S. oil consumption

All of these factors—declining domestic production, cutbacks in imports, rising product prices, plus appeals for voluntary conservation followed by mandatory product allocations—have operated to slow the rate of growth in U.S. oil consumption.

As can be seen in *Appendix H*, total domestic consumption of refined products in 1972 averaged 16,367,000 barrels a day. In 1973, it averaged only 17,215,000 barrels a day—an increase of less than one million barrels a day, and well below the growth rates of recent years.

The month-by-month comparisons show the impact of the tightening in supplies even more clearly. From January through October of last year, monthly consumption steadily exceeded the 1972 levels by substantial margins. By November of 1973, total consumption was only slightly above the November 1972 level. In December, consumption of 17.6 million barrels a day was more than one million barrels below the 1972 level of 18.7 million barrels a day.

An identical pattern can be seen in consumption of each of the major refined products—gasoline, middle distillates, and residual fuels. These are detailed separately in *Appendices I, J, and K.* In each case, the rate of growth in consumption slowed in November to about the level of the prior year, while December showed clear declines. Precisely how much of these declines to attribute to conservation, either voluntary or otherwise, how much to higher prices, and how much to physical shortages, is impossible to determine. In any event, the rates of growth to which we have been accustomed for so long have clearly been arrested.

Current U.S. petroleum inventories and near-term supply outlook.

This brings us to the question of what lies ahead. *Appendix L* summarizes our inventory position for the most recent period for which data are at hand. As of January 18, supplies of gasoline stood at 208 million barrels, or about 10 million barrels below the 1972 level. Inventories of jet fuel were slightly higher than they were at this point in 1972. Supplies of residual oil totaled 49 million barrels, slightly below the 53 million barrels in stock a year ago. Crude inventories amounted to 281 million barrels, or 5 million barrels less than we had at this point in 1972.

Only distillate inventories were significantly higher, with supplies of 188 million barrels on January 18 of this year versus 143 million barrels a year ago. Even this apparent margin is ephemeral, and results mainly from warmer-than-normal weather thus far. A severe cold spell in key consuming areas would draw down these inventories sharply in a very short period. If we exclude the temporarily high supplies of distillates from the calculations, our combined inventories of the remaining products and crude oil are actually some 16 million barrels lower than they were a year ago.

As for the outlook, there are nearly as many different predictions as there are forecasters. A great deal depends on the assumptions which go into the process. Within our own company, we have recently conducted a reappraisal of the prospects for 1974 and our projections point to continued shortages, although of different magnitudes depending on developments in the Middle East.

Assuming the selective oil embargo against the United States were to continue through 1974, we would expect the net shortage of crude and refined products to average approximately 2.5 million barrels a day for the full year. This is the estimated shortage compared with intrinsic demand—the quantities expected to be consumed if there were no restrictions on supply. According to our best estimates, it would be possible to offset this degree of shortages through a combination of voluntary and mandatory limits on consumption.

Assuming the embargo were to be lifted in mid-1974, it is our estimate that the shortage could be reduced to approximately 1 million barrels a day below intrinsic demand. If this were to be the case, most of the shortage could be offset through voluntary conservation efforts alone. While we would not have all the products we might want, it should be possible to get by with some determined belt-tightening.

Conclusion

I think recent events have underscored the dangers of any significant degree of reliance on foreign oil. In retrospect, it is clear that the nation narrowly avoided disaster through the decision by the President in 1970 not to accept the recommendations made by the Special Cabinet Task Force on Oil Import Controls. It was the recommendation of a majority of the Task Force that we adopt a tariff program giving preference to oil from certain foreign countries, with the objective of forcing an increase in the use of then lower-cost imported oil—while bringing about an initial reduction of about 30 cents a barrel in the price of domestic crude, with further reductions envisioned down the road.

Among the assumptions made by the Task Force were that total U.S. imports from the Eastern Hemisphere by 1980 would be no higher than 500,000 barrels a day if no change were made in the existing system. These low estimates of future reliance on the Eastern Hemisphere were linked with a series of very optimistic estimates of potential supplies available from other Western Hemisphere sources

considered to be secure. Yet within the span of only three years, we have seen U.S. dependency on Middle East oil rise to over 2 million barrels a day, while its price has soared. Had the Task Force recommendations been followed, our present energy crisis would be more severe.

Just what course the exporting nations will follow over the longer run remains to be seen. The Shah of Iran recently suggested to the Persian Gulf members of OPEC that they set an oil price which would correspond to the minimum price that would have to be paid for shale oil or for liquefied or gasified coal, and he estimated this to equate currently with a minimum of $7.00 a barrel in government take for the Middle East producers.

This would appear to be a rational proposal. The major barrier thus far to development of these non-conventional energy sources has been the economic differential between their estimated cost and the lower cost of conventional fuels which has prevailed. It is now clear that we are going to have to employ all of our potential resources, including coal and oil shale, and it is encouraging that both the Administration and the Congress are now preparing to move in this direction.

While conservation measures can assist greatly in easing the immediate pinch, the urgent need is to expand our energy supplies to prevent more drastic shortages in the years ahead. However, in order to meet our expanding energy needs it is going to be necessary to rely heavily on oil imports—particularly over the near-term—with serious consequences in terms of national security and monetary stability. In these circumstances, it is essential that we maximize the extent to which our needs can be met from secure sources, both by increased development of domestic supplies of all types, and by increased efficiency of energy use.

What concerns me particularly at this point is Congressional failure to address the real issues before us. Our paramount national objective at this juncture should be to take the necessary steps to insure that we can increase the supplies of energy available from reliable sources. All other considerations must rank behind this central priority, and it applies particularly in the case of oil—our key fuel. Events of the past year have demonstrated conclusively that the United States cannot be assured of unlimited supplies of foreign oil and that foreign suppliers are determined to exact a full price for their oil—which, in the long run will be measured by the cost of alternative sources of energy, such as synthetics. For both the short and long term, the oil shortage is real.

However, in recent hearings before various Committees of the Congress, the discussion has been concerned mainly with trying to find someone to blame for our current energy shortages and with debates over the present tax provisions affecting the petroleum industry. This is avoiding the real issue. The principal problem we should be addressing is not whether the oil industry, or any other industry, is currently paying the right amount of taxes—or who has contributed most to getting us into our present predicament. The real challenge is to take the actions needed to assure the flow of energy the American economy has to have to function. Unless we succeed in doing this, we are going to face a serious decline in tax revenues from *all* of the revenue sources on which the government relies to finance its activities.

Attempting to affix the blame for our present energy dilemma is a pointless endeavor, since all segments of society have contributed to it. The dangers of the course this nation has been following were spelled out in the Report of the President's Materials Policy Commission, the Paley Commission, submitted to President Eisenhower in June of 1953. As that report concluded:

> In area after area we encounter soaring demands, shrinking resources, the constant pressure toward rising real costs, the strong possibility of an arrest or decline in the standard of living we cherish and hope to share. As a Nation, we are threatened but not alert . . .

Part of the answer to the question as to why we disregarded this and other early signs of warning lies in the fact that, for generations, unlimited supplies of low-cost energy have been taken for granted in this country. It has become a cliche to note that with only six per cent of the world's population, the United States uses roughly one-third of the world's energy. It is difficult to convince people who have never been without fuel for their cars or heat and electricity in their homes that affluent America could really have an energy problem. The whole economy has been geared to provide ever-larger and more luxurious vehicles, more heat in the winter and more air-conditioning in the summer, and a range of power-consuming appliances that staggers even sophisticated Europeans.

Warnings that this joyride would have to come to an end have not been warmly received. For a number of years, spokesmen for the petroleum industry—my-

self included—have tried to call attention to what was happening. More often than not, such efforts were written off as self-serving, particularly since the only rational solutions we could see would lead to higher energy prices.

The oil industry can also be accused of a certain degree of over-optimism about its own affairs, although we could not reasonably have been expected to anticipate the impact on our operations of developments outside the industry and beyond our control. Five years ago, we were confident that oil would be moving to market from the Alaskan North Slope by now. In response to obvious needs for increased supplies of domestic oil and gas, we were convinced the frequency and size of federal offshore lease sales would be greatly increased. Not only did this fail to come to pass, but a number of operating leases in the Santa Barbara Channel were shut down in 1969 after an oil spill.

Nor did anyone foresee the full impact of the increasingly stringent environment control requirements adopted by the Congress in 1970. The net effect of these measures was to reduce the supplies of available fuels, while simultaneously increasing fuel demand. As for the latest round of hostilities in the Middle East and its disruptive effects on oil supplies, this caught nearly everyone by surprise.

But the major fault throughout has been the failure of the entire governmental structure either to prepare the nation for what it was going to face or to mobilize any effective response. Only the government has the capacity to shape and direct a genuine national effort to come to grips with the complex problems involved in the flow of energy.

As the Paley Commission report stated over twenty years ago:

> The Federal Government is not at present properly equipped to carry out its responsibilities for dealing single-mindedly with the many aspects of the problem. Dozens of Government organizations—departments and agencies, bureaus and offices, and interdependent committees—have an active concern in one or more aspects of the problem . . . some necessary jobs are not being done well enough; others are not being done at all; and the whole effort lacks sufficient coordination.

In most respects the report could have been written yesterday. Over the intervening twenty years, we have seen the world's leading energy producing and consuming country converted from our historic position of self-sufficiency into a candidate for membership among the have-not nations. All of us have helped contribute to this dilemma—government, industry, the media, and the public—and all of us are going to have to participate in efforts to work out a solution. Ex-post-facto attempts to assign culpability for what has happened will do nothing to get the nation back on the track.

While the problems of energy supply and demand are admittedly complex, our most pressing need is clearly to increase the supply. Measures which promise to help to increase energy supplies will serve the national interest; measures which will impede an increase in energy supplies, whatever other merits that may appear to have, will do the nation a profound and lasting disservice.

APPENDIX A

Estimated oil production income to exporting nations

[Dollars per barrel of equity crude*]

PERSIAN GULF ARABIAN LIGHT—34°

Pre November 14, 1970	$0.91
November 14, 1970	.98
January 1, 1971	.90
February 15, 1971	1.26
June 1, 1971	1.33
January 20, 1972	1.44
January 1, 1973	1.51
April 1, 1973	1.61
June 1, 1973	1.70
July 1, 1973	1.73
August 1, 1973	1.80
October 1, 1973	1.77
October 16, 1973	3.04
November 1, 1973	3.08
December 1, 1973	2.99
January 1, 1974	7.00

*Share of production owned by private operator.

APPENDIX A—Continued

VENEZUELAN OILS

1967–69	$0.95
1970 Average	1.08
1971 Average	1.80
1972 Average	1.62
(Period of sporadic increases)	
November 1, 1973	4.27
December 1, 1973	4.57
January 1, 1974	8.25

APPENDIX B

U.S. IMPORTS OF CRUDE OIL AND REFINED PRODUCTS

	1st 9 months			
	1973	1972	1971	1970
Million barrels per day:[1]				
Crude oil	3,205	2,122	1,569	1,322
Products	2,916	2,444	2,180	2,096
Total	6,121	4,566	3,749	3,418
Percent of domestic consumption	35.7	28.6	25.0	23.5
Value, millions[2] (excludes freight)	$4,982	$3,117	$2,384	$2,048
Per barrel	$2.98	$2.49	$2.33	$2.19
Percent increase versus prior year:				
Volume	34.1	21.8	9.7	.....
Value	59.8	30.7	16.4	.....
Effect on balance of trade versus prior year (millions)	($1,865)	($733)	($336)	.....

[1] Source: USBM.
[2] Source: "Survey of Current Business," Commerce Department.

APPENDIX C

PLATT'S IMPORT PRODUCT PRICES, 1973

[Barges f.o.b. Rotterdam; cents per gallon]

	Gasoline		Heavy fuel, 1 percent sulfur
	Premium	Regular	
January	14.7–15.0	12.5–12.9	8.6– 8.9
February	15.2–15.6	13.5–13.8	9.2– 9.7
March	17.0–17.8	15.0–15.5	8.8– 9.4
April	20.1–21.2	17.3–18.4	8.7– 9.1
May	26.0–27.8	23.0–24.8	9.5–10.1
June	30.4–32.4	27.0–29.2	10.1–10.6
July	28.0–29.4	25.3–26.8	9.3– 9.8
August	22.9–24.0	20.6–21.7	7.8– 8.5
September	23.5–24.5	21.6–22.2	8.4– 8.9
October	28.0–29.1	25.3–26.3	10.6–11.3
November	39.5–44.6	37.3–41.5	18.8–21.1
December	49.5–55.1	46.8–52.4	43.4–48.9

APPENDIX D

INCREASE IN U.S. REFINED PRODUCT PRICES

[Cents per gallon]

	Motor gasoline[1]	No. 2 fuel oil
December 1972	37.3	19.8
June 1973	40.1	22.1
December 1973	44.7	29.1
Percent increase, December 1973 versus December 1972	19.8	47.0

[1] Weighted average of regular and premium gasoline.

Source: BLS Consumer Price Index.

APPENDIX E

PLATT'S CHICAGO WHOLESALE PRICES

[Cents per gallon]

1973	100 octane, premium	94 octane, regular	No. 2 fuel oil	No. 6, maximum 1 percent sulfur
January	15.0–15.5	13.2–13.5	11.0–12.0	11.0–11.5
February	15.0–15.8	13.2–13.8	11.8–12.2	11.5
March	15.8	13.8	12.2–14.5	11.5–13.2
April	15.8–19.0	13.8–17.0	12.2–14.5	11.5–13.2
May	16.5–20.0	14.5–18.0	13.5–14.5	12.0–13.2
June	17.8–22.5	15.8–20.5	13.5–15.5	13.0–14.0
July	17.8–22.8	15.8–20.5	13.5–14.5	13.0–14.0
August	17.8–22.6	15.8–20.9	13.5–19.0	13.0–14.0
September	17.8–22.6	15.8–20.9	13.5–19.0	13.0–14.0
October	17.8–25.0	15.8–23.0	14.8–19.0	14.0–16.0
November	19.0–26.0	17.0–24.0	14.8–22.8	14.0–21.2
December	21.0–29.0	19.0–26.0	15.8–25.8	16.0–26.0

Note.—Most refined products sales are made on a contract basis. Hence, these published prices represent only a very small fraction of the market and, in some cases, may represent the price being offered for the last gallon.

APPENDIX F

ARAB OIL PRODUCTION

[In thousands of barrels daily]

	September 1973	Percent reductions versus September: November/ December 1973	Percent reductions versus September: January 1974
Saudi Arabia	8,291	−25	−15
Kuwait	3,237	[1] −25	[1] −15
Iraq	2,116	[2]	[2]
Abu Dhabi	1,398	−25	−15
Neutral zone	528	−25	−15
Qatar	609	−25	−15
Oman	302	−25	−15
Dubai	273	−25	−15
Bahrain	68	−25	−15
Libya	2,286	−25	−15
Algeria	[3] 1,050	−25	−15
Egypt	[3] 195	[4]	[4]
Syria	[3] 150	[4]	[4]
Total	20,503		

[1] Base for reduction is 3,000,000 barrels daily.
[2] No cutback.
[3] Estimate.
[4] Unknown because of war damage.

Source: Petroleum Intelligence Weekly.

APPENDIX G

DECLINE IN U.S. PETROLEUM IMPORTS

[In thousands of barrels daily]

	Crude oil	Refined products	Total
October 1973 [1]	3,739	2,786	6,525
November 1973 [2]	3,266	3,015	6,281
Week ending: [2]			
Dec. 7, 1973	3,427	2,780	6,207
Dec. 14, 1973	3,005	2,938	5,943
Dec. 21, 1973	2,561	2,989	5,550
Week ending: [2]—Continued			
Dec. 28, 1973	2,679	7,267	5,446
Jan. 4, 1974	2,591	3,045	5,636
Jan. 11, 1974	2,347	2,612	4,959
Jan. 18, 1974	2,171	2,811	4,982

[1] Source: USBM.
[2] Source: API.

APPENDIX H

TOTAL DOMESTIC CONSUMPTION OF REFINED PRODUCTS

[In thousands of barrels daily]

	1973	1972		1973	1972
January	18,667	16,735	August	17,438	15,936
February	18,941	17,861	September	16,620	15,489
March	17,193	16,870	October	17,080	16,445
April	15,935	15,529	November	17,735	17,610
May	16,603	14,801	December	17,662	18,738
June	16,471	15,615			
July	16,387	14,821	Year	17,215	16,367

Source: USBM—1972, 10 mos. 1973; API—2 mos. 1973.

APPENDIX I

GASOLINE CONSUMPTION

[In thousands of barrels daily]

	1973	1972		1973	1972
January	6,157	5,589	August	7,311	6,986
February	6,481	5,755	September	6,625	6,498
March	6,555	6,467	October	6,728	6,404
April	6,584	6,332	November	6,582	6,516
May	6,958	6,490	December	6,168	6,414
June	7,009	6,872			
July	7,062	6,722	Year	6,671	6,422

Source: USBM—1972, 10 mo 1973; API—2 mo 1973.

APPENDIX J

MIDDLE DISTILLATE CONSUMPTION

[In thousands of barrels daily]

	1973	1972		1973	1972
January	5,650	5,125	August	3,750	3,181
February	5,718	5,674	September	3,909	3,438
March	4,508	4,773	October	4,161	4,168
April	3,824	3,939	November	4,522	4,718
May	3,897	3,393	December	4,898	5,628
June	3,537	3,473			
July	3,522	2,857	Year	4,318	4,217

Source: USBM—1972, 10 mo 1973; API—2 mo 1973.

APPENDIX K

RESIDUAL FUEL CONSUMPTION

[In thousands of barrels daily]

	1973	1972		1973	1972
January	3,262	2,815	August	2,714	2,257
February	3,305	3,171	September	2,667	2,239
March	3,071	2,682	October	2,532	2,362
April	2,472	2,444	November	2,827	2,843
May	2,518	2,111	December	2,979	3,151
June	2,602	2,196			
July	2,430	2,107	Year	2,775	2,529

Source: USBM—1972, 10 mo. 1973; API—2 mo. 1973.

APPENDIX L

U.S. INVENTORIES

[In millions of barrels]

	Week ending	
	Jan. 18, 1974	Jan. 19, 1973
Motor gasoline	208	218
Jet fuel	28	25
Distillates	188	143
Residual	49	53
Crude oil	231	236

Source: API.

The CHAIRMAN. The next witness is Robert G. Dunlop.

STATEMENT OF ROBERT G. DUNLOP, CHAIRMAN, SUN OIL CO., IN BEHALF OF THE AMERICAN PETROLEUM INSTITUTE, MID-CONTINENT OIL & GAS ASSOCIATION, ROCKY MOUNTAIN OIL & GAS ASSOCIATION, AND WESTERN OIL & GAS ASSOCIATION

Mr. DUNLOP. Mr. Chairman, good morning. I am Robert G. Dunlop, chairman of Sun Oil Co., St. Davids, Pa., and I am appearing today on behalf of the American Petroleum Institute, the Mid-Continent Oil & Gas Association, the Rocky Mountain Oil & Gas Association and the Western Oil & Gas Association.

The United States has entered a new era in energy supply. The outlook for continuing restrictions on Middle East oil production, and higher prices for what is available, requires an immediate and massive acceleration of domestic energy development.

The events detailed by Mr. Swearingen demonstrate conclusively the risks inherent in relying heavily upon foreign sources of oil. These recent developments are only the latest in a long series of major supply interruptions since World War II.

Even if the present Arab embargo is ended, it is my company's view that there is no substantial likelihood that Middle East production will be restored to levels that would result in a return to the days of cheap foreign oil. The resulting prospect of sharp increases in the world's oil import bill poses grave questions for international monetary affairs.

William I. Spencer, president of the First National City Bank in New York, pointed out in testimony before the House Ways and Means Committee last March that the U.S. oil import bill could rise from the $8 billion level to the $20 billion by 1980. Events since that time have greatly magnified the problem. The First National City Bank suggested last month that industrialized countries as a group will have to pay an additional $50 billion for imported oil in 1974, with the United States paying an additional $10 billion; 1980 is here today.

There will be an explosive growth in income for member nations of the Organization of Petroleum Exporting Countries. Some of these OPEC nations will be accumulating reserves of such dimension that they cannot possibly be absorbed internally, and must be invested abroad.

This poses potentially serious questions for the United States, as Mr. Spencer noted in his March testimony:

. . . U.S. investments of such magnitude by the oil-exporting countries could raise problems depending upon the nature of the investments. Would they be debt or equity, portfolio or direct, in what industries, and with how much control? . . .

It is apparent that the United States can no longer accept the risks inherent in depending upon foreign sources for energy that is needed for economic, military, and diplomatic security. The only means of avoiding such dependence is large-scale development of America's rich energy resources.

We must aim toward reaching as quickly as possible that degree of self-sufficiency that will enable our country to avoid damage to our economy and our defense and diplomatic posture in the event foreign oil is denied to us.

Whatever the proper target figure or figures are, whether 85 percent, 90 percent or some other number, it is clear that we are now far short of where we should be. In 1973, over one-third of our petroleum needs were met by imports, and the present trend is toward ever-increasing, more dangerous dependence on foreign supplies. This is unacceptable.

What must be done to achieve a secure level of self-sufficiency?

The answer to this question has been detailed before Congress in terms of exploring for and developing new oil and gas reserves, constructing shale oil plants, coal liquefaction and coal gasification facilities, geothermal and nuclear power facilities, and opening new coal mines. Today, I want to stress the financial side of this challenge—the staggering size and scope of the investment job we face.

In a comprehensive study completed in 1972, the National Petroleum Council suggested that the total capital requirements of all the domestic energy industries would amount to more than $500 billion over the 1971 to 1985 period, measured in 1970 dollars. This is equivalent to some $34 billion annually.

The CHAIRMAN. If I might just stop you there, if you are going to measure that in 1973 dollars that is about $600 billion, is it not?

Mr. DUNLOP. Or possibly $650 billion at this point in time and that would assume no further inflation, which would be a questionable assumption at this point in time.

The CHAIRMAN. Yes; that is correct.

Mr. DUNLOP. This is equivalent to some $34 billion annually—for 15 years—substantially more if inflation is taken into account. The entire Apollo space program cost in the range of $25 billion.

The NPC further suggested that the petroleum industry alone would require more than $250 billion over the period for investment in conventional and synthetic fuels development in the United States. This works out to be an average annual investment of some $17 billion, without allowing for inflation, which is more than double the annual average for the previous decade.

In contrast to these capital needs, the capital availability picture is a quite different one. At the same time that investment requirements have been rising sharply, the ability of the industry to attract the needed funds, has, prior to 1973, been severely hampered by below-average profitability. There has been a widening gap between capital needs and earnings.

The industry has had to turn increasingly to borrowing. Long-term debt has been rising steadily, but the sobering fact is that in a high-risk

activity like petroleum development, there is a point at which debt levels impact on investor confidence.

Improved earnings are the key to securing the vast amounts of capital that the industry will require. Mr. True will comment in some detail on the current earnings situation, but let me mention briefly two points that are pertinent to the matter of petroleum industry profits and the capital needs projections I have described.

One problem is that the statement of profits in current dollars gives no recognition to the impact of inflation over the past two decades. Current charges for depreciation will in no way cover the cost of replacing physical facilities built in earlier years. This inflation problem is particularly troublesome for capital-intensive industries like petroleum which are characterized by costly, long-lived facilities.

Another consideration is that energy is an increasingly costly business. Current profits are based on historical costs and do not reflect the far higher expenditures needed to develop new supplies to replace the existing reserves being consumed currently.

The petroleum industry must be permitted to earn profits that will enable it to compete effectively with other industries for the capital that it requires. However, the record of the past decade shows that the industry had not been earning such a competitive return. That fact is at the heart of the grave energy problem we now face.

Against this background, I will conclude my testimony with a discussion of policy considerations and of recommended actions for rebuilding the energy self-sufficiency of the United States.

First, however, I want to urge as strongly as possible that all of us work together—I repeat, that all of us work together—to bring to an end the continuing search for scapegoats on which the energy crisis can be blamed. The current problem is real. It can be solved only with a maximum effort, and this will require a foundation of mutual confidence between business and government.

In broad perspective, the overriding need is for the development of a coordinated set of national energy policies. We cannot afford to continue dealing with energy issues on a piecemeal basis, for in attempting to solve one problem in isolation we create others. All of the issues—economic incentives, environmental concerns, tax considerations—are closely interrelated and can be dealt with effectively only on the basis of coordinated policies.

Our specific recommendations fall into three broad areas. In the first area, that of providing an economic climate supportive of energy development, there are two major recommendations: (1) to remove restraints on price in an orderly manner, and (2) to maintain tax policies that support and encourage investment.

It is essential that petroleum price controls be phased out, in an orderly manner, that there be a clear commitment to do this upon which the industry and investors can rely, and that natural gas prices be deregulated and decontrolled. Failure to take these actions will cripple the national effort to accelerate the development of domestic energy supplies.

Similarly, tax policy must support and encourage investment in the energy industries. This means (1) that profits vital to energy development not be taxed away; (2) that tax policies which have proven to be effective incentives be continued; and (3) that taxation of foreign income continue to recognize the need for U.S. companies to be able

to compete effectively with foreign companies in the development of overseas resources.

In the area of required affirmative actions by Government, I have three recommendations for your consideration.

First, that the leasing of Federal energy lands be accelerated. A major share of the domestic petroleum yet to be developed is believed to be on the Outer Continental Shelf, while virtually all of the high-potential oil shale areas are also under Federal ownership.

Second, we urge the Federal Government to take the lead in assuring that a proper balance is maintained among environmental and energy goals. The balance we seek is not one that sacrifices environmental goals, but one that carefully weighs costs against benefits and permits energy development to proceed with proper environmental safeguards.

Third, we recommend that Government provide a substantially higher level of financial support for research and experimentation in developing new energy sources, including loan guarantees for initial commercial projects.

The final area of required action is that of petroleum industry response to the new climate that would result from the above recommendations. Here I think two responses are particularly significant.

One is in the area of capital investment, where the industry must assure that if funds are made available they will be invested in energy development and in the processing, transportation and other facilities that are essential to increased U.S. self-sufficiency. It is my observation, buttressed by recent announcements of capital spending plans for 1974, that the industry is fully committed to such investment. Speaking for my own company, Sun's proposed capital spending for 1974, some $650 million or more, will be almost double 1973 outlays.

Also, I think the industry must broaden the horizons of its thinking about synthetic fuels development. A truly massive research and development effort will be required to build these fuels into significant contributors to U.S. energy supply.

The commitment of the industry to do precisely this is demonstrated by its response to the recent oil shale lease sale. Two companies represented on this panel today—Gulf and Indiana Standard—invested over $200 million in the winning bid for the acreage offered—and this is only the beginning investment in what will surely prove to be a very costly project.

The United States has entered into a new era in energy supply. The needed supplies can be brought forth. Private industry can get the job done, if the Government will provide coordinated national policies and give its approval to an economic climate that will allow the energy industries to generate and attract from investors the required capital.

Thank you very much.

The CHAIRMAN. Thank you, Mr. Dunlop.

[The prepared statement of Mr. Dunlop follows:]

PREPARED STATEMENT OF ROBERT G. DUNLOP, CHAIRMAN, SUN OIL COMPANY, IN BEHALF OF THE AMERICAN PETROLEUM INSTITUTE, THE MID-CONTINENT OIL AND GAS ASSOCIATION, THE ROCKY MOUNTAIN OIL AND GAS ASSOCIATION, AND THE WESTERN OIL AND GAS ASSOCIATION

SUMMARY

1. The United States has entered a new era in energy supply. The outlook for continuing restrictions on Middle East oil production, and higher prices for what

is available, require an immediate and massive acceleration of domestic energy development.

2. The 1973 crude production cutbacks by Arab exporting countries and embargo of petroleum shipments to the United States and the Netherlands are only the most recent of a long series of post-World War II interruptions in international petroleum movements. However, now there is no spare U.S. productive capacity to offset the substantial import shortfall.

3. The prospect of sharp increases in the world's oil import bill, including the U.S.'s share, poses grave questions for international monetary affairs. Most significant is the balance of payments impact, with the attendant shift of economic power to the oil exporting countries.

4. The United States can no longer accept the risks inherent in depending upon foreign sources for energy that is needed for economic, military, and diplomatic security. We must aim toward reaching as quickly as possible that degree of self-sufficiency that will enable our country to avoid damage to our economy and defense and diplomatic posture in the event foreign oil is denied to us. It is clear that we are now far short of where we should be.

5. The major challenge we face is the challenge of providing the investment dollars essential to carrying out the necessary exploration and development, construction of facilities, opening of mines—all the projects that will be necessary to return the country to a safe level of energy self-sufficiency. Unprecedented amounts of capital, hundreds of billions of dollars, will be required over the next 10 to 15 years.

6. Improved earnings are the key to securing the capital the petroleum industry will require. It is essential that the industry be permitted to earn profits that will enable it to compete effectively with other industries for the capital it needs. Competitive profits will have to take into account the particularly adverse effect of inflation on an industry characterized by costly, long-lived facilities and the fact that the replacement cost of new supplies will be substantially higher than the historical cost of existing reserves being consumed currently.

7. Restrictions on the ability of the petroleum industry to earn adequate profits over the past decade or more are at the heart of the grave energy problem we now face.

8. In the short-term, the degree of self-sufficiency we seek is not attainable. It is important that the country continue to have access to foreign production and that we diversify our foreign sources. This makes essential the continuing participation of U.S. companies in the development of foreign petroleum.

9. The overriding need is for the development of a coordinated set of national energy policies. We must recognize that all of the energy issues—economic incentives, environmental concerns, conservation measures, tax considerations—are closely interrelated and cannot be dealt with on a piecemeal basis.

10. Essential measures to provide an *economic climate* supportive of energy development include removal of restraints on price in an orderly manner; and tax policies that support and encourage investment.

11. Required *actions by government* include acceleration in the leasing of Federal energy lands; assurance of a proper balance among environmental and energy goals; and a higher level of financial support for energy research and experimentation.

12. If the essential economic climate exists and the necessary government actions are taken, the *industry will respond* by doing its part in developing the energy supplies we all seek.

STATEMENT

I am Robert G. Dunlop, Chairman of Sun Oil Company, St. Davids, Pa., and I am appearing today on behalf of the American Petroleum Institute, the Mid-Continent Oil and Gas Association, the Rocky Mountain Oil and Gas Association and the Western Oil and Gas Association.

My statement relates primarily to the areas of domestic energy security, petroleum capital requirements and national energy policy.

The United States has entered a new era in energy supply. The outlook for continuing restrictions on the Middle East oil production, and higher prices for what is available, requires an immediate and massive acceleration of domestic energy development. To make this possible, our Nation must adopt coordinated national policies that will enable the energy industries to generate and to attract from investors the tremendous amounts of capital that are essential to strengthening U.S. self-sufficiency in fuel supply.

The events detailed by Mr. Swearingen demonstrate conclusively the risks inherent in relying heavily upon foreign sources of oil. These recent developments are only the latest in a series of major supply interruptions. In fact, testimony before the House Committee on Ways and Means in March, 1973, detailed 11 interruptions in international petroleum movements from the end of World War II until late 1971. It is worth taking a moment today to bring that listing up to date.

The first interruption occurred at the start of the 1948 Arab-Israeli war when Iraq shut down a pipeline to the Mediterranean. During the 1956–57 Arab-Israeli conflict, the Suez Canal was closed, but subsequently reopened. At the start of the 1967 Arab-Israeli war, crude production was temporarily halted by Arab producers, the Trans Arabian pipeline was shut down and the Suez Canal was blocked—and remains closed today. Most recently, the October, 1973, Arab-Israeli conflict resulted in crude production cutbacks by Arab exporting countries and embargo of petroleum shipments to the United States and the Netherlands.

Up to and including the 1967 Arab-Israeli war, the United States had sufficient spare petroleum production and distribution capacity not only to cover its own shortfall but also to export crude oil and products to other nations denied normal supplies.

In a 1967 speech, I pointed out that as a result of the 1967 Middle East fighting, and an unrelated civil war in Nigeria, more than 10 million barrels per day of oil suddenly wasn't available. In the face of this crisis, during the four months of June, July, August and September 1967, the United States exported 17 million barrels of crude oil to the United Kingdom and 6½ million barrels to other free world countries. At the same time, we overcame a deficiency of 27 million barrels in our own imports from the Middle East.

However, I went on to say this:

> Without significant improvements in the industry's economic circumstances, it can be expected to produce at rates that increasingly press upon the total capacity as time goes by, with the result that future crises will likely find it incapable of meeting emergency needs at home or abroad. Unless there is a change in the economic climate in which our industry operates, and soon, we face the stark fact that the last crises we met with distinction was the last crises we will be capable of meeting with distinction.

Today, our Nation is once again confronted with a massive interruption in imported oil supplies, but there is no spare productive capacity to offset the import shortfall. And that shortfall is substantial.

Prior to the war and the subsequent embargoes, it had been estimated that the U.S. would require total imports of 7.4 million barrels daily in 1974, or 40 per cent of required oil supply.

The actual situation today is that the direct embargo of Arab oil exports and the related cut-off of refined product imports is denying the United States imports of some 2.5 million barrels daily.

Apparently as a result of diplomatic efforts to resolve the Arab-Israeli conflict, the Arab nations have not put into effect all previously threatened production cut-backs and it seems possible that they may institute partial resoration of pre-embargo crude producion rates. However, even if the embargo is ended, it is my Company's view that there is no substantial likelihood that Middle East production will be restored to levels that would result in a return to the days of "cheap foreign oil."

The prospect of sharp increases in the world's oil import bill poses grave questions for international monetary affairs.

Most significant is the balance of payments impact. William I. Spencer, President of the First National City Bank of New York, pointed out to the House Ways and Means Committee last March that the U.S. oil import bill could rise from the $8 billion level to $20 billion by 1980. And he went on to say that this would "necessitate a drastic reappraisal of our entire international payments prospect, as well as of our energy production outlook."

Events since that time have greatly magnified the problem. The First National City Bank suggested last month that industrialized countries as a group will have to pay *an additional $50 billion* for imported oil in 1974. On the assumption that the oil price increases will stick, but that oil shipments will return to more normal levels, the Bank says the U.S. will pay an additional $10 billion, or 14 per cent of its total merchandise import bill in 1974, with Japan and Western European nations feeling a much sharper impact.

A second major consideration is the anticipated explosive growth in income for member nations of the Organization of Petroleum Exporting Countries. A

year ago, it was estimated that as much as $45 billion could be flowing into some half-dozen of those oil exporting countries by 1985. Events of the past few months assure now that the figure will be sharply higher.

Whatever the precise level, some OPEC nations will be accumulating reserves of such dimension that they cannot be absorbed internally, and must be invested abroad. A recent report by the Organization for Economic Cooperation and Development (OECD) had this comment about the situation: ". . . the oil producing countries are only likely to spend a fraction of their increased revenues on imports. What they do not spend they will likely invest in one way or another in the money and capital markets of the OECD countries. In the longer run, this may raise problems in finding investment outlets which are satisfactory to both parties (and on which the availability of oil supplies may partly depend) . . . there will be important questions about what form this investment takes, as it may increase the volatility of international capital flows, and also where it occurs. . . ."

The point bears reemphasis. As Mr. Spencer said in March, 1973: ". . . U.S. investments of such magnitude by the oil-exporting countries could raise problems depending upon the nature of the investments. Would they be debt or equity, portfolio or direct, in what industries, and with how much control? . . ."

Against this background of supply restrictions, rising foreign oil prices, and balance of payment problems with the attendant shift of economic power to the oil exporting countries, it is apparent that the United States can no longer accept the risks inherent in depending upon foreign sources for energy that is needed for economic, military and diplomatic security. Just as clear is the simple fact that the only means of avoiding such dependence is large-scale development of America's rich energy resources.

The target of this expanded effort need not be absolute, 100 per cent self-sufficiency.

I cannot now state a precise percentage figure as a self-sufficiency target, for this involves both the future mix of our energy supplies and variables of supply, demand and price that in the immediate situation are difficult to predict. I can say that we must aim toward reaching as quickly as possible that degree of self-sufficiency that will enable our country to avoid damage to our economy and our defense and diplomatic posture in the event foreign oil is denied to us. Thus, we can afford to import only that portion of our supply which could be offset by interim, short-term conservation measures in emergency periods. However, we must have in place the proven technology and ability to rapidly bring on stream our full energy requirements.

Whatever the proper target figure or figures are, whether 85 per cent, 90 per cent or some other number, it is clear that we are now far short of where we should be. In 1973, over one-third of our petroleum needs were met by imports, and the present trend is toward ever-increasing, more dangerous dependence on foreign supplies. This is unacceptable.

What must be done to achieve a secure level of self-sufficiency?

In March, 1973, testimony before the House Ways and Means Committee, Bob R. Dorsey, Gulf Oil Chairman, detailed what must be done in terms of exploring for and developing new oil and gas reserves, constructing shale oil plants, coal liquefaction and coal gasification facilities, geothermal and nuclear power facilities, and opening new coal mines.

He went on to point out that these are not alternative actions, but that *all* of these forms of energy must be developed to meet rising U.S. needs. And this points up the major challenge that we face today—the challenge of providing the investment dollars that are essential to carrying out exploration and development, building these facilities and opening these mines. The size and scope of this investment job: are staggering.

Current projections of energy capital requirements vary in accordance with the technical assumptions on which they are based. But all reach the common conclusion that petroleum and the other energy industries will require vast amounts of capital. The following representative projections indicate the magnitude of requirements.

In a comprehensive study completed in 1972, the National Petroleum Council (which assumed that foreign oil would be freely available and would serve as the swing fuel to take up the slack as shortages developed) suggested that the total capital requirements of the domestic energy industries would amount to more than $500 billion over the 1971 to 1985 period (expressed in 1970 dollars). (See NPC Table 20 attached.) This is equivalent to some $34 billion annually—substantially more if inflation is taken into account. Helping to put this figure

into perspective is the fact that the entire Apollo space program cost in the range of $25 billion. So the domestic energy industries must invest funds equivalent to one and one-half Apollo programs for each year of the 15-year period.

Within this total picture, the Council further suggested that the petroleum industry alone would require more than $250 billion over the period for investment in conventional and synthetic fuels development. This works out to an average annual investment of some $17 billion, without allowing for inflation, which is more than double the annual average for the previous decade.

More than half of this petroleum industry total—some $140 to $170 billion—would be invested directly in searching for and developing new reserves of oil and natural gas.

On a broader basis, the Chase Manhattan Bank has estimated that worldwide petroleum industry financial requirements will amount to a staggering $1,350 billion over the period 1970 to 1985.

Some $450 billion of this total will be capital investment required for exploration and development of conventional oil and gas supplies. Another $360 billion would be capital invested in refineries, tankers, pipeline and other facilities. The remainder is allocated to other financial needs—debt service, enlarged working capital and dividends.

In contrast to these capital needs, the capital availability picture is a quite different one. At the same time that investment requirements have been rising sharply, the ability of the industry to attract the needed funds has, prior to 1973, been severely hampered by below-average profitability. There has been a widening gap between capital needs and earnings.

The Chase Bank has placed these trends in perspective in these words:

"Normally, net income should be the most important source of the funds needed for these (capital) purposes. But as a result of their continuing weak performance, earnings provided no more than 32 per cent of the money available in 1972. They provided 35 per cent the year before, and several years ago they were the source of nearly 50 per cent."

Unable to generate sufficient income to keep pace with rising capital needs, the industry had to turn increasingly to borrowing. Long-term debt has been rising steadily, and at the close of 1972 totaled $21 billion for the thirty oil companies surveyed by the Chase Bank. This was equivalent to more than 30 per cent of invested capital, or double the 15 per cent ratio of 10 years earlier. The sobering fact about this is that in a high-risk activity like petroleum development, there is a point at which debt levels impact on investor confidence. And there is increasing evidence that this point is being reached in the petroleum industry.

Mr. Spencer commented on this in his testimony last March. Noting that many companies were borrowing heavily, he went on to say: ". . . bond buyers and equity underwriters begin to look askance at a company that makes too many trips to the public fountain. Their disapproval is most marked for companies engaged in hydrocarbon exploration or unproven methods of generating electric power—or other activities where the outlays are especially large and the risks especially high."

In brief, improved earnings are the key to securing the vast amounts of capital that the petroleum industry will require in the future. While Mr. True will comment in some detail on the current earnings situation, I do want to mention briefly two points that are particularly pertinent to the matter of petroleum industry profits and the capital needs projections I have described.

One problem is that the statement of profits in current dollars gives no recognition to the impact of inflation over the past two decades. Briefly, current charges for depreciation, based on historical costs, will in no way cover the cost of replacing physical facilities built in earlier years. To duplicate a refinery that cost $100 million 20 years ago could cost close to $200 million today. While this inflation problem is one that affects all industry, it is particularly troublesome for capital-intensive industries like petroleum which are characterized by costly, long-lived facilities.

Another consideration is that current profits should be appraised in the light of steadily increasing costs for developing new supplies of petroleum. It is a fact that the lowest-cost oil and gas have already been developed. As these supplies are produced and consumed, they must be replaced. The replacement cost for new supplies will be far higher than the historical cost of existing reserves being consumed currently. Exploratory efforts must be increasingly concentrated in offshore and other areas where access is difficult, where wells must go deeper, and where operating costs are higher. The cost of a single 100,000

barrel per day synthetic crude project could run as high as $1 billion. Reported industry profits are based on historical costs and do not take into account these much higher replacement costs. Current prices must be adequate to cover replacement costs.

It is essential that the petroleum industry be permitted to earn profits that will enable it to compete effectively with other industries for the capital that it requires. That required capital is enormous, but given the profits it can and will be provided by the industry and the capital markets. As Mr. Spencer stated, from the banker's viewpoint, " . . . we tend to be optimistic . . . in terms of the ability of free societies to raise capital for economically viable operations."

I suggest to you that objective analysis of the record of the past decade shows clearly that the petroleum industry had not been earning such a competitive return. And that fact is at the heart of the grave energy problem we now face.

Before leaving the capital needs issue, I want to make one additional point relating to foreign investments by U.S. petroleum companies. In the short-term, we must realistically face the fact that the degree of self-sufficiency we seek is not immediately attainable. We are now playing catch-up, and energy development takes time. Since we must continue to rely heavily on imported oil for the immediate future, it is important that we continue to have access to foreign production. And we need to diversify foreign sources as rising world demand intensifies pressures on available supply. This makes essential the continuing participation of U.S. companies in the development of foreign petroleum.

My own company's experience supports this position. Sun is basically a domestic company, with its investment base largely concentrated in North America. Even so, it has been necessary for us in the past decade to move increasingly into foreign petroleum exploration. We have been forced to do this in an effort to acquire additional crude oil supplies for our refineries, since domestic exploration opportunities were limited. If the tax laws were changed, as some have urged, to make it uneconomic for Sun to continue its foreign exploration efforts, or to make it impossible for us to compete with the oil companies of other countries, the effect would be less crude for our refineries and less product for U.S. consumers.

Against this background, I will conclude my testimony with a discussion of policy considerations and of recommended actions that are essential to rebuilding the energy self-sufficiency of the United States.

First, however, I want to urge as strongly as possible that all of us work together to bring to an end the continuing search for scapegoats on which the energy crisis can be blamed. It is my personal view that in one sense all of us, individuals and institutions alike, share responsibility for the problem. We were all slow to perceive the rapidity with which energy surfeit was changing to energy scarcity.

In any case, the current problem is a real one. Rhetoric and recrimination serve only to divert attention from the major issues, and to impede our efforts to deal with the problem. It is time now for all of us to get on with the job we have to do.

In broad perspective, the overriding need is for the development of a coordinated set of national energy policies. We simply cannot afford to continue dealing with energy issues on a piecemeal basis, for in attempting to solve one problem in isolation we create others. What we need to recognize is that all of the issues—economic incentives, environmental concerns, tax considerations—are closely interrelated, and, therefore, can be dealt with effectively only on the basis of coordinated policies.

Our specific recommendations fall into three broad areas: (1) measures to provide an *economic climate* supportive of energy development: (2) specific *actions by government* that are essential to developing domestic resources; and (3) *petroleum industry responses* that will get the job done.

In the first area, there are two major recommendations: one, to remove restraints on price in an orderly manner, and two, to maintain tax policies that support and encourage investment.

In a private enterprise economy, when shortages develop, the role of price is to stimulate new supply. When prices are controlled, however, shortages persist and worsen, and market relationships become badly distorted. This is precisely what is happening today in respect to petroleum fuels. The fact that 20 years of natural gas price control, supposedly in the interest of consumers, has created a situation where many consumers cannot obtain gas at any price clearly demonstrates the problem. Low gas prices have also impacted severely on other fuels, driving coal out of many markets and holding oil prices at depressed levels, thereby weakening the overall U.S. energy situation.

It is essential that petroleum price controls be phased out in an orderly manner, that there be a clear commitment to do this upon which the industry and investors can rely, and that natural gas prices be deregulated and decontrolled. Failure to take these actions will cripple the national effort to accelerate the development of domestic energy supplies.

Similarly, tax policy must support and encourage investment in the energy industries. Specifically, this means (1) that profits vital to energy development not be taxed away; (2) that tax policies which have proven to be effective incentives be continued; and (3) that taxation of foreign income continue to recognize the need for U.S. companies to be able to compete effectively with foreign companies in the development of overseas resources. I will not elaborate on these recommendations since Mr. Henry will cover the tax area in detail.

In the area of required affirmative actions by government, I have three recommendations for your consideration.

First, it is vital that leasing of Federal energy lands be accelerated. A major share of the domestic petroleum yet to be developed is believed to be on the outer continental shelf, while virtually all of the high-potential oil shale areas are also under Federal ownership. Good progress was made in stepping-up the leasing of offshore areas during 1973, and the new prototype oil shale leasing program this year is a major step forward. But both the frequency of lease sales and the acreage offered need to be further increased.

Second, we urge the Federal government to take the lead in assuring that a proper balance is maintained among environmental and energy goals. Environmental concerns have already impacted seriously on energy supply through slowing the Alaska pipeline, restricting offshore development and impeding the siting of refineries and nuclear power plants. They are also blocking the broader utilization of our vast coal reserves, which are the key to immediate, large-scale expansion of domestic fuel supply. The balance we seek to correct this situation is not one that sacrifices environmental goals, but one that carefully weighs costs against benefits and permits energy development to proceed with proper environmental safeguards.

Third, we recommend that government provide a substantially higher level of financial support for research and experimentation in developing new energy sources, including loan guarantees for initial commercial projects. It will be difficult to obtain entirely from private investors the very large amounts of capital needed for research and development on synthetic fuels from coal and shale and for longer-range nuclear and solar energy capabilities. Government support could help bring these technologies to the point from which private companies could move into major commercial-scale production.

The final area of required action is that of petroleum industry response to the new economic climate that would result from the above recommendations. Here I think that two responses are particularly significant.

One is in the area of capital investment, where the industry must assure that the available funds are in fact invested in energy development and in the processing, transportation and other facilities that are essential to increased U.S. self-sufficiency. It is my observation, buttressed by recent announcements of capital spending plans for 1974, that the industry is fully committed to such investment. This commitment was strongly reflected in the survey of petroleum companies conducted by Senator Bartlett last fall. In answer to his question as to how increased cash flow resulting from removal of price controls would be utilized, the great majority of the 115 companies responding said "vitually all or 100 per cent" would be used to increase domestic energy capability. Speaking for my company, Sun's proposed capital spending for 1974, some $650 million or more, will be almost double 1973 outlays.

Also, I think the industry must broaden the horizons of its thinking about synthetic fuels development. A truly massive research and development effort will be required to build these fuels into significant contributors to U.S. energy supply. And while government financial support is essential, the petroleum industry must shoulder the major share of the costs.

The commitment of the industry to do precisely this is demonstrated by its response to the recent oil shale lease sale. Two companies represented on this panel today—Gulf and Indiana Standard—invested over $200 million in the winning bid for the acreage offered—and this is only the *beginning* investment in what will surely prove to be a very costly project.

In closing, I repeat that the United States has entered a new era in energy supply.

. . . We can no longer depend upon foreign sources for energy necessary to our military and economic security.

. . . We must accelerate the development of our domestic resources to achieve a degree of self-sufficiency that will enable our country to avoid damage to its economy, its defense posture, and its diplomatic independence in the event foreign oil is denied to us.

. . . To achieve this, we wust adopt coordinated national policies and provide the kind of economic climate that will permit the energy industries to generate and attract from investors the capital necessary to get the job done.

U.S. ENERGY OUTLOOK (SUMMARY), NATIONAL PETROLEUM COUNCIL, DECEMBER 1972

TABLE 20.—SUMMARY OF CUMULATIVE CAPITAL REQUIREMENTS, U.S. ENERGY INDUSTRIES, 1971–85

[Billions of 1970 dollars]

	Initial appraisal	Supply cases			
		I	II	III	IV
Oil and gas:					
Exploration and production	92.4	171.8	144.8	135.1	88.0
Oil pipelines	3.5	7.5	7.5	7.5	7.5
Gas transportation	21.0	56.6	46.9	39.8	29.5
Refining[1]	20.0	19.0	24.0	30.0	38.0
Tankers, terminals	14.5	2.0	9.0	16.0	23.0
Subtotal	151.4	256.9	232.2	228.4	186.0
Synthetics:					
From petroleum liquids		5.0	5.0	5.0	5.0
From coal (plants only)	1.5	12.0	4.6	4.6	1.7
From shale (mines and plants)	.5	4.0	2.2	2.2	.5
Subtotal	2.0	21.0	11.8	11.8	7.2
Coal:[2]					
Production	9.3	14.3	10.4	10.4	9.4
Transportation	6.0	6.0	6.0	6.0	6.0
Subtotal	15.3	20.3	16.4	16.4	15.4
Nuclear: Production, processing, enriching	5.0	13.1	11.0	8.5	6.7
Total, all fuels	173.7	311.1	271.4	265.1	215.3
Electric generation, transmission[3]	200.0	235.0	235.0	235.0	235.0
Water requirements	N.A.	1.1	.8	.8	.7
Total energy industries	373.7	547.4	507.2	500.9	451.0

[1] Based on maximum U.S. requirements, some of which may be spent outside the United States.
[2] Cases I–IV include capital requirements for coal for synthetic fuels. The initial appraisal includes only capital requirements for coal for conventional markets.
[3] Condition 1: Capital requirements under all 6 conditions postulated by the electricity task group are as follows:

Condition	Cumulative investment (1971–85), billion 1970 dollars					
	1	2	3	4	5	6
Powerplant construction	181	183	186	169	196	163
Transmission (estimated at 30 percent of condition 1 cumulative powerplant investment	54	54	54	54	54	54
Total	235	237	240	223	250	217

The CHAIRMAN. Next we will hear from Mr. True.

STATEMENT OF H. A. TRUE, JR., A PARTNER IN TRUE DRILLING CO. OF CASPER, WYO., IN BEHALF OF THE AMERICAN PETROLEUM INSTITUTE, MID-CONTINENT OIL & GAS ASSOCIATION, ROCKY MOUNTAIN OIL & GAS ASSOCIATION, AND WESTERN OIL & GAS ASSOCIATION

Mr. TRUE. Good morning. I am H. A. (Dave) True, Jr., a partner in True Drilling Co., Casper, Wyo., and am an independent operator.

In addition, I am currently Chairman of the National Petroleum Council but my appearance here today has no relationship to my Council affiliation. My presentation today reviews the 1973 price, profit and investment experience of the U.S. oil industry in comparison with the industry's post-World War II history.

After 1948, the average wellhead value of crude oil in the United States was essentially unchanged for decades, this is shown on the chart at the right.

The 1968 price was only 13 percent above 1948.

The CHAIRMAN. Is that in constant dollars or is that in current, varying dollars?

Mr. TRUE. That is in current dollars.

The CHAIRMAN. So that does not allow for inflation?

Mr. TRUE. The constant dollars would slow this down.

The CHAIRMAN. That is what I had in mind. I think it would be very impressive if you made a similar chart to show what those prices were in constant dollars. It would show that the price of oil and gas went way down.

Mr. TRUE. That is correct.

The CHAIRMAN. Let me ask you, did your costs in drilling for oil and gas go up as much as the increase in the cost of living for the average consumer?

Mr. TRUE. A little more, I believe, Mr. Chairman.

The CHAIRMAN. In other words, the cost of steel, the cost of transportation, the cost of labor, and the other items that are reflected in the cost of a well actually went up more than the average in the cost of living, if I understand you correctly.

Mr. TRUE. That is correct, Mr. Chairman.

Speaking from personal experience, the cost of operating an average depth onshore drilling rig in the Rocky Mountains is a little over three times today what it was 2½ or 3 years ago, the all out-of-pocket costs.

The CHAIRMAN. So the cost of drilling a well to the same depth was moving ahead rapidly on you. Was it not also true that for the average well you had to go down deeper because most of the oil that could be found at shallow depths had already been found?

Mr. TRUE. That is correct. The average depth of all wildcats in the United States has increased, I believe, every year or at least 1 year——

The CHAIRMAN. And that is because the shallow oil that is cheap to find has already been found, for the most part?

Mr. TRUE. That is correct.

Price increases in the 1969 to 1970 period were effectively neutralized by the reduction in percentage depletion imposed by the Tax Reform Act of 1969. The first increase actually realized since the early 1950's came late in 1971—and it was only about 8 percent. With price controls, the average price of crude was held at $3.39 per barrel until the spring of 1973.

For the first time in a quarter of a century, U.S. crude oil prices were permitted to advance significantly in 1973. So-called new oil was decontrolled in September. Stripper well production was decontrolled in December. Controlled oil was raised to about $5 per barrel in December, and decontrolled oil is now selling at more than $10 per

barrel following the sharp OPEC price increase at Christmas. Today, the average price of all U.S. crude oil is probably about $6.50 a barrel. Hopefully, the recent price increases will open the door to a new period of expansion.

The average wellhead value of U.S. gas rose from 1948 to the early 1960's but was then held almost constant around 15 to 16 cents per thousand cubic feet for the remainder of the decade. This also is shown on chart 1.[1] Prices began to move up in 1971. New interstate contract prices increased from 22 cents per thousand cubic feet in 1970 to 27 cents in 1971 to 34 cents in 1972. Recent sales have been reported above 50 cents, which is equivalent to about $3 per barrel for oil. Thus, U.S. natural gas prices were permitted to improve 2 years ahead of crude oil prices.

The CHAIRMAN. If I might just interrupt you, Mr. True, the point I was making is that I think at some point somebody ought to set that chart alongside the chart prepared by the Independent Petroleum Assoication of America showing those same prices in terms of constant dollars.[2] You can pick any year you want to as long as you maintain a constant purchasing power for the dollar, and the way it works out with regard to a barrel of oil, the price in 1973 dollars for example, went down from $3.58 to $2.20. So the price went down by one-third, if you are thinking in terms of constant dollars.

If you are thinking in terms of what the cost of producing that oil is, it went down even more than that.

Mr. TRUE. Would it be proper for us, Mr. Chairman, to reconstruct that chart for the record?

The CHAIRMAN. I will ask that this chart be reproduced in the record at this point so you could see the two charts together, because it is hard to explain why 50 percent of all the independent producers had to go out of business during that period unless you see that. It was not a constant price as it would appear in terms of what his cost of operation was. It was just a dropoff at about the rate of about a 50-degree angle, so that they simply could not meet the increased costs and stay in business, and that is why 50 percent of the independent operators had to quit drilling for oil.

Mr. TRUE. In an appearance a year ago before the House Committee on Ways and Means, we reported that the 1972 profitability of U.S. oil companies was at a 10-year low. Their 1972 rate of return on net assets came close to the 10.0–10.5 percent experience of the industry's depressed year from 1958–72 as shown on chart No. 2.[3] I am gratified that 1973 was a better year for U.S. oil companies. Preliminary data indicated that their rate of return recovered to just over 15 percent in 1973, a level not experienced since the period 1948–56.

The industry's 50-percent increase in earnings in 1973 has been the subject of extensive criticism. My only real concern about this long-overdue recovery in petroleum industry profitability is that domestic earnings apparently did not increase nearly so much as is desirable. Preliminary earnings statements by some of the largest U.S. international oil companies show domestic earnings up 11 percent, while foreign earnings were up 93 percent. Thus, the domestic industry

[1] See p. 119.
[2] See p. 10.
[3] See p. 121.

(with close Government controls) is not yet out of the woods on profits.

A principal explanation of the large 1973 increase in foreign earnings was a rise from very low refining and marketing earnings to something approaching reasonable levels. A sharp increase in profits was also long overdue there. Another important reason for the increase in foreign earnings was dollar devaluation. Apart from dollar devaluation, the increase in foreign earnings was only about 67 percent, not 93 percent. Since much of the 1973 dollar devaluation has been wiped out by recent deterioration in foreign currency values, a good part of the 1973 increase in foreign earnings could well be reversed.

The profit experience of 1973 was also encouraging for other U.S. businesses. Manufacturing profits apart from oil were up about 25 percent. Their return on net assets rose to just over 14 percent, as shown on chart 3.[1] This increase for other manufacturing continued an improvement begun in 1972. The 2-year gains in profits from 1971 to 1973 were about 50 percent for both oil and other manufacturing.

I believe we cannot overestimate the significance of getting the domestic integrated oil return up through that 15 percent threshold level. The return should, of course, be higher for the very risky producing stage of the business. The domestic oil industry's expansion after World War II begun in earnest in 1948, when the rate of return was 22.7 percent, as shown on chart 4.[2] During the years through 1956, rates of return averaged 14.6 percent; and the number of wildcat wells drilled rose from 3,500 in 1947 to 8,700 in 1956, again shown on chart 4. It was, I am convinced, no coincidence that those years were a time of expansion. After 1956, the rate of return fell off; and the number of wildcat wells drilled declined to a low of 4,500 in 1971. Hopefully, that decline has been arrested as prices began to rise.

Following price and profit increases, we have begun to see real signs of expansion of the domestic energy industries.

Offshore leasing in the lower 48 States averaged about 700,000 acres per year during the 1960's, and I refer to chart 5, but acreage leased dropped off sharply in 1971. At the very time when domestic oil and gas shortages were developing, our most promising frontier areas were not available for leasing. However, Federal offshore lease sales were resumed late in 1972 after a 2-year lapse; 900,000 acres were leased then, and 1.5 million acres were leased in 1973. The industry's willingness to work toward eliminating the energy crisis is clearly indicated by the sums of money paid for the 1972–73 offshore lease purchases—a total of over $5 billion, and this is also shown on chart 5 [3] and consists of about $2 billion in 1972 and $3 billion in 1973, and this was, incidentally, over a period of only 13 months from December of 1972 through December of 1973. This increase in offshore leasing is a good beginning, and we are most encouraged that the administration has indicated that it will more than triple offerings beginning next year.

Were it not for a serious (and hopefully only temporary) shortage of drill pipe, casing, wellhead equipment, and personnel, the number of exploratory wells completed might have turned upward. Despite the shortages, the number of drilling rigs in operation did increase in 1973, as shown on chart 6,[4] especially toward the end of the year. The fourth quarter of 1973 was up 15 percent from the same period in 1972.

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[1] See p. 122.
[2] See p. 124.
[3] See p. 125.
[4] See p. 126.

Another very promising trend has commenced. Following the gas price increases of 1971–72, the number of gas discoveries has increased dramatically (see chart 7).[1] In contrast, the number of oil discoveries still seems to be declining. Hopefully, that trend will also react to the improved oil prices of 1973. I am encouraged that much of this new activity is onshore in the lower 48 States, where we independents traditionally operated. A word of caution, however. It is still far too early for thorough geological evaluation of the size of the new gas discoveries, but I believe that the industry is on the way back.

After a long period of stagnation, expenditures for exploration and development increased substantially in the United States in 1972 as shown on chart 8.[2] Total expenditures for exploration and development were over $6 billion in 1972; and 94 percent of this was provided by American companies, which incidentally, spent over twice as much on exploration and development at home as abroad.

The CHAIRMAN. Are those expenditures within the United States?

Mr. TRUE. Yes, sir. Data for the exploration-production stage of the industry for the year 1973 will not be available for some time. However, total capital expenditures of a sample of large companies were up 45 percent in 1973; and these same companies plan larger increases for 1974—up 57 percent over 1973. In other words, this is over a doubling in a 2-year period.

In addition to revitalization of exploration for conventional oil and gas, the United States must also look to nonconventional sources of oil and gas if we are to achieve energy independence. Now that conventional oil and gas prices have broken out of the stagnant era of $3 oil and 15-cent gas, I can report that the vital U.S. synthetics industry is no longer simply in the talking and research stage. It is emerging into the world of commerce.

Two coal gasification plants have been announced for the Four Corners area. They will cost about $400 million each; and they will produce gas at a cost which is competitive with imported liquefied natural gas. Those two plants were scheduled to begin operating in 1976; however, the Federal Power Commission has not acted on the applications. On a much smaller scale; an $18 million facility is being planned in Illinois. This would produce low-heat content gas to burn under a boiler for generating power. This project could be the forerunner of a simple—but not cheap—means of using high-sulfur coal without venting sulfur oxides to the atmosphere. A number of other commercial coal gasification projects have been announced. And numerous research projects are underway on better processes. Coal gasification is ready to emerge, but the Federal Power Commission has not yet cleared the way.

A three-company consortium has just announced plans to construct a moderate-sized commercial oil shale plant in Colorado. This plant is expected to be completed in about 3 years. Another company has announced plans for operation by 1979. These plants will be built on privately owned shale lands, which are limited in area. After decades of discussion, the U.S. Government—which owns most of the promising shale lands—has scheduled six shale oil lease sales. The first sale was held on January 8, with a winning bid of $210 million; the second sale on February 12 drew a high bid of $117 million. As with coal

[1] See p. 127.
[2] See p. 129.

gasification, there are numerous other projects underway for developing new shale processes.

We conclude that the economic stage is set for successful expansion of the conventional and nonconventional domestic oil and gas industries. Crude oil and gas prices have broken out of their postwar stagnation. Profitability is increasing to attractive levels. First generation synthetics plans are announced. We should be optimistic over the prospects for achieving ultimate energy independence.

Yet, the U.S. petroleum industry is being accused of profiteering and is being subjected to threats of price rollbacks and higher taxes. Nothing could be better calculated to destroy the new economic environment. Nothing could be more contrary to the national interest.

Thank you.

The CHAIRMAN. Thank you, Mr. True.

[The prepared statement with attachments of Mr. True follow:]

PREPARED STATEMENT OF H. A. TRUE, JR., TRUE DRILLING CO., IN BEHALF OF THE AMERICAN PETROLEUM INSTITUTE, MID-CONTINENT OIL AND GAS ASSOCIATION, ROCKY MOUNTAIN OIL AND GAS ASSOCIATION, AND WESTERN OIL AND GAS ASSOCIATION

CONTENTS

SUMMARY

A. Prices Have Turned Up

(1) The average wellhead price of crude oil was essentially unchanged from 1948 ($2.60 per barrel) through 1968 ($2.94 per barrel). Increases in 1969–70 were offset by the Tax Reform Act of 1969. While an eight percent increase was realized in 1971, no significant increases occurred until 1973. The long-needed price breakthrough of 1973 has brought "new" oil prices to about $10 per barrel and "old" oil prices to about $5 per barrel, an average of about $6.50 per barrel.

(2) The average wellhead price of natural gas increased from 1948 (6.5¢ per Mcf) to the early 1960's (about 15.5¢ per Mcf), but was then held almost constant through the 1960's. A long-needed price breakthrough began in 1971 bringing new contract prices to 34¢ in 1972 and to more than 50¢ in 1973.

B. Profitability Has Recovered

(1) A 50 percent increase in earnings in 1973 brought U.S. oil companies' return on invested capital from a 10-year low of 10.8 percent in 1972 to about 15 percent in 1973, in comparison with about 14 percent for other manufacturing.

(2) Domestic earnings were up far less than 50 percent—12 percent for a group of companies which have reported to date. Foreign earnings for these companies were up 75 percent. Two important reasons for the foreign increase were a recovery from depressed performance in earlier years and devaluation of the dollar.

(3) The 1973 recovery to the 15 percent return range is encouraging. That is the range of returns—following a 23 percent year in 1948—experienced during the postwar expansion of the domestic petroleum industry which ended in 1956. After 1956, returns plunged to the 10 percent range; and exploratory activity fell off.

C. Expansion Has Begun

(1) After a two-year lapse, the Federal government has resumed leasing offshore in the lower 48 states; 900 thousand acres were leased in 1972, 1.5 million

in 1973—well above the 700-thousand acre average of the 1960's. The industry spent a total of over $5 billion for offshore leases in 1972 and 1973. Approval of the Alaska pipeline should also encourage more activity there.

(2) The long-term decline in wildcat drilling has apparently been arrested. The number of rigs in operation has increased. Gas discoveries have increased sharply. Oil discoveries continued to decline in 1973, but oil prices did not move up until 1973; gas prices had started up two years earlier.

(3) Expenditures for exploration and development in the United States increased to more than $6 billion in 1972. Total capital expenditures by a sample of large companies were up 45 percent in 1973, and they plan a further 57 percent increase in 1974.

(4) A U.S. synthetics industry is beginning to become commercial. Numerous research projects are under way for improving techniques for gasifying coal and extracting oil from shale. Coal gasification facilities have been announced but not approved by the Federal Power Commission. One shale plant on private land has been announced; and Federal leasing has begun, with an initial winning bid of $200 million.

D. Conclusion

The economic stage is set for successful expansion of the domestic oil and gas industry. However, current threats of price rollbacks and increased taxes could easily destroy the favorable new economic environment.

STATEMENT

Mr. Chairman and Members of the Senate Committee on Finance, I am H. A. True, Jr., a partner in True Drilling Company of Casper, Wyoming. I am an independent operator. Additionally, I am chairman of the National Petroleum Council, but my appearance today has no relationship to my Council affiliation. My presentation today reviews the 1973 price, profit, and investment experience of the United States oil industry in comparison with the industry's postwar history. It shows that rising prices have led to a recovery in profitability to the levels of the early 1950's, when the domestic industry was last expanding vigorously. As would be expected with improving profitabiilty, we can now see—if not the beginning of another vigorous expansion—at least the end of the 15-year decline in domestic exploration and development that began after 1956.

A. Prices Have Turned Up

Domestic oil and gas prices have improved significantly.

(1) *Crude Oil.*—After removal of World War II price controls, the average wellhead value of crude oil in the United States more than doubled by 1948, reaching $2.60 per barrel. Then, except for minor fluctuations, it was essentially unchanged for two decades (see Chart 1). The 1968 price of $2.94 per barrel was only 13 percent above 1948.

Price increases aggregating 24¢ per barrel in 1969–70 were effectively neutralized by the reduction in percentage depletion imposed by the Tax Reform Act of 1969. The first increase actually realized since the early 1950's came late in 1971—and it was only about eight percent. Despite industry warnings of impending sharp increases in insecure imports,[1] the government claimed that the 1971 price increase was unjustified in the short run and quite possibly in the long run. With price controls, the average price of crude was held at $3.39 until the Spring of 1973.

For the first time in a quarter of a century, U.S. crude oil prices were permitted to avance in 1973. By May, the price was up by 25¢. Another 35¢ per barrel was approved in August. "New" oil was decontrolled in September and initially rose about a dollar per barrel. When OPEC raised prices sharply in October, U.S. "new" oil rose another $3 per barrel. Stripper well production was decontrolled in December. Controlled oil was raised to about $5 per barrel in December, and decontrolled oil is now selling at more than $10 following the second sharp OPEC price increase at Christmas. Today, the average price of all U.S. crude oil is probably about $6.50. The gains in price in the past year are comparable to the experience of 1946 to 1948 which preceded the postwar expansion of the industry. Hopefully, the recent price increases will open the door to a new period of expansion.

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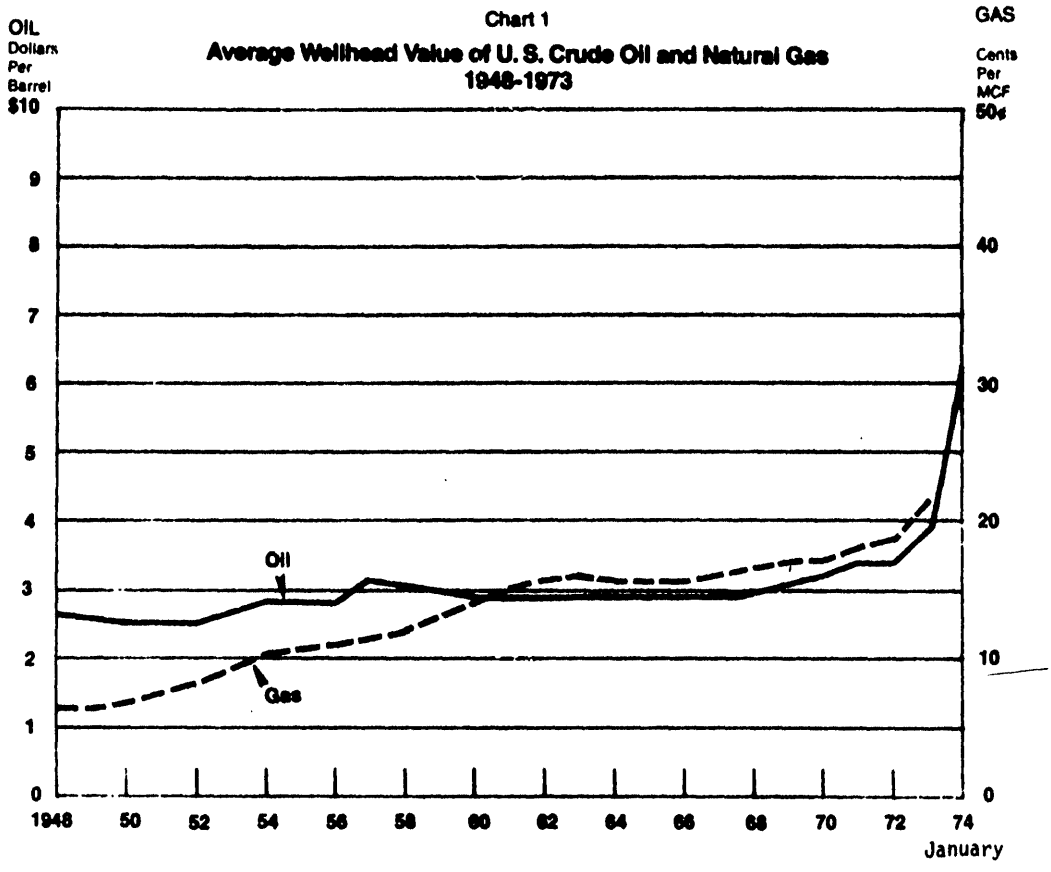
[1] See, for example, hearings before the Committee on Ways and Means on Tariff and Trade Proposals, June 3, 1970, Part 8 of 16 parts, pps. 2214, 2281, and 2285.



Source: 1948-1972 from U. S. Bureau of Mines
January 1974 from U. S. Treasury submission
to Committee on Ways and Means, February 4, 1974.

(2) *Natural Gas.*—The average wellhead value of U.S. gas rose from 6.5¢ per Mcf in 1948 to about 15.5¢ in the early 1960's but was then held almost constant for the remainder of the decade (see Chart 1). The average value began to move up in 1971, reaching 21.3¢ per Mcf in 1973. However, the average value of all gas does not adequately reflect recent developments in the market because it is heavily weighted by past sales under long-term contracts. Average prices under new interstate contracts increased from 22¢ per Mcf in 1970 to 27¢ in 1971 to 34¢ in 1972:

	Cents
1966	17.6
1967	18.6
1968	19.5
1969	19.7
1970	22.0
1971	27.4
1972	34.3

Source.: Testimony of Dr. J. Rhoads Foster, submitted in the Matter of Stingray Pipeline Company, CP73-27, et. al., August, 1973.

Recent sales have been reported above 50¢. Thus, U.S. natural gas prices were permitted to improve beginning in 1971—two years ahead of crude oil prices.

B. Profitability Has Recovered

A year ago we reported to Congress that the 1972 profitability of U.S. oil companies was at a 10-year low. Their 1972 rate of return on net assets was only 10.8 percent, which came close to the 10.0–10.5 percent experience of the

industry's depressed years from 1958–1972 (see Chart 2).[2] I am gratified that 1973 was a better year for U.S. oil companies. Preliminary data indicate that their rate of return recovered to just over 15 percent in 1973, a level not experienced since the period 1948–1956.

The industry's 50 percent increase in earnings in 1973 has been the subject of extensive criticism in the press and in Washington. My only real concern about this long-overdue recovery in petroleum industry profitability is that *domestic* earnings apparently did not increase nearly so much as is desirable. Complete data are not yet available, but preliminary earnings statements by some of the largest U.S. international oil companies show domestic earnings up 11 percent, while foreign earnings were up 93 percent—with a worldwide increase of 51 percent. As we have seen, the domestic industry is under strict price controls for products and "old" crude oil, with recent activity in Congress and the Administration aimed at re-controlling and rolling back "new" crude oil prices. There is also an overall profit margin limitation. Thus, the domestic industry (with close government controls) is not yet out of the woods on profits; but some upturn in domestic profits has occurred.

A principal explanation of the large 1973 increase in foreign earnings was a rise from very low refining and marketing earnings to something approaching reasonable levels. A study by the First National City Bank last summer showed that refining and marketing profitability in Western Europe had been below 5 percent for about a decade. Thus, a sharp increase in profits was also long-overdue there.

Another important reason for the 1973 increase in foreign earnings was dollar devaluation. American companies keep their books in dollars; and each yen or mark or franc earned during much of 1973 was equivalent to substantially more dollars than in 1972. The 1972–73 increase in foreign earnings apart from dollar devaluation was about 67 percent, not 93 percent—38 percent worldwide instead of 51 percent. We must remember that much of the 1973 dollar devaluation has been wiped out by recent deterioration in foreign currency values. The foreign exchange markets have apparently predicted that the rise in world oil prices will ultimately hurt the U.S. economy less than Europe or Japan because we import less of our oil requirements. Consequently, a yen or mark or franc earned today is equivalent to fewer dollars than on the average in 1973. This means that the part of the 1972–73 increase in foreign earnings which was attributable to dollar devaluation could be reversed.

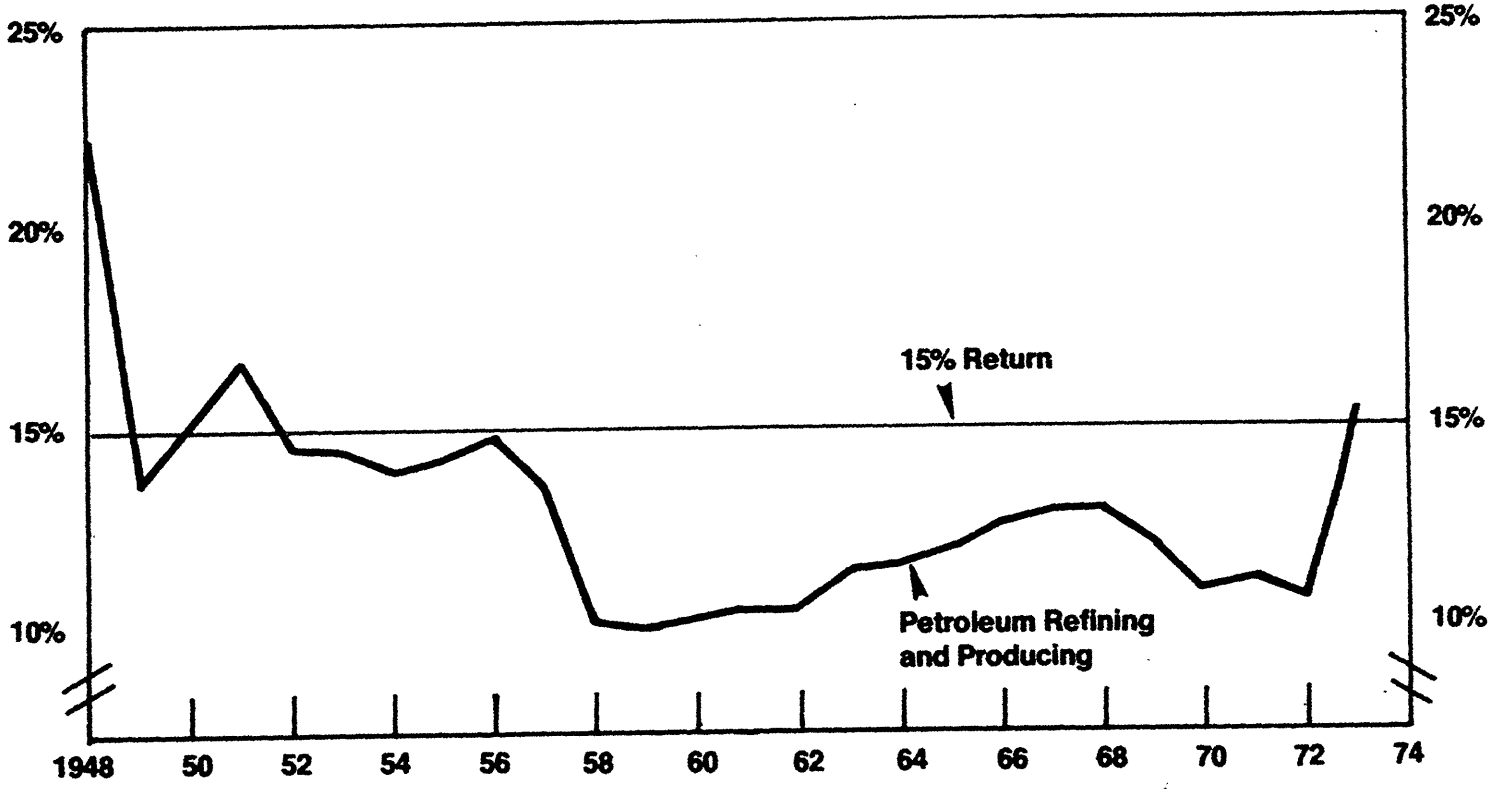
The profit experience of 1973 was also encouraging for other U.S. businesses. Using preliminary data, the First National City Bank estimates that manufacturing profits (apart from oil refining) were up about 25 percent. As a result, the return on net assets rose to just over 14 percent (see Chart 3). This increase for other manufacturing continued an improvement begun in 1972, when their rate of return reached 12.5 percent—1.7 percentage points above petroleum. The two-year gains in profits from 1971 to 1973 were about 50 percent for both oil and other manufacturing. Those increases are computed without any consideration of inflation. General price levels rose by 8.5 percent from 1971 to 1973 (as measured by the price index used for deflating Gross National Product).

Just how important is a 15+ percent rate of return for U.S. oil companies? I believe we cannot overestimate the significance of getting the domestic integrated return up through that threshold level. The return should, of course, be higher for the very risky producing stage of the business. The domestic oil industry's expansion after World War II began in earnest in 1948, when the rate of return was 22.7 percent (see Chart 4). During the years through 1956, rates of return ranged from 13.6 percent in the recession year of 1949 to 16.7 percent, with an average of 14.6 percent. And the number of wildcat wells drilled rose from 3,500 in 1947 to 8,700 in 1956 (see Chart 4). It was, I am convinced, no coincidence that those years were a time of expansion. After 1956, the rate of return fell off; and the number of wildcat wells drilled declined to a low of 4,500 in 1971. Hopefully, that decline has been arrested as prices began to rise in 1971 and profits in 1973.

[2] These data are from the First National City Bank, which measures rate of return by dividing net income by shareholder's equity at the beginning of the year. In a period of expansion (as in 1972–74), this overstates the rate of return somewhat.

Chart 2

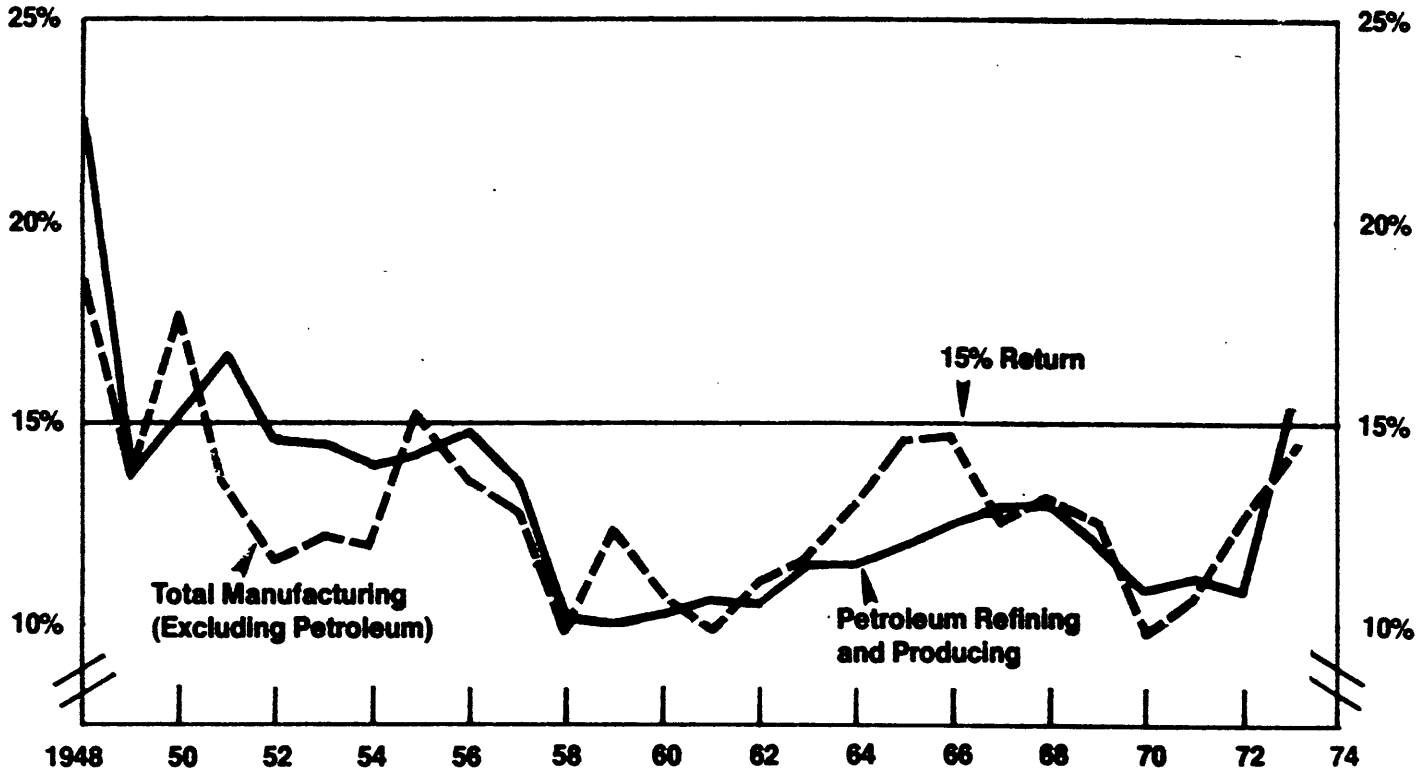
Return on Shareholder's Equity—Petroleum Companies
1948-1973



Source: First National City Bank
1973 preliminary.

Chart 3

Return on Shareholder's Equity
Petroleum Companies and Other Manufacturing
1948-1973



Source: First National City Bank
1973 preliminary.

C. Expansion has begun

Following these price and profit increases, we have begun to see real signs of expansion of the domestic energy industries.

(1) *Acreage Leased.*—Offshore leasing in the Lower 48 states averaged about 700 thousand acres per year during the 1960's (see Chart 5). Leasing in Alaska averaged about 350 thousand acres per year in the same period. However, offshore acreage leased in the Lower 48 states dropped off sharply in 1971 to only 135 thousand acres. Less than 50 thousand acres per year were leased in Alaska during 1970 and 1971. In large part, these declines reflected well-intentioned but excessive environmental concern about the safety of offshore drilling and Arctic pipe line construction. At the very time when domestic oil and gas shortages were developing, our most promising frontier areas were not available for leasing.

However, Federal offshore lease sales in the Lower 48 states were resumed late in 1972 after a two-year lapse; 900 thousand acres were leased then, and 1.5 million acres were leased in 1973, culminating in opening of a new area in the northeast Gulf of Mexico. About 200 thousand acres per year were leased in Alaska during 1972 and 1973; and the pipe line has been approved by the Congress.

I believe that the industry's willingness to work toward eliminating the energy crisis is clearly indicated by the sums of money paid for the 1972–73 offshore lease purchases: over $2 billion in 1972 and $3 billion in 1973, for a total of over $5 billion (see Chart 5), or bettr than $2000 per acre. The largest single past year had been $1.3 billion in 1968.

This increase in offshore leasing is a good beginning, and we are most encouraged that the Administration has indicated that it will more than triple offerings beginning next year. It is essential that these offerings include the promising Atlantic offshore geological provinces—with, of course, proper environmental safeguards. Since the Atlantic Coast relied most heavily on imports in the era of cheap foreign oil, it needs increased domestic production more than any other area.

(2) *Drilling and Discoveries.*—We have seen that the decline in wildcat drilling has apparently been arrested. Were it not for a serious (and hopefully only temporary) shortage of drill pipe, casing, wellhead equipment, and personnel, the number of exploratory wells completed might have turned upward. The equipment shortages are attributable to price controls, and years of depressed activity discouraged skilled personnel from entering or remaining in the industry.

Despite the shortages, the number of drilling rigs in operation (as opposed to the number of wells finished) did increase in 1973 (see Chart 6), especially toward the end of the year. The average number of rigs running in 1973 was up 10 percent from 1972; and the fourth quarter of 1973 was up 15 percent from the same period in 1972.

Another very promising trend has commenced. Following the gas price increases discussed earlier, the number of gas discoveries has increased dramatically (see Chart 7). In contrast, the number of oil discoveries still seems to be declining. Hopefully, that trend will also react to the improved oil prices of 1973—once the equipment and personnel shortages are alleviated.

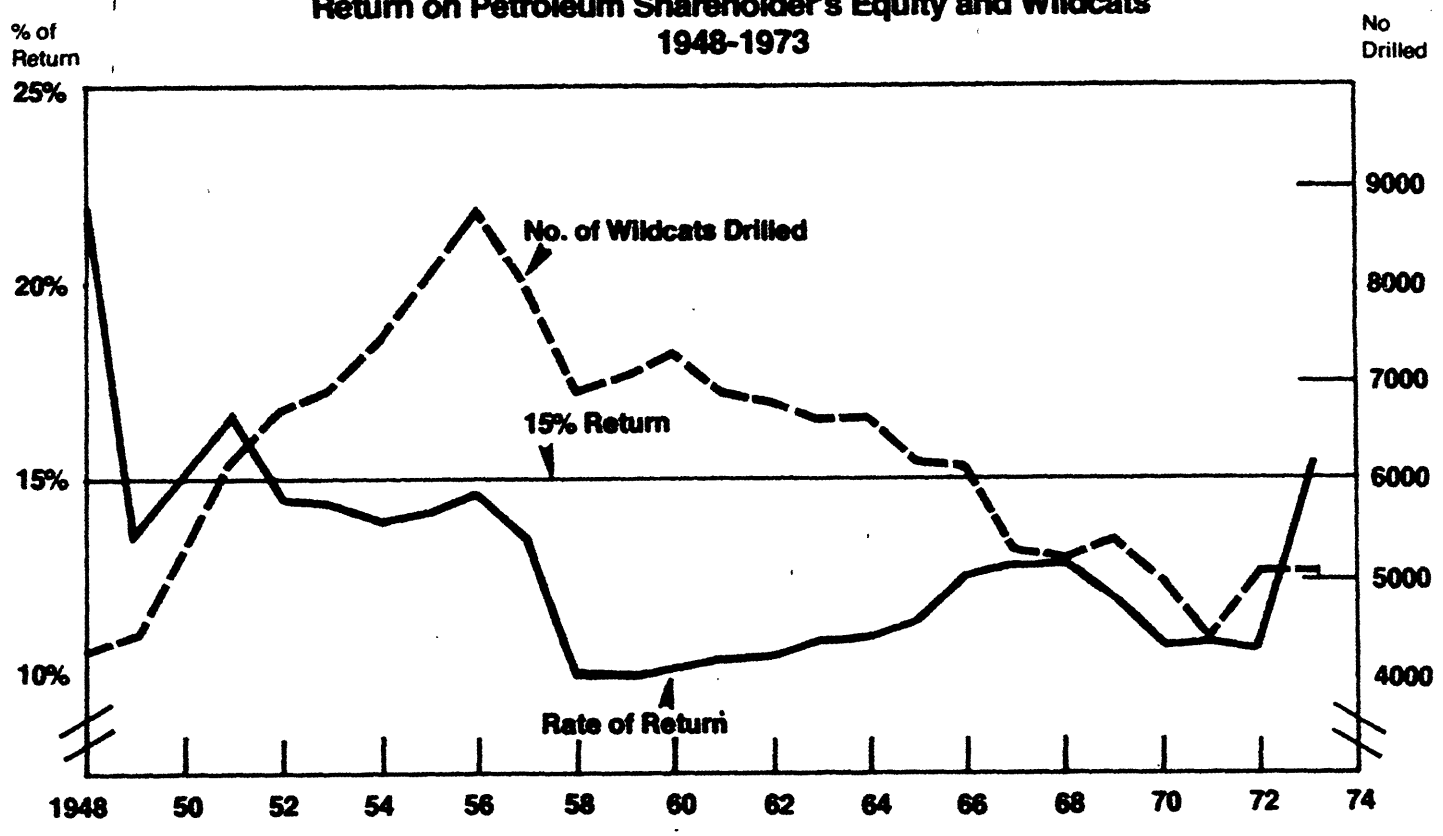
I am encouraged that much of this new activity is onshore in the Lower 48 states, where independents have traditionally operated. This area has been intensively explored in the past but never before with $10 oil and $1 gas prices in mind for newly discovered oil and gas. We are now paying prices higher than those for imported crude oil and liquefied natural gas.

A word of caution: the number of discoveries is not what really matters in the end. It is the amount of oil and gas found which is important. It is still far too early for thorough geological evaluation of the size of the new gas discoveries but I believe that the industry is on the way back.

(3) *Expenditures.*—After a long period of stagnation, and even of decline, expenditures for exploration and development increased substantially in the United States in 1972 (see Chart 8). Total expenditures for exploration and development were over $6 billion in 1972; and 94 percent of this was provided by American companies, which spent over twice as much on exploration and development at home as abroad. With accelerated leasing under way, further increases in exploration and development expenditures are certain unless the economic outlook for the industry should darken because of price roll-backs or tax increases.

Chart 4

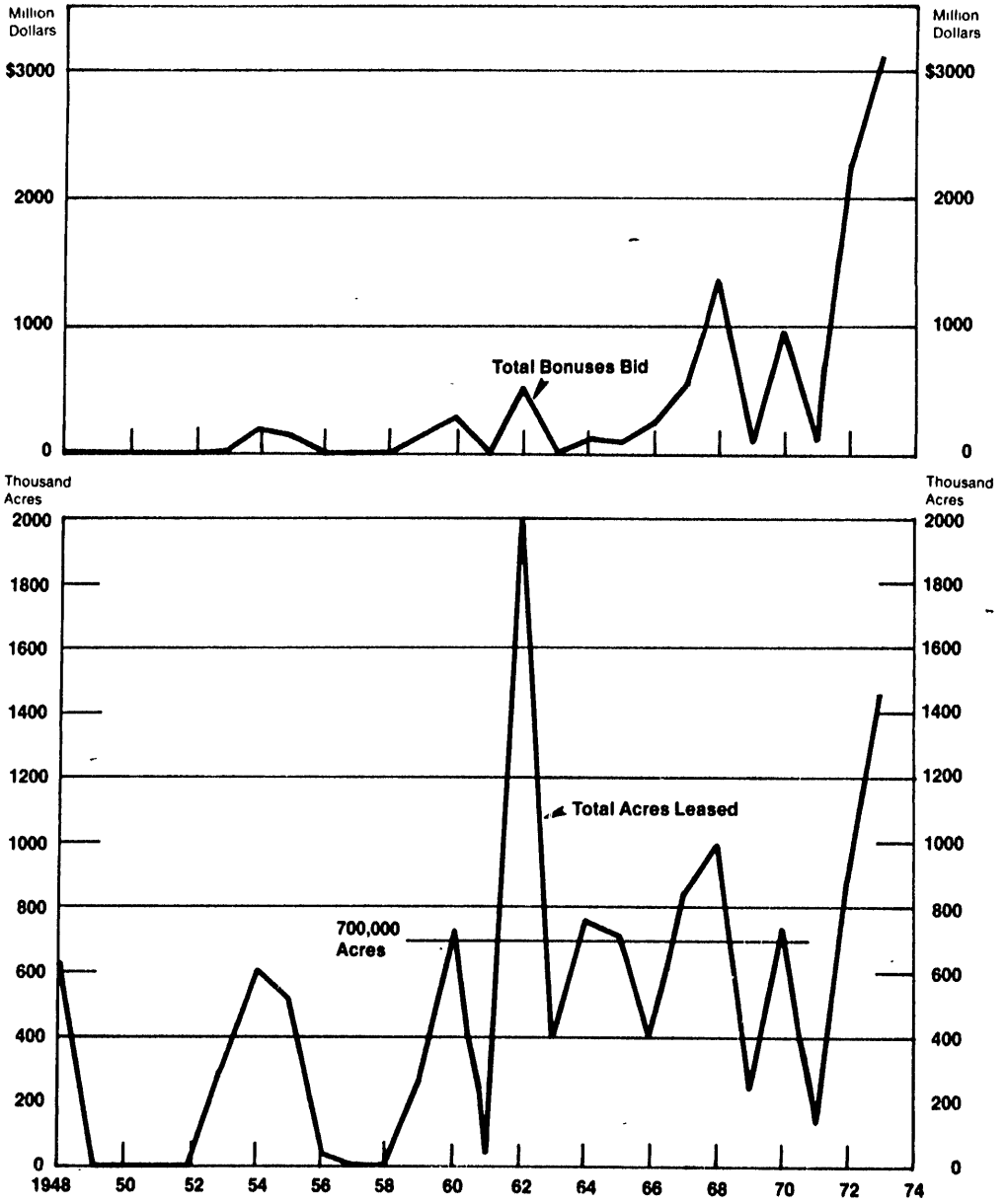
Return on Petroleum Shareholder's Equity and Wildcats
1948-1973



Source: Rate of return from Chart 2.
Wildcats drilled from American Association of Petroleum Geologists and API.

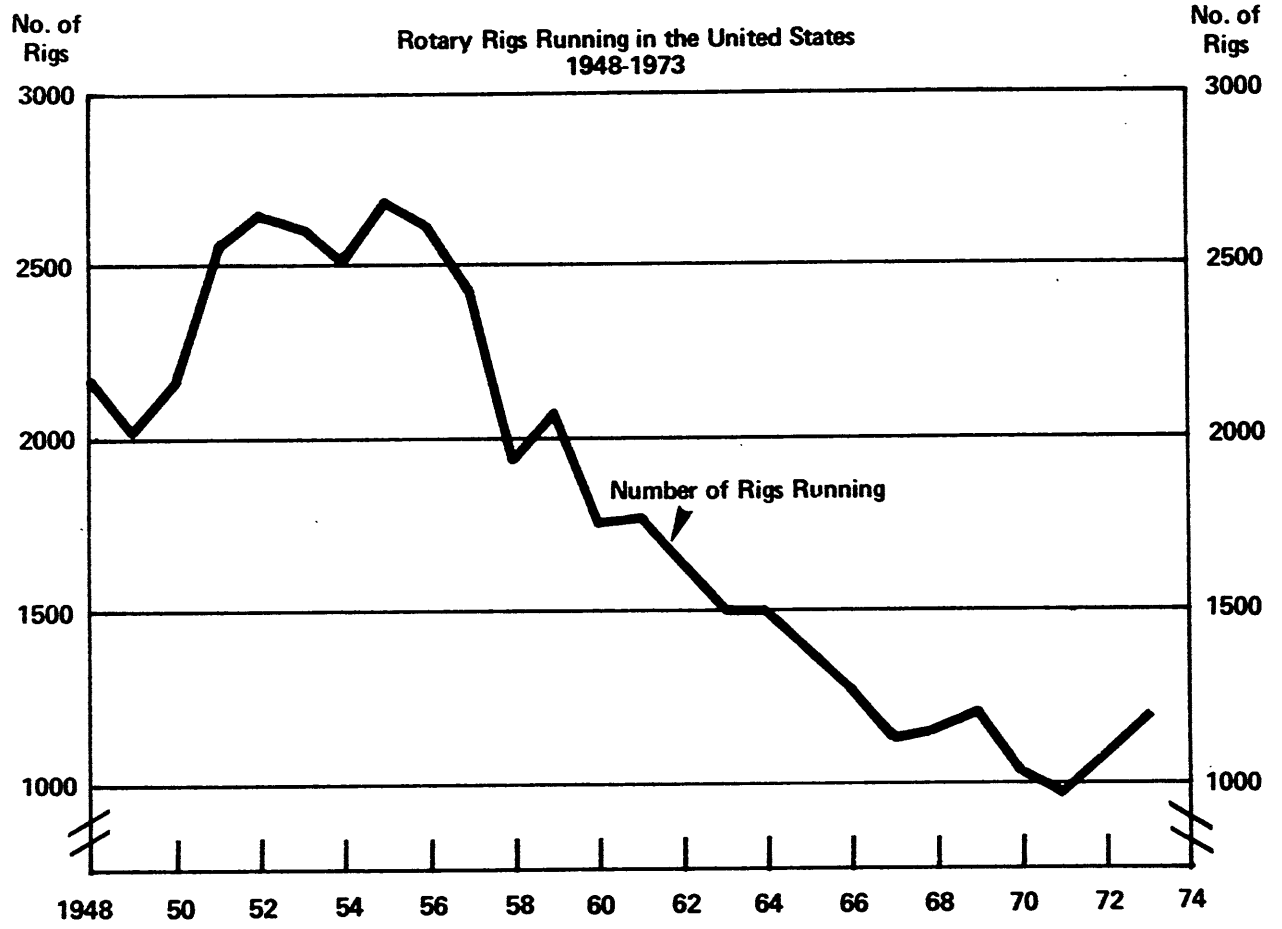
Chart 5

Offshore Lease Sales in the Lower 48 States
1948-1973



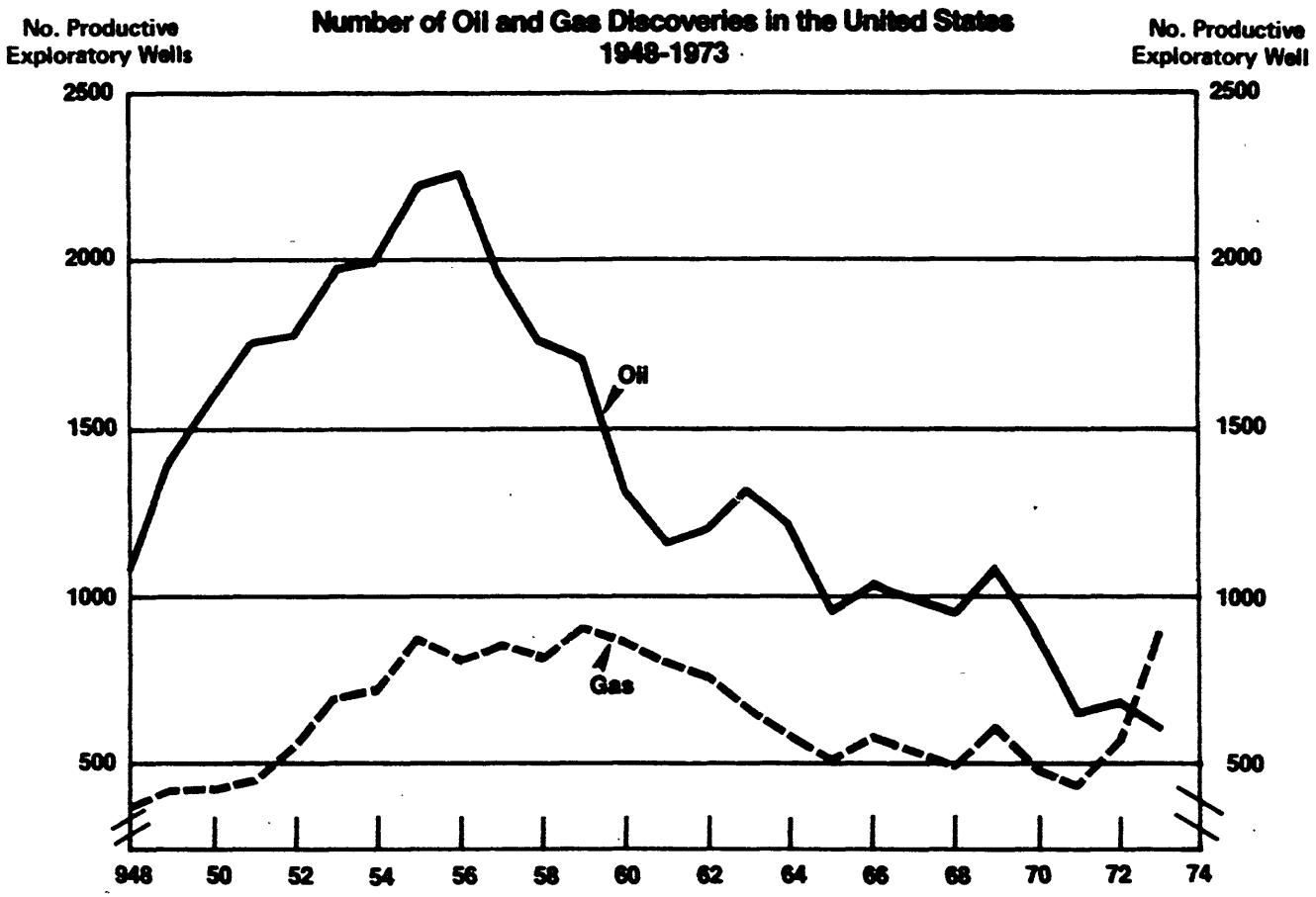
Source: Records of U. S. Bureau of Land Management, Louisiana, and Texas.

Chart 6



Source: Hughes Tool Company.

Chart 7



Source: American Association of Petroleum Geologists and API.
Includes new fields and new pools in old fields.

Data for the exploration-production stage of the industry for the year 1973 will not be available for some time. However, total capital expenditures of a sample of large companies were up 45 percent in 1973; and these companies plan larger increases for 1974—up 57 percent over 1973. Clearly, the industry *is* moving ahead.

(4) *Synthetics.*—In addition to revitalization of exploration for conventional oil and gas, the United States must also look to non-conventional sources of oil and gas if we are to achieve energy independence. The Bureau of Mines has had a shale oil demonstration plant in Colorado for many years. And the Lurgi process for producing low-heat content gas from coal has been used for decades on a small scale in some towns in Europe—and also in the United States until the advent of natural gas pipe lines. However, we now need large plants which can make a real contribution to closing the massive national energy gap of the 1970's. The basic processes have been known for many years. But what has been missing is an economic environment that would make the existing basic processes—or new improved processes—competitive with conventional oil and gas.

Now that conventional oil and gas prices have broken out of the stagnant era of $3 oil and 15¢ gas, that economic environment is attainable. Indeed, I can report that the vital United States synthetics industry is no longer simply in the talking and research stage. It is emerging into the world of commerce.

Two coal gasification plants have been announced for the Four Corners area. They will cost about $400 million each; and they will produce gas at a predicted cost of about $1.25 per Mcf, which is higher than recent sales of domestic natural gas but which is certainly competitive with imported liquefied natural ags. These plants will use the Lurgi process with upgrading to produce gas with a high-heat content similar to that of natural gas. These two plants were scheduled to begin operating in 1976. However, the Federal Power Commission has not acted on the applications. Industry is willing but government is waiting.

Another use of the Lurgi process on a much smaller scale—an $18 million facility—is being planned in Illinois. This would use the old Lurgi process to produce low-heat content gas to burn under a boiler for generating power. Anticipated cost of this gas is 80–90¢ per Mcf. This project could be the forerunner of a simple (but *not* cheap) means of using this nation's vast reserves of high-sulfur coal without venting sulfur oxides to the atmosphere.

A number of other commercial coal gasification projects using the modified Lurgi process have been announced. And numerous research projects are under way on better processes. Coal gasification is ready to emerge, but the Federal Power Commission has not yet cleared the way.

A three-company consortium has just announced plans to construct a moderate-sized commercial oil shale plant in Colorado. This plant is expected to be completed in about three years. Another company has announced plans for operation by 1979. These plants will be built on privately owned shale lands, which are limited in area.

After decades of discussion, the United States government—which owns most of the promising shale lands—has scheduled six shale oil lease sales. The first sale was held on January 8, 1974, with a winning bid of $210 million for a 5000-acre tract in Colorado. As with coal gasification, there are numerous other projects under way for developing new shale processes.

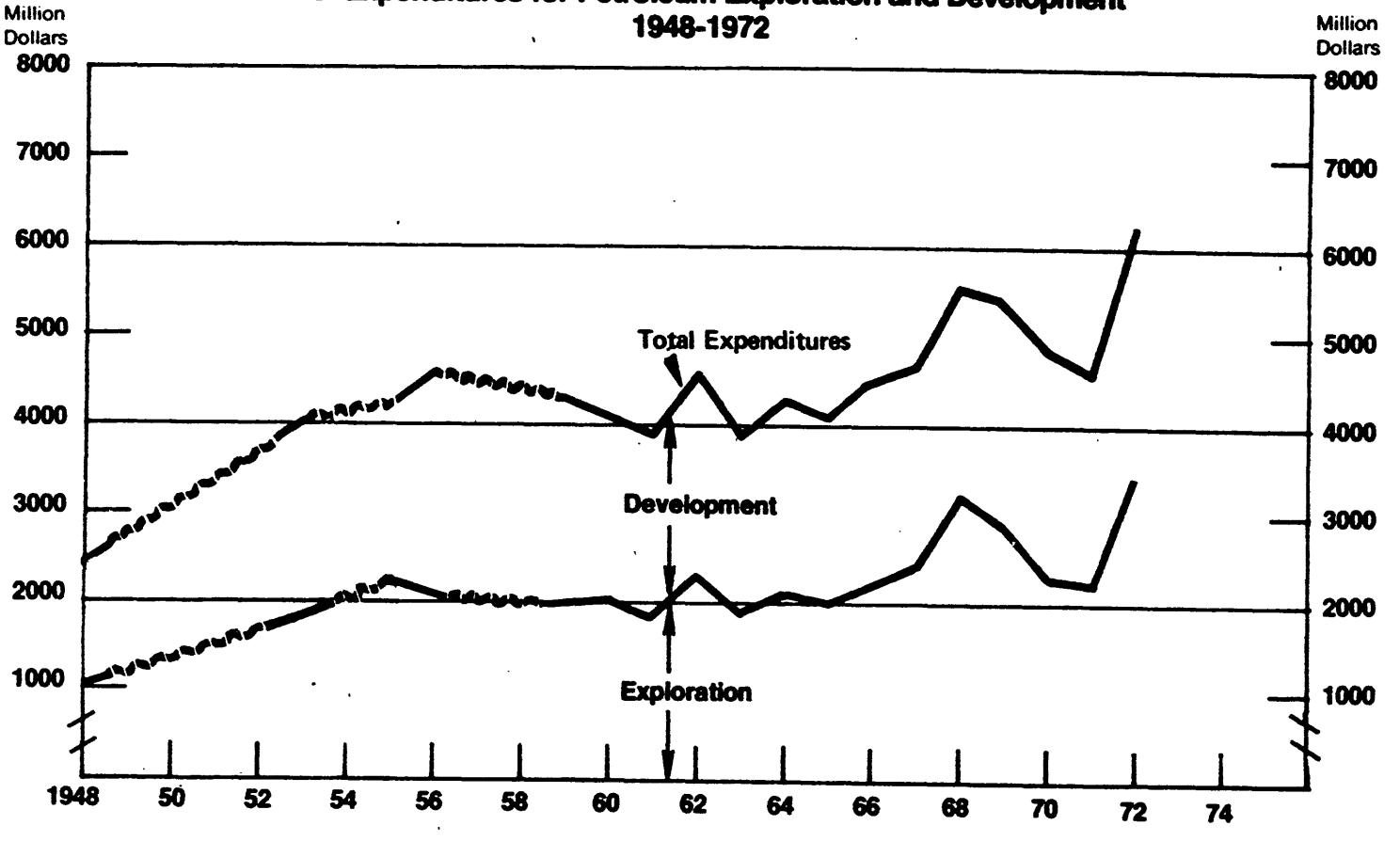
D. Conclusion

The economic stage is set for successful expansion of the conventional and non-conventional domestic oil and gas industries. Crude oil and gas prices have broken out of their postwar stagnation. Profitability is increasing to attractive levels. First generation synthetics plans are announced. We should be optimistic over the prospects for achieving ultimate energy independence.

Yet the U.S. petroleum industry is being accused of profiteering and is being subjected to threats of price roll-backs and higher taxes—especially taxation of so-called "excess" profits. Nothing could be better calculated to destroy the new economic environment. Nothing could be more contrary to the national interest.

Chart 8

U.S. Expenditures for Petroleum Exploration and Development 1948-1972



Source: Joint Association Survey.

The CHAIRMAN. The next witness is William L. Henry.

STATEMENT OF WILLIAM L. HENRY, EXECUTIVE VICE PRESIDENT, GULF OIL CORP., IN BEHALF OF THE AMERICAN PETROLEUM INSTITUTE, MID-CONTINENT OIL & GAS ASSOCIATION, ROCKY MOUNTAIN OIL & GAS ASSOCIATION, AND WESTERN OIL & GAS ASSOCIATION

Mr. HENRY. Mr. Chairman, I am William Henry and I am executive vice president of the Gulf Oil Corp., appearing on behalf of the API. The API has prepared a lengthy statement which we have submitted for the record. In addition, we have included a review of the capital and profit requirements of the industry and a detailed analysis of existing and proposed tax provisions. But in my brief oral statement today I would like to concentrate directly on profits. I will show you that the oil industry's profits are not excessive and not composed of windfalls, and I will speak for the industry in requesting your constructive support for solving the Nation's energy shortage.

For profits I will use Gulf data, since they are representative, since I understand them better than any other numbers and since we have not had time to prepare comparable industry figures for 1973.

Gulf earned about $800 million in 1973, which is a fine earnings record that sounds good, and was much better than 1972. But, just how good was it? First, to make any judgment we have to know the investment base—the investment which generated the profit. In other words, for every $100 of capital employed in the company, how much did we earn in 1973? The answer is about $11.70, which is not magnanimous, it is only fair.

The CHAIRMAN. If I might only stop you there because I can't let this opportunity pass, we had today's headlines about Gulf having record profits.

Mr. HENRY. Yes, sir.

The CHAIRMAN. The New York banks have estimated that if this industry is to do what should be demanded of it is going to have to make 18 percent profit. Someone takes a 1972 base and from that they then say, "Look at that big increase in Gulf profits." The question should be what degree of profit would these people have to make in order to do what is expected of them, and if they are not making that much, why aren't they.

Now, I haven't seen anybody challenge that 18-percent figure.

Mr. HENRY. Yes, sir.

The CHAIRMAN. You are making less than two-thirds that amount, even though the headline is that Gulf is reaping the harvest. If this statement you are presenting here won't stand up under analysis, I think it is time that those who don't agree with it analysis it and stop accusing some executive of withholding information when he, a production man, comes up here and can't tell the Senator what the company's dividends were that year. This is a published figure available to anybody, but he just doesn't happen to be a finance man, he is a production man. He can tell you how many barrels they produced, but he can't tell you the profits they paid the stockholders, since he is a production man. The question is how much profit will this industry have to make in order to do what is expected of it, or how much taxes are we going to have to put on the American people in order to make up for

the shortfall. That is what we ought to be talking about, it seems to me.

Mr. HENRY. Yes, sir, Mr. Chairman, I agree with that. I particularly agree in Gulf's case that 1973 is a meaningless statistic because Gulf in 1972 took severe remedial action to improve its earnings.

The CHAIRMAN. Well, I think someone told me, and I would just like to check it out, that one of the major companies in the United States said, "Well, measuring our company by the same standards, we showed a 2,400-percent gain in profits because we only made a few thousand dollars in 1972 and, by the same comparison, we made a fair profit this year. But if you compare it to the fact that we made so little in the previous year because we had some bad breaks in that year, it would appear we made 24 times as much, which is a 2,400-percent increase in profits. Unless you are going to have a meaningful comparison I don't think it is even fair to print it. It just misleads the public.

Mr. HENRY. Yes, sir; Mr. Chairman, I agree with that philosophy.

Exactly on the point, Mr. Chairman, in the January 1 issue of Forbes magazine, that of the 851 companies which were surveyed, this 11.7 percent return on investments for Gulf ranks us 213th. In other words, there are 212 companies in the United States who are more appropriate candidates than is Gulf for an excess or windfall profits tax and 208 of these companies, Mr. Chairman, were in industries other than petroleum.

That is not all, Mr. Chairman. Gulf's operations were more profitable overseas, and Mr. True has also pointed out, in 1973 than they were in the United States. The rate of return on all of Gulf's U.S. investments was less than 8 percent. This number would rank Gulf lower than 500, lower than 500 in the list of 851 companies. This return on our domestic investment is the lowest since before 1968. A major reason is that, in fact, we are plowing profits back—and then some.

Now you can begin to see our concern, Mr. Chairman. With today's high bank interest rates, how can we justify a rate of return of less than 8 percent in the United States to the many thousands of shareholders who have invested their savings in our company? Very frankly, faced with these facts we think it is ridiculous to talk about excess or windfall profits.

To complete the picture let me point out that the high level of foreign earnings, which brought the company average up to about 12 percent cannot be counted on in the future. The trend is toward gradual nationalization of the foreign production which contributed significantly to 1973 earnings. In 1974 our ownership participation and therefore profits can drop from our present 50–50, 60–40, to 100-percent ownership in the producing country. Also, the decline in value of the dollar in early and mid-1973, which contributed very significantly to increased earnings from foreign refining and marketing, is expected to reverse this year, further impairing foreign profits. And, the 1973 marketing profits resulting from selling cheaper inventory at sharply increasing prices will probably not be repeated, since the rate of increase of oil prices has slowed down. Hence our overall rate of return on investment could well decline in the next few years because of a drop in foreign earnings.

Now all this being true, which it is, how can Gulf justify the decision to spend $2 billion to develop and make available new forms of energy in 1974? Frankly, it was not an easy decision. We made the decision because we know and believe that our basic business is energy, and we have the experience, the expertise and, in fact, an obligation to do the job more efficiently than anyone else. And we believed the prices we could charge for the energy we produce will provide an adequate rate of return. The recent increases in the price of "free oil" in the United States seemed to confirm this second point. But if the equation were to change significantly—either through a price rollback or punitive special tax on what someone might consider "excess" profits, the conclusion would have to be different. We just can't spend money we don't have.

While the specifics I have just reviewed apply to Gulf, the conclusions apply throughout the petroleum industry. Based on estimates of the National Petroleum Council, the Chase Manhattan Bank, and others, the industry's annual rate of capital spending must more than double if we are to have adequate oil and gas supplies—even with a high degree of energy conservation. This will only happen given adequate profits in relation to our investment.

As Mr. True has testified, price and profitability increases do provide a dramatic stimulus to increased capital investment and increased oil and gas production. This was amply demonstrated in the period just after World War II.

In 1945, the price of 36-degree mid-continent crude at the wellhead was $1.17 per barrel. By 1948 the price had risen 120 percent to $2.57 per barrel and held at that level for several years thereafter.

In response to the incentive of higher crude oil prices, industry's total annual capital expenditures rose from a level of $2 billion in 1946 to $3.6 billion by 1951. In the activities related solely to the production of crude oil and natural gas, these capital expenditures were $1.35 billion in 1946 and $2.69 billion in 1951; an increase of nearly 100 percent.

In terms of work effort, the following took place during the 1946–51 period:

(1) Total wells drilled per year increased from 28,000 in 1946 to 45,000 in 1951.

(2) Cumulative additions to crude oil reserves amounted to 19 billion barrels—almost twice the reserves presently proved on the Alaskan North Slope—and the net reserves position in the United States, after allowing for annual withdrawals, increased from nearly 20 billion barrels at the beginning of 1946 to over 27 billion barrels by 1951.

(3) Crude oil production increased 30 percent from 4.7 million barrels per day in 1946 to 6.1 million barrels per day in 1951.

For the period 1946–51, industry's annual rate of return averaged 15.8 percent. This was about 40 percent better than in recent years when earnings averaged 11 percent.

Further, when earnings reached record levels, as they did in 1948 when the return measured nearly 23 percent, the incentive to reinvest effected a decline in the subsequent year's earnings to 13.6 percent. This occurred because the new investments made during 1948—as a direct response to the profit motive at that time, broadens the capi-

tal base against which profits in year 1949 were measured, additional investment.

These historical data show clearly that an increase in the profit incentive is accompanied by corresponding increases in investment and oil and gas production and, such increases stimulate higher employment and activity throughout the economy.

You have the power to eliminate present tax benefits to the oil industry such as depletion and the intangible drilling deduction. The committee and the Congress also had the power to enact an additional tax on domestic profits. You have the power to rollback prices for petroleum. And, I know in today's political climate, such action superficially seems the easiest course to take. But, such action can only slow down the efforts to produce more energy here at home and to use that energy carefully.

You also have the power to provide the programs needed to encourage, not restrict, domestic energy development. And, this is the only sure way to stabilize prices. We need accelerated leasing for offshore oil. We need a renewal of coal leasing on Federal lands. We need acceleration of nuclear, shale oil and synthetic fuels timetables. We need rapid development of high productivity coal mining equipment: the development of home solar heat units—a boon to small business development; and ever more emphasis on mass transit.

All of these fall under your authority. But they require leadership. They require leadership which is positive and constructive. Such leadership takes courage. But surely there are those of you who can exercise a true and constructive leadership role; who can take the harder course of telling the facts to your constituents—that the days of cheap energy are, in fact, over; that the days of wasting energy are, in fact, over; that if new sources of energy are to be developed, the rate of return on investments must increase, not decrease. And most importantly—that changes in the laws to impose taxes will most surely be passed on to the consumer, either as price increases or supply reductions. The key, the gut point, is the bottom line profit and its ratio to the shareholder's investment.

At this point, Mr. Chairman, parenthetically, I would like to confirm the API's position of the need for current tax incentives.

For example, in Gulf's case in the United States, percentage depletion benefits amounted to almost 30 percent of our U.S. net income in 1973, which is a measure of our need of the depletion deduction in the United States. It shows that the majors as well as the independents need both depletion and the current tax treatment of intangible drilling costs to help ensure adequate return. We also need to maintain the foreign tax credit provision if the United States is to remain competitive in finding diverse sources of foreign oil which we have got to have to meet our energy needs. We urge you not to change these provision, Mr. Chairman, or add any new restrictive laws such as a tax on so-called excess or windfall profits or a rollback in prices. Today the stage is set for a rapid expansion of U.S. exploration and production of oil and gas and other energy sources, and this is not the time, in our opinion, to turn back that effort.

Both we and you have a compelling obligation to get this message across to the public. Industry has been criticized for our poor public relations, and frankly, we think the criticism is probably justified.

But now we are asking for your cooperation—a joint effort of both business and Government—to inform the public, and to do the job necessary to supply the country's energy needs—instead of punishing the industry which must play a key role in solving our energy problems. We can't go it alone, Mr. Chairman. With the aid of those of you who are able and willing to provide objective, constructive leadership, dramatic progress can be made in telling the energy story as it really is. This, it appears to us, is the first step.

Gentlemen, since Senate Resolution 45 was passed in May 1971—even before—the Senate has held innumerable hearings and has amassed more information on energy than can possibly be read or digested. Now it is time for understanding—and for action. Without these, the energy situation of the Nation—of your constituents—will steadily deteriorate. The Nation can be energy independent, but we need your constructive support.

Thank you very much, Mr. Chairman.

[The prepared statement with attachment of Mr. Henry follow:]

PREPARED STATEMENT OF W. L. HENRY, EXECUTIVE VICE PRESIDENT, GULF OIL CORP., IN BEHALF OF THE AMERICAN PETROLEUM INSTITUTE, MID-CONTINENT OIL & GAS ASSOCIATION, ROCKY MOUNTAIN OIL & GAS ASSOCIATION, AND WESTERN OIL & GAS ASSOCIATION

CONTENTS

DOMESTIC AND FOREIGN TAX POLICY

SUMMARY

1. *Tax incentives.*—The API supports present tax incentives—particularly percentage depletion and the expensing of intangible drilling costs—for both foreign and domestic operations.

2. *Importance of international oil operations.*—The U.S. must import petroleum supplies for at least the next 10 years. Foreign operations of the U.S. oil industry will provide greater control of foreign oil, thus assisting the procurement of essential supplies. If privately-owned U.S. companies were unable to compete in the international oil industry, this country would inevitably become largely dependent on companies owned by foreign governments. A continued American presence in the international oil industry contributes to the economic, strategic, and diplomatic security of this country. It also has a substantial positive effect on the U.S. balance of payments.

3. *Foreign tax credit.*—The foreign tax credit is essential to the competitive survival of American business abroad. All other industrialized countries avoid double taxation of foreign source income. If taxed on the same income in both the foreign country and at home, U.S. companies will be unable to compete abroad. Further, disincentives to foreign investments will not increase domestic activity. Domestic activity does not compete with foreign. Each is dependent on its own anticipated economic return.

4. *Facts about the foreign tax credit.*—(*a*) It is not an incentive. It merely avoids double taxation.

(*b*) It does not apply just to oil companies. It is allowed to every American taxpayer, whether corporation or individual.

(*c*) It does not reduce taxes on U.S. source income. It applies only to foreign income. Foreign tax rates nearly always exceed the U.S. tax rate. Thus, foreign tax increases are very real costs to the industry and do not reduce U.S. income taxes.

(*d*) Foreign taxes are not royalties. The host governments require royalties and impose income taxes just like the U.S.

5. *Administration proposal.*—The Administration proposal would arbitrarily limit creditable foreign taxes on producing income. There is no basis for treating foreign income taxes as anything other than income taxes. The impact of the proposal would likely fall most heavily on those oil companies which operate worldwide integrated businesses and compute the foreign tax credit on the overall method. It would place them at a competitive disadvantage with their principal foreign-owned international competitors.

6. *"Excess profits" in perspective.*—API members condemn profiteering. However an increase in profits does not necessarily mean that profits are excessive. Petroleum company earnings have risen from a level that was much too low. As the industry's costs increase, the absolute level of profits must rise correspondingly. Removing capital from the industry through an "excess profits" tax will not help to solve the energy problem. It will needlessly prolong the energy shortage.

7. *Excess profits tax proposals.*—If the oil industry is singled out for an excess profits tax, a provision that gives credit for reinvestment is of critical importance. At least three proposals have been made:

(*a*) S. 2806 includes a tax based on current taxable income to the extent such income exceeds a profit allowance and the funds reinvested in energy projects. This proposals has the medit of a reinvestment feature, permitting profits to increase with additional investment. However, the 20 percent rate of return allowed in this bill may be inadequate because it relates to the smaller tax basis rather than the usual book basis used for computing rates of return.

(*b*) The McGovern-Aspin proposals would base the tax either on historic profit levels (perpetuating low profits from the chosen base period) or on a profit allowance substantially less than 6 percent of investment on a tax basis. Such a profit allowance would be grossly inadequate. The reinvestment provision is also inadequate.

(*c*) The Administration proposal would impose a graduated tax on the difference between the selling price of crude oil and the ceiling price as of December 1, 1973. The tax rate would be reduced over a three-year period. This tax should be imposed, if at all, only on prices well in excess of the long-run supply price, i.e., the price that will ultimately balance supply and demand. A reinvestment provision would be essential if this proposal is to stimulate new supplies.

STATEMENT

Gentlemen, I welcome the opportunity to testify before you today. My topic is the United States taxation of the petroleum industry.

Domestic Tax Policy

Before offering our analysis and comments on the specific tax proposals I would like to present our views on the justification for continuing the percentage depletion allowance and the option to expense intangible drilling costs.

From the very earliest days of our Federal income tax structure, tax incentives to encourage the development of our country's petroleum resources have been wisely provided. The need for such incentives is as great as, or greater than, any time in the past if the United States is ever to return to a level of near self-sufficiency in its oil and gas supply.

Percentage depletion and the intangible option are essential elements of such incentives. They have attracted into the high-risk search for petroleum a greater amount of capital than would otherwise have been available. As a result, our available domestic supply of petroleum has been greater than it would have been because the industry has spent the funds—and much more—generated by depletion in search for new petroleum deposits. The industry's expenditures in its exploration and drilling effort in recent years have been at a level twice the amount of the statutory depletion allowance.

Budgeted capital expenditure figures released by several petroleum companies for 1974 indicate that their level of exploration and development effort will increase by more than 50 percent. These increases are part of the response of our industry to the need projected by the National Petroleum Council for exploration and development expenditures at an average level of at least $12 billion annually during the 1970's.

Non-financial factors will also have to be present as part of a successful national energy program to achieve such expenditure levels, but in the face of our current critical energy shortages, it would not make economic sense now to remove established tax incentives which have worked effectively and fairly to attract and retain risk capital in this industry's vital effort to develop additional producing capacity. The reduction by the Revenue Act of 1969 in the rate of the percentage depletion allowance and subjecting it to the 10 percent preference tax added over $500 million annually to the petroleum industry's tax burden. There is no doubt that these changes had a negative effect on efforts to become less dependent on foreign oil and to become self-sufficient in energy. For example, in 1970 following the additional taxes resulting from the 1969 Act, there was a decline of more than 20 percent in exploratory wells and new fields discovered representing an acceleration of the long term decline in exploratory activity.[1]

There is another aspect of this issue on which I would like to present our views. Prices of crude oil and petroleum products are subject to control by the Cost of Living Council. Whether price controls continue on domestic petroleum or the prices are allowed to move to the price of imported oil, there is little or no possibility—politically or economically—that for the foreseeable future domestic prices could respond in the manner or the magnitude required to pass on additional tax costs.

The Administration has announced an ultimate objective of establishing a free market which would permit all U.S. crude oil prices to reach world parity. Thus, the domestic price would be set by prices of imported oil regardless of the level of U.S. taxation. Under these conditions, there would be no way to shift any U.S. petroleum tax increases on to consumers. It is a basic principle of international trade that a government cannot, in the absence of import barriers, increase taxes on domestic producers without reducing their profits and discouraging them from making domestic investments. With or without percentage depletion, the U.S. producer could receive no more than the import price. If depletion and the option to expense intangibles were eliminated, the adverse effect on the industry's energy efforts should be apparent. These provisions, therefore, remain essential parts of a national energy policy. Their incentive effects are as important today as ever before.

In the context of today's shortages of developed energy and increasing petroleum prices, the grave danger for the fiscal and energy policy makers in the Congress is that they will look at only the short-run tax or economic consequences of proposed action without regard for the long-run consequences or the evaluation of all the economic considerations. The imposition of additional taxes on petroleum operations now would entail long-term public costs exceeding benefits and would not be in the national interest of expanding our domestic energy resources. If the tax laws cannot be changed to help solve energy problems, then surely they should not be altered in any way that will contribute to greater shortages.

U.S. Taxation of Foreign Source Income

U.S. taxation of foreign-source income of American petroleum companies is a subject of numerous misconceptions and the object of many false or misleading statements. In the discussions below, I will outline the importance of overseas oil operations by U.S. oil companies and the history and operation of the foreign tax credit. I will then try to eliminate some of the misconceptions concerning the foreign tax credit and comment on the Administration's proposal to amend the credit.

The National Interest in U.S. Oil Operations Abroad

U.S. taxation of foreign-source income of American petroleum companies must be evaluated in the light of the importance of their activities to the national interest of the United States. A continued American presence in the international oil industry contributes to the economic, strategic, and diplomatic security of

[1] Richard J. Gonzalez, "Declining Trends in Exploration for Oil and Gas," Statement before Senate Interior and Insular Affairs Committee, August 9, 1972, pages 12–13.

this country. It also has a substantial positive effect on the U.S. balance of payments.

As has been indicated in earlier testimony, the United States will continue to require petroleum imports for several years to come. Even with a maximum effort, achieving self-sufficiency will likely take at least 10 years because of the long lead times required to develop new supplies of petroleum and alternative energy sources.

In addition to domestic economic requirements, foreign-source oil is of significant strategic importance, since—in the words of the Department of Defense—"The U.S. alone cannot realistically plan to fuel any Free World type of emergency. . . ." [2] In a deficit oil position itself, the United States is not in a position to help meet the needs of its allies during an interruption of international supplies.

Diversification of foreign sources of supply would also diminish the restraints which might be imposed on American international diplomacy if the country were heavily dependent on one or two foreign oil sources. The security of the Free World supplies requires ready access to diverse and growing sources of foreign oil.

In the case of the United States, the best way to minimize the problems of future access to foreign-source petroleum is to encourage U.S.-owned companies to continue to operate aboard. American companies will apply their managerial and technological expertise to diligent development of the discovered-but-undeveloped reserves in the Middle East, as well as to exploration for new reserves in that area. Moreover, they will apply that same expertise in attempting to diversify sources of foreign supply. If privately-owned U.S. companies were unable to continue to compete effectively in the international oil industry, this country would inevitably become largely dependent for its essential foreign supplies on companies owned in whole or in large part by foreign governments.

It is a commonplace in world affairs that not to be represented in international councils is a severe handicap in obtaining appropriate recognition of a nation's interests. If U.S.-owned companies own or control part of international oil supplies, it is much more likely that an allocation of supply equitable to the United States, as well as to others, will be obtained in the event of a world oil shortage. With the U.S. and foreign-owned private companies continuing in their key position as producer-distributors of international oil supplies, the legitimate interests of the United States and its allies would be considered in any such shortage. In the absence of an American presence in the international oil industry, there would be substantially less U.S. control of foreign petroleum supplies.

In addition to the national security significance of U.S.-owned foreign oil supplies, the participation of U.S. companies in the world oil industry has decided positive implications for the U.S. balance of payments. American ownership of foreign crude producing facilities provides some balance-of-payments offset to the increasing costs of U.S. oil imports, since the profit component of those supplies accrues to U.S. interests. Profits attributable to American ownership of petroleum producing, transport, refining, and marketing facilities serving foreign markets also have a positive effect on the balance of payments.

In addition to direct earnings, U.S. foreign petroleum investments result in receipts of fees and royalties and in substantial U.S. exports of capital equipment and other merchandise for use in U.S.-owned facilities abroad. The annual income received from foreign petroleum investments by U.S. companies also results in additional U.S. tax revenues when this income is taxed upon distribution to individual U.S. shareholders.

U.S. Tax Policy and U.S. Oil Operations Abroad

If American petroleum operations abroad are to remain viable, U.S. taxation of foreign-source petroleum income must not be amended to leave U.S.-owned companies at a competitive disadvantage relative to foreign-owned petroleum companies. Companies owned by producing country governments have an obvious advantage in access to supplies while companies owned by the governments or private citizens of the principal consuming countries of Europe and Japan generally receive special tax and non-tax incentives for foreign oil exploration ventures. The combined incentives for foreign oil ventures provided by other major countries are generally at least as valuable as the tax treatment provided by the United States—and in some cases are more valuable.

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[2] Submission to the 1969 Task Force on Oil Import Control.

EXHIBIT I

Summary Statement of Tax Treatment and Other Incentives for Foreign Petroleum Operations by Companies Domiciled In:

(1) France—does not tax. Other incentives: None for private companies. (Government finances wholly-owned government company and owns substantial interest in large private company.)

(2) Japan—taxes on overall basis with credit. Other incentives: Exploration loans of up to 50% not repayable in the event of failure; government guarantees of bank loans for exploration and development; percentage depletion of 15% with reinvestment requirement; expensing of dry holes.

(3) Netherlands—does not tax. Other incentives: Allows deduction of foreign losses from domestic income.

(4) United Kingdom—taxes on per country basis with credit. Other incentives: Expensing of all pre-discovery costs; expensing of plant and machinery expenditures; rapid depreciation of other post-discovery expenditures. Allows a form of averaging of foreign losses and profits similar to U.S. overall method. Allows deduction of a net foreign loss. (Government owns substantial interest in large private company.)

(5) West Germany—taxes on the per country basis with credit. Other incentives: Outside the Common Market, exploration loans up to 75%, not repayable in the event of failure—50% of a loan may not be repayable in the event of discovery; expensing of all exploration costs; rapid depreciation of tangibles and intangibles. Allows deduction of a net foreign loss.

(6) United States—taxes on the per country or the overall basis with credit. Other incentives: Percentage depletion; expensing of dry holes and intangibles on producing wells (but no deduction of pre-discovery costs other than dry holes, until properties are abandoned). Allows deduction of a net foreign loss.

NOTE: This exhibit is drawn from a more detailed analysis in Appendix A. Also see that appendix for notes and explanations.

While the details of these foreign government combined tax/incentive/financing packages vary from country to country, it is clear that most foreign competitors of U.S. oil companies have strong incentives from their governments and in many cases unique advantages, e.g., direct or indirect government financing in whole or part by France, Italy, Japan, the United Kingdom, and West Germany. U.S. tax policy should not impose competitive constraints on American companies by adversely changing U.S. tax treatment of foreign petroleum operations.

Avoidance of Double Taxation.—The primary tax requirement for continued competitiveness of U.S. oil operations abroad is that the United States continue its traditional policy of avoiding double taxation of foreign-source income. Since all other major consuming countries avoid double taxation, U.S. abandonment of this policy would render American companies non-competitive.

The United States avoids double taxation by allowing a credit for foreign income taxes paid. If the United States were to treat foreign income taxes as a deduction from income rather than as a tax credit, U.S.-owned companies would be double taxed—once by the foreign country and once by their home country. For example, with a 50 percent tax rate at home and 50 percent abroad, their combined tax rate on foreign income would be 75 percent (50 percent foreign plus 25 percent U.S.). Foreign-owned competitors would pay only 50 percent. Thus, the American-owned companies would be fatally disadvantaged relative to their foreign competitors who have to pay no home country taxes on their foreign operations.

As former Assistant Secretary of the Treasury Stanley S. Surrey has said, "American investment would not proceed at all without the foreign tax credit because . . . two taxes would be imposed and the overall burden of two taxes would be so great that investment would practically cease." [3] We emphasize that only American investment would cease. Oil companies owned by others—especially by foreign governments—would be only too glad to step in to fill the ownership gap left by the tax-induced departure of their U.S. competition.

Equal Treatment of Foreign and Domestic Income.—A second traditional goal of U.S. taxation of foreign-source income has been equality of treatment of like investments at home and abroad. Substantial petroleum imports are going to be

[3] Hearings before the Committee on Foreign Relations, United States Senate, 90th Congress, 1st Session on Tax Convention with Brazil, Executive Journal, 1967, pp. 19–20. Professor Surrey reaffirmed his view that the foreign tax credit should be retained in his appearance before the Committee on Ways and Means, February 5, 1973.

required to supplement domestic sources for a number of years to come. Accelerated domestic exploration and development is essential, but continued foreign exploration and development is also necessary to meet U.S. energy requirements. For this reason, U.S. petroleum tax policy should continue to encourage foreign oil operations. For example, percentage depletion, expensing of intangible development costs, and accelerated depreciation should not be denied to foreign operations. Making foreign operations by U.S. companies more difficult would not, itself, mean that the companies would increase domestic exploration. Domestic exploration rises when—and only when—domestic economic incentives improve. That improvement cannot be achieved by raising taxes on foreign exploration.

In short, the national interest need for increasing the security of overseas oil supplies requires that the U.S. government use the utmost care to avoid foreign tax policies which would disadvantage foreign operations of U.S.-owned petroleum companies. Certain suggested foreign tax changes now pending before the Congress would do this.

Foreign Tax Credit

General.—Two methods are used in determining the allowable foreign tax credit. The per country method treats the income and taxes from each foreign country separately in determining the amount of the allowable foreign tax credit. The overall method treats all foreign profits and all foreign income taxes as a whole. Taxpayers may choose that method which appears more suitable on a long-term basis considering their particular business circumstances, but they may not change methods from year to year.

In both cases, the foreign investor always pays the higher of the U.S. or foreign tax rates. Under the United States credit system, if the foreign income tax rate is less than the U.S. rate, the U.S. government collects the difference from the taxpayer. However, if the foreign income tax rate is higher than the U.S. rate, the taxpayer bears the difference; no additional tax is paid to the U.S. The amount of the allowable credit is limited to the amount of U.S. tax which would otherwise be due on the foreign-source income. Accordingly, the allowance of the foreign tax credit cannot reduce a company's income tax an U.S. source income. Of course, a net foreign loss is deductible in accord with the treatment of losses by other countries which tax foreign source income earned by their nations (See Exhibit 1 and Appendix A).

The Overall Method.—The overall method is particularly important to firms which operate worldwide integrated businesses in competition with foreign-owned worldwide integrated businesses. For example, in a manufacturing industry, components may be produced in a number of countries, assembled within a single country, and the final product sold on the world market.

The vertical integration of the international oil industry, which traces back to the early years of this century, is also a good example of interrelated foreign business operations. Investments in foreign oil-producing activities are often in countries far removed from the major consuming areas. The additional investments in refineries, pipelines, tankers, and other distribution facilities which are required to bring this production to market often occur in a number of other countries, all of which may have internal taxing concepts and income tax rates which differ substantially from each other and from those of the United States. The overall method has been criticized for permitting averaging of incomes and taxes in different countries where a U.S.-owned firm may "fortuitously" do business. There is nothing fortuitous about the intercountry integrated operations of the established international companies. Sales in Europe and production in the Middle East are part and parcel of the same operation. In assessing the effect of taxes on the economic feasibility of such integrated ventures, it is the overall tax burden on the competing international firms which matters.

As is shown in Exhibit I above, in order to avoid double taxation of foreign source income earned by their nationals, some governments use an averaging concept or an overall foreign tax credit system which obtains results similar to the United States overall method. Other countries impose no domestic income tax on foreign source income. Multinational companies domiciled in those countries which impose no tax on foreign operations automatically bear a foreign income tax burden which is the average of all foreign income taxes paid—again a result similar to the U.S. overall method.

Since the principal foreign-owned worldwide competitors of U.S. integrated international oil companies are domiciled in countries falling in one of these categories (France, Italy, Netherlands, U.K.), the U.S. overall method providing for

averaging of all foreign taxes enables the more completely integrated U.S. company to compute its foreign-source income tax obligations in a manner closely similar to that available to its primary foreign competitors. For example, if a U.S. company and a foreign competitor domiciled in, say, France derive half of their income from a country with a 60 percent tax rate and half of their income from a country with a 40 percent tax rate, the foreign-owned company's overall foreign income tax burden would be 50 percent (60+40÷2=50). On the U.S. overall basis, the U.S. company would also pay the foreign average of 50 percent, which is higher than 48 percent U.S. rate. On the other hand, if the U.S. company were on the per country basis, the U.S. would collect an 8 percent tax on income earned in the second country, whose rate is 8 percentage points lower than the U.S. rate. Thus, the U.S. company would pay 54 percent overall on the per country basis (60+40+8÷2=54).

Use of the overall method, therefore, places a U.S. oil company which is more completely integrated from crude production through refining and marketing in a better position to achieve competitive tax equality with its principal foreign-owned integrated international competitors in world markets. Accordingly, the option to compute the foreign tax credit on the overall basis corresponds to the competitive requirements of integrated foreign operations of U.S. firms. The more complete the degree of integration, the more economically appropriate is the application of the overall method.

It has been suggested that the overall method of computing the foreign tax credit encourages the export of U.S. manufacturing jobs to low tax rate countries in order to permit the taxpayer to take advantage of the excess credit being generated in a high tax rate country. This argument overlooks the other and paramount aspects of a business decision to go overseas, particularly such compelling factors as proximity to market or supplies and host government requirement that local markets be served by the products of local plants. As the U.S. Tariff Commission has recently said, ". . . while tax considerations always are relevant, they seldom are dominant in the multinational company's decision to invest abroad."[4] For example, production of crude petroleum must occur where the natural resources are geographically located. Similarly, the location of pipeline operations is determined by the source of the oil or gas and the site of the market being served. Governments often require that refined products be manufactured within the country. And service stations can only be located at the market. In determining the site of business facilities, compelling factors such as these generally far outweigh any advantage which might accrue from use of the overall method. The overall method is not used as a device to export U.S. operations and jobs to foreign countries; rather, it enables integrated U.S. companies to meet the competition of foreign-owned integrated companies.

The Per Country Method.—The per country method for computing the foreign tax credit is vitally important to many companies in high-risk industries when they are entering new foreign areas. On the per country method, operations in each foreign country are given the same U.S. tax treatment for purposes of computing the foreign tax credit as would prevail for comparable operations in the United States. Thus, U.S. tax treatment is neutral in its effect on investment decisions for an operation in the U.S., in foreign country A, or in foreign country B. The decision on whether to conduct operations in the U.S., in foreign country A, or in foreign country B, rests on basic economic considerations, not on U.S. tax considerations.

The foreign competitive position of less completely integrated U.S. firms requires the per country method, especially if a considerable part of their foreign endeavors is composed of risky ventures such as petroleum exploration in new foreign areas. The ability to deduct foreign losses with a resultant decrease in U.S. tax is necessary for their competitive survival in the race for new oil sources against foreign-owned companies receiving the combined tax/incentive/financing assistance outlined in Exhibit I and Appendix A. Recall that West Germany and the United Kingdom permit full loss deduction on a country-by-country basis. And we have seen that other countries such as France, Italy, and Japan provide direct or indirect financial assistance to foreign oil operations conducted by their citizens. Japan, for example, grants exploration loans up to 50 percent, not repayable in the event of failure.

The per country method is needed for purposes of foreign loss deductions because such deductions are usually not available on the overall method. Foreign

[4] U.S. Tariff Commission, Implications of Multinational Firms for World Trade and Investment and for U.S. Trade and Labor (Washington: 1973), p. 12.

loss deductions for U.S. tax purposes are available on the U.S. per country method when there is a net loss in an individual country, but a loss deduction would only be available on the overall method in the event of a net loss in all foreign countries combined.[5] However, a U.S.-owned company on the per country method could fully deduct any loss in a new country from its other taxable income.

If restricted to the overall method, new entrants may be restrained in their efforts to find and develop foreign petroleum reserves in new areas. In petroleum exploration and production, the chance of loss is high; and foreign tax rates are generally at least as high as U.S. rates. After one successful foreign venture under these conditions, the costs of any further foreign exploration and development would increase because the U.S. tax deductions would be effectively lost as a result of the operation of the overall limitation. This would have the effect of nearly doubling the capital required. That capital burden may be beyond the capability of many smaller petroleum companies, thus eliminating them from the search for foreign oil and gas. It is important that these companies be encouraged to seek new oil reserves in diversified locations abroad, as well as domestically, in order to increase the security of petroleum supplies for the United States and its allies.

The Method Which Gives the Higher Tax.—The United States once required taxpayers to use the method which gave the higher tax; but Congress determined that this approach was undesirable and abandoned it in 1954.

Forced application of either method of computing the foreign tax credit to any given taxpayer is likely to produce a bias against some form of activity. For those presently using the overall method, forced application of the per country method would produce onerous competitive results in worldwide integrated production and distribution networks and discourage development in existing producing countries. In the case of taxpayers presently using the per country method, expansion into new areas of exploration would likely be limited by a forced change to the overall method. Neither of these results would be in the national interest. The overall method encourages exploration and development operations of the more completely integrated firms in existing producing countries where success in obtaining needed incremental oil supplies is more likely. The per country method encourages companies concentrating on exploration and production to engage in risky attempts to achieve diversification of sources of supply, which is essential to increase the security of imported supplies. Both activities are required in the national interest.

One of the objectives of sound international tax policy is to promote tax neutrality between foreign and domestic investment decisions in order that tax policy will not, itself, distort the economic decision on where to locate a facility. The U.S. policy of having its foreign investors pay the higher of the U.S. or foreign tax approaches international tax neutrality when applied under the existing option to choose either method. The foreign tax rate may be higher than the U.S. rate, but only because the foreign country chooses to levy higher rates. U.S. action to force the taxpayer to use the less favorable method is almost certain to produce bias against foreign investment because it will almost always lead to a higher tax rate on a foreign investment than on a similar investment at home.

Misconceptions of the Foreign Tax Credit

The many misconceptions of the operation and effect of the foreign tax credit have led to false or misleading charges directed to the petroleum industry.

Charge: It is an incentive for the oil industry. Answer: No.—The foreign tax credit has been mislabeled as an incentive for the oil industry. In fact, it is not an incentive nor does it apply only to the oil industry.

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[5] For example, if a U.S. company on the overall method has its foreign-source income equally divided between two countries having tax rates of 54 percent and 42 percent, its overall foreign tax rate is 48 percent (54+42÷2=48). Hence, there is no U.S. tax on the foreign-source income. If the U.S. company pursues a risky venture in a third country and incurs a loss, its total foreign tax could not be reduced because the third country loss would not be deductible in other foreign countries. The third country loss could also not reduce the U.S. tax, since there was no U.S. tax on foreign-source income with a 48 percent average foreign rate. If the average foreign rate had been, say, 40 percent before entry into the third country, an 8 percent U.S. tax would have applied (48−40=8). And the third country loss would reduce that tax on the overall basis. However, foreign tax rates in the major countries are generally sufficiently close to U.S. rates that any such U.S. tax is unlikely to be large. The third country loss would lead to a full reduction in U.S. tax on U.S.-source income (i.e., 48 percent of the loss) only if the company had a combined loss in the first two foreign countries—no doubt a rare situation. Thus, a U.S. company on the overall method can realize little or no reduction in U.S. tax from a foreign loss in a new country.

The foreign tax credit is necessary to prevent double taxation of the same income—once by the foreign government and again by the U.S. Without it American companies could not compete with other companies since all other industrialized nations avoid double taxation.

The foreign tax credit is allowed to every American taxpayer, whether it be a corporation or an individual, who earns income abroad and is required to pay an income tax to the nation in which the income is earned. The fact that the oil companies account for 45 percent of all foreign tax credits simply reflects that (1) their foreign investments are higher than any other business, and (2) they are operating in countries that impose very high income taxes.

Charge: Oil companies do not resist foreign tax increases. Answer: False.—Critics have alleged that the industry does not resist tax increases imposed by foreign producing governments asserting that the increases are credited against and reduce U.S. income tax dollar for dollar. There is no truth to this charge.

A U.S. oil company receives a credit for foreign taxes paid, but only up to the amount of the U.S. tax that would otherwise be due. To the extent the foreign tax exceeds the U.S. tax, the excess cannot be used as a credit against U.S. taxes. The following example illustrates the unused credit:

EXHIBIT II—U.S. TAX CALCULATION

1.	Sales at market price	$8.00
2.	Less the following:	
	Royalty at 12½ percent	1.00
	Production costs	.50
	Depletion 22 percent of $7	1.54
		3.04
3.	U.S. taxable income	4.96
4.	U.S. tax at 48 percent	2.38
5.	Less foreign taxes paid at 55 percent	3.57
6.	U.S. tax due	0
7.	Unused foreign tax credits	1.19

NOTE.—The unused foreign tax credits cannot reduce the U.S. tax on U.S. income. The foreign tax rules apply uniformly to all U.S. corporations operating abroad.

Any increase in the foreign tax simply increases the unused tax credit. For example, if the foreign tax rate in Exhibit II were increased to 60%, the unused credit would increase by 33¢ per barrel. But it would have absolutely no effect on U.S. tax payments.

Additional foreign taxes are a very real cost to the industry. In some instances, companies have been able to recoup the additional taxes from their customers. In others, the companies have absorbed the cost.

Thus, statements that the companies have not resisted increases in foreign tax because the United States "picks up the tab" are completely false.

Charge: Oil companies are allowed to treat foreign royalties as taxes. Answer: False.—Charges are made that all of the payments to the producing country governments are royalties, not taxes. That is not true. The basis for this misconception is probably due to the fact that a foreign government deals with the oil industry in two capacities: (1) as the owner of natural resources in place; and (2) as a sovereign taxing power. The foreign government collects a royalty as the owner of the natural resources; and it levies an income tax on the profits in its capacity as the taxing sovereign. Each payment is separate, and each is made for different reasons. In recognition of this distinction, a U.S. tax deduction is allowed for the royalty; and a U.S. tax credit is allowed for the income tax to the extent that the U.S. would tax the same income. Thus, a tax credit is not allowed for oil royalties paid to foreign governments.

This system of payments parallels payments to the U.S. government on its own oil lands. It collects a royalty as the landowner and levies an income tax on the profits as the taxing sovereign. There is no reason to treat payments to foreign governments differently—particularly because the Internal Revenue Service reviews the validity of the foreign tax as an income tax.

If the foreign taxes were treated as royalties, it would be about the same as allowing a deduction rather than a credit. As shown above, American-owned com-

panies would be fatally disadvantaged relative to their foreign competitors who pay no home country tax on foreign operations.

Charge: Foreign disincentives will increase domestic activity. Answer: False.— It has been asserted that discouraging or eliminating foreign oil and gas operations of American companies would increase domestic activity. That is false. Reducing the foreign operations would do nothing toward making domestic exploration and development more attractive. It would do nothing to increase energy supplies and would likely reduce the total supply available to the U.S.

This charge assumes that attractive opportunities in the United States have been foresaken in favor of foreign exploration. It is true that until 1972 domestic exploration had been decreasing. But, the decline in domestic exploration was attributable to (1) policies that have withheld federal acreage from exploration; (2) environmental restraints that have discouraged the search for new reserves; and (3) U.S. price restrictions. Raising taxes on foreign exploration and development will not assist domestic exploration and development. Domestic exploration and development will be undertaken on the basis of the adequacy of its own anticipated economic return to investors rather than in competition with foreign exploration and development. In the light of the critical shortage of fuels on a worldwide basis, both domestic and foreign exploration are urgently needed.

Administration Proposal for Reducing the Foreign Tax Credit on Producing Operations

In its energy message the Administration announced that the Treasury Department had been asked to prepare proposals which would cause part of the income taxes paid to foreign countries on producing operations to be designated as creditable in computing the foreign tax credit and the balance to be allowed solely as a deduction in computing taxable income. The impact of this proposal will fall principally on those oil companies which operate worldwide integrated businesses and compute the foreign tax credit on the basis of the overall limitation. To assist in our discussion of this proposal it will be helpful to consider a hypothetical but nonetheless representative description of the activities of such a company. This company carries on its foreign operations (1) through some U.S. corporations which are included in its consolidated tax return, (2) through some U.S. corporations in which its ownership interest is not large enough for inclusion in the consolidated tax return and (3) through foreign corporations which are not includible in the consolidated tax return. These foreign operations include exploration, production, transportation, refining and marketing of crude petroleum and its product.

Exploration Operations.—Most of this hypothetical corporation's exploration and producing operations are carried on through U.S. corporations includible in the consolidated tax return but in some cases foreign corporations are utilized. When carried on through a U.S. corporation the deductible expenses during the period prior to production reduce consolidated taxable income and correspondingly reduce the consolidated foreign tax credit. When they are carried on through foreign corporations such pre-production expenses are not taken into account in the computation of U.S. income tax liability.

Producing Operations.—This hypothetical company conducts producing operations in many foreign countries. Most of these countries impose income taxes at rates higher than the U.S. rate, but some impose income taxes at rates lower than the U.S. rate or provide tax incentives which result in a lower effective income tax rate. Most of these operations are carried on through wholly-owned U.S. companies in which case the income from the producing operations is included in the consolidated tax return and the foreign income taxes it pays are directly taken into account in computing the consolidated foreign tax credit.

In some instances the foreign operations are carried on through U.S. corporations in which the ownership interest is less than 80 percent, in which case the producing company files its own U.S. income tax return and computes its own foreign tax credit. In such a case 15 percent of the dividends received by the U.S. corporate shareholder are included in that shareholder's taxable income as foreign source income, but none of the foreign income taxes paid by the producing company may be taken into account in computing the shareholder's consolidated foreign tax credit.

In some instances the producing operations are carried on through foreign corporations. In these cases the U.S. corporate shareholder includes dividends from that foreign corporation in its consolidated tax return and takes into account in the computation of its consolidated foreign tax credit the foreign

income taxes paid by the foreign corporation that are attributable to such dividend income.

Transportation Operations.—Most international transportation of crude oil and its products is through the use of large oceangoing tankers. In some instances the tankers are owned by foreign corporations incorporated under the laws of the consuming countries but in most instances they are owned by foreign corporations incorporated in countries which impose little or no income tax on income from shipping operations. Dividends from such foreign corporations are included in consolidated taxable income and foreign income taxes attributable to those dividends are included in calculating the consolidated foreign tax credit.

Refining and Marketing Operations.—Most of our hypothetical corporation's refining and marketing operations are carried on through foreign corporations incorporated in the countries in which the refining and marketing operations are conducted. Sometimes the effective foreign income tax rates are higher than the U.S. rate; in other cases they are lower. In either case the U.S. shareholder includes dividends from the foreign corporation in computing its consolidated taxable income and takes into account in computing its consolidated foreign tax credit the foreign income taxes paid by the foreign corporation which are attributable to such dividends. In addition there usually are foreign income taxes imposed on such dividend which are also taken into account in computing the consolidated foreign tax credit.

Calculation of U.S. Income Tax.—The foregoing description demonstrates that the sources of income from the foreign operations of our hypothetical company are quite varied. Some are taxed at rates higher than the U.S. rate, some are taxed at rates lower than the U.S. rate and some are subject to no foreign income tax. Yet they all represent segments of an integrated foreign operation. Under the overall limitation to the foreign tax credit the various foreign income taxes applicable to the integrated operation are aggregated and are compared with the U.S. tax (before foreign tax credit) on the consolidated taxable income from such foreign operations. In that aggregation a portion of the foreign income taxes attributable to income eligible for the percentage depletion deduction is not taken into account. Because the rates of income tax on producing operations are generally higher than the U.S. rate, the aggregate foreign income taxes exceed the consolidated U.S. tax attributable to foreign source income and thus through application of the foreign tax credit no U.S. income tax is payable on income from foreign operations. The overall limitation to the foreign tax credit prevents utilization of foreign income taxes in excess of the U.S. income tax on foreign source income from reducing the U.S. income tax on U.S. source income. What is thus achieved is a result closely comparable to that achieved under the income tax laws of most other major foreign countries, namely, either complete exemption of foreign income from home country taxation or the avoidance of international double taxation by not imposing home country taxes when foreign country income taxes are imposed at a higher rate. This system has made it possible for U.S. oil companies who are more completely integrated from crude production through refining and marketing to be in a better position to achieve competitive tax equality with their principal foreign-owned integrated international competitors in world markets.

Impact of Administration Proposal.—What the Administration's proposal would do to our hypothetical U.S. company is to disallow as a creditable foreign income tax that portion of the income taxes paid to a foreign producing country which is greater than the U.S. tax rate on the producing income from that country, treating the excess as a deduction in computing that producing income. An algebraic formula is required to determine the interdependent amounts of the portion of the foreign income tax that is deductible and the portion that is creditable but the result of that algebraic computation is to allow the foreign income tax to offset the U.S. tax on producing income from that foreign country but not to allow it to reduce U.S. income tax on foreign income from any other source. As a result the U.S. company using the overall limitation would be required to pay income taxes on its other foreign operations which were not taxed at rates as high as the U.S. rate, despite the fact that its total foreign income tax burden is greater than the U.S. income tax rate.

The primary objection to this proposal is that it would place the more completely integrated U.S. companies who utilize the overall limitation to the foreign tax credit at a competitive disadvantage with their principal foreign-owned integrated international competitors. Income from shipping operations would be particularly hard hit. Such companies would be far less likely to invest in

tankers and the loss in U.S. control of oceangoing tanker tonnage would be harmful to the national interest.

Foreign Tax Policy—Summary.—The U.S. should not increase its taxes on foreign operations at a time of severe worldwide energy crisis. In addition to promoting increased domestic production, United States tax policy should promote discovery of diversified crude oil supplies overseas by U.S.-controlled companies, as well as accelerate development and new exploration in existing producing countries. But increased U.S. taxation of foreign-source income would do exactly the opposite. At the most inopportune of times, it would seriously, if not fatally, disadvantage the operations of American petroleum companies abroad. This would be an irretrievable move, for once the American company relinquish their position abroad, they will be immediately and permanently replaced by European and Japanese companies.

Excess Profits Taxes

There is widespread pressure in Washington to levy an "excess" profits tax on the oil industry in order to make certain that no one exploits the energy crisis to make profits far above the level needed to attract the capital required to reachieve a reasonable degree of energy self-sufficiency in the United States. Let me make clear that while the member firms of the American Petroleum Institute wholeheartedly support profits, they wholeheartedly oppose profiteering. But. when do profits become "excessive"?

What Profits Are Excessive?

Perhaps the best way to answer this question is to specify what profits are not excessive. Clearly, profits are not "excessive" merely because they are increasing as time passes. We have seen that industry earnings were up about 50 percent in 1973, but a 50 percent increase over an unsatisfactory low level does not necessarily mean an unsatisfactorily high level. Consider the case of a firm which was incurring losses in the base period established for an excessive profit tax. Blanket prohibition of increases in profits could condemn it to unsatisfactory performance for the life of the tax. Indeed, "excess" profits taxes can almost always be expected to discriminate against some companies depending upon their performance in the base period. What matters is the rate of return on investment, not the rate of increase of profits as time passes.

Nor are profits "excessive" merely because they may reflect prices higher than required to attract capital in past years. In periods of persistent inflation—such as we have experienced since 1965—rising "profits" as determined by conventional accounting practice may not be rising in real terms at all. From the point of view of the corporate shareholder, profits per share must rise at least with inflation; otherwise his income will lose buying power.

Entirely apart from inflation, some industries are characterized by what economists call "increasing costs." In the minerals producing industries, for example, the geological prospects which appear to be the best are tapped first. Therefore, as the industry expands, it must tap progressively more costly prospects. The lower investment and operating costs of fields discovered and developed years ago are irrelevant to what it will cost to bring on new supplies. New supplies will cost much more in terms of the real resources of men, materials, and invested capital required to bring them into production. Hence, expansion requires increasing prices and profits in order to maintain acceptable rates of return on the new, higher-cost investments. If capital requirements per barrel of oil producing capacity, say, double because it becomes necessary to move to more remote and hostile locations, the company must earn twice as many dollars merely to maintain its rate of return. And it may well need *more* than twice as many dollars because the results of investment in "frontier" areas are often much more uncertain than in proved areas. The petroleum industry is now facing precisely this problem as it moves to exploration in the Arctic and deep-water offshore areas, as well as to the exploitation of new energy sources requiring unproved and costly technology. Such increased uncertainty requires increased rate of return in order to attract capital.

Unquestionably then, both the absolute level of dollar profits and the rate of return for an increasing cost industry operating in an era of persistent inflation must rise as time passes. And the more uncertain the outcome of investments, the more rapidly profits must rise.

High profits attributable to occasional discovery of highly productive properties in an uncertain minerols industry must also not be considered excessive. The rate of return on a billion barrel oil field is likely to be high. But it is not

excessive because the remote possibility of the big prize is undoubtedly a major motivating factor in attracting capital to the search for oil and gas, where the chance of break-even success has been only about 1 in 60 in recent years. (That figure is for break-even success on the productive venture without consideration of the costs of unrelated dry holes.) The investor's knowledge that he will receive the full fruits of a major find does much to offset the negative influence of the dry hole. This is especially true because the Congress has recognized that the discovery value of a find—as approximated by percentage depletion—should be recoverable without taxation. Absence of the opportunity to realize the profits from a big find would make it far more difficult to attract capital to the petroleum industry.

It is sometimes argued that while consumers must reasonably expect to pay a price which compensates investors for the higher cost of expanded new production in an increasing cost industry (including return on investment), there is no reason why they should pay that price for old production which originally cost less than present replacement cost. Such a price for old oil would, it is said, lead to excess profits.

But why should consumers *not* expect to pay the replacement cost of the old oil or gas they use? When a barrel of lower cost old oil is used, it can only be replaced with higher cost new oil. The consumer actually has no grounds to contend that a price which covers the cost of replacing old production leads to excessive profits. With any lower price for its old oil, the first will not generate sufficient profits to stay in business at past levels of operation—much less to expand. Internal generation of funds is particularly important in high-risk endeavors such as petroleum exploration, where outside capital is less readily available.

Foreign profits are also not an appropriate subject for control by a United States excess profits tax. Profits from foreign ventures by American firms increase U.S. Gross National Product and improve the balance of payments. It would be wholly counterproductive to discourage U.S. foreign investment by taxing profits of those ventures at high rates above the foreign rate. That would make new ventures of American companies non-competitive with those foreign-owned firms. And it would expose existing American-owned facilities to retaliatory taxation by the foreign governments. If an excess profits tax is to be paid by the foreign ventures of Americans, why should the foreign government permit the tax to flow to the United States Government?

We have outlined a number of categories of profits which are not excessive. What, if any, profits *are* excessive? A common concept of excess profits would be any increase occurring as the result of extraordinary price increases during a period of emergency shortage. But we have seen that this concept is clearly inadequate because profits may have been sub-normal before the crisis, costs may have risen, etc. A far more acceptable concept would hold such profits to be excessive only if price had risen beyond that level required to equate supply and demand in the long run.

However, even profits attributable to prices well above the supply-demand equating level have long been recognized to have a useful economic function. Such profits (which economists call "quasi rents") give investors extra encouragement to increase capacity in an industry where demand temporarily exceeds supply. After sufficient supply is available, price would fall back to the equalibirum level; and these extra profits would disappear. They, in effect, self-destruct after their economic purpose has been served.

Requirements for an Excess Profits Tax

We believe that levying an excess profits tax on the petroleum industry would be contrary to the national interest, since it would almost inevitably discourage investment. And increased investment is absolutely essential if we are to reachieve a reasonable degree of energy self-sufficiency. Is there any reasonable chance that investors will take a tax in stride without any reduction in their plans to devote funds to the uncertain search for oil and gas and to the risky development of new energy sources? We think not, because Congressional action to increase taxes on the industry is virtually certain to discourage investment, no matter how carefully an "excess" profits tax may be designed to avoiding taxing those profits which are necessary, not excessive. The psychological effect on investors of knowing that success will be penalized can only be negative. We, therefore, oppose an "excess" profits tax.

If, however, we are to have one, what form should it take to be minimally damaging to the critical national interest in sharply increased output of domestic energy? Essential requirements of any excess profits tax are that it:

(1) Treat all competing firms equally.

(2) Define as "excess" or "windfall" profits only funds attributable to prices clearly higher than the level of price which will equate supply and demand in the long run—after allowing for inflation and rising real costs.

(3) Permit minerals explorers to retain the profits from large discoveries.

(4) Enable the industry to retain sufficient profits for the replacement of used-up facilities and to show an adequate rate of return on new facilities.

(5) Affect only domestic profits.

What it really means is that "excess" profits taxes must never be imposed unless prices rise very sharply in supply emergencies to levels well beyond the long-run supply-demand balancing level. Moreover, the tax should expire when the emergency expires. And it should apply to any industry experiencing emergency shortages, not just to oil.

One must concede that the economically sound concept that profits are excessive only if attributable to prices well beyond the supply-demand balancing price may be administratively difficult to implement in an "excess" or "windfall" profits tax because a reasonable accurate estimate of the long-run equilibrium price is required. One promising device for dealing with the difficulty of estimating that price correctly would be to require reinvestment (within a reasonable time) of any profits attributable to prices higher than the estimated correct level. This would assure consumers that if they did, in fact, pay more than the long-run supply-demand balancing price, the funds would either be reinvested—thereby expanding capacity and putting downward pressure on prices and profits—or be taxed away. Amounts reinvested in replacing existing supplies and adding new ones are not windfalls.

We would like to evaluate three "excess" or "windfall" profit tax proposals now before the Congress in the light of these criteria.

Gravel Proposal—Tax on Uninvested Profits from Energy Sources

Under this proposal profits from energy sources in excess of profit allowance would be taxed at 40 percent unless reinvested in energy projects.

There are many substantial conceptual and technical problems with the bill. On the other hand, it includes three of the essential requirements of an excess profits tax:

(1) It is not measured by historical profits, thus permitting some needed profit increase and minimizing discrimination among taxpayers.

(2) It appears that the profit allowance is based on investment in all energy related activities, thus providing a better measure of profits. (As discussed below the 20 percent rate of return is somewhat deceptive since it is based on tax basis rather than the conventional book basis.)

(3) A deduction for reinvestment is permitted.

But let me discuss some of the problem areas.

Profits.—The starting point for computing the tax would be "profits from energy sources" which means taxable income (with certain modifications) from all phases of the energy business. Production, transportation, transmission, importation and sale of consumable energy or of fuel for conversion into consumable energy are specifically included. While it is not entirely clear, it appears that in the case of the petroleum industry, all production, transportation, and marketing are specifically included. Presumably refining is also included. These points should be clarified. The inclusion of all phases of the energy cycle is proper since it is the only feasible method of measuring true profits.

In the case of oil, gas, and other minerals, the bill specifies that "taxable income from energy sources" has the same meaning as the term "taxable income from the property" for purposes of Section 613. This apparently is an attempt to simplify the calculation. However, in doing so, it has created a question on the allowance of depletion in computing taxable income subject to the excess profits tax since "taxable income from property" is prior to either cost or percentage depletion. This should be clarified by adding the phrase "less allowable depletion" immediately after "taxable income from the property" in Section 4961(a)(2).

In determining taxable income from energy sources, certain modifications to taxable income would be required by the bill.

(1) U.S. income taxes attributable to energy profits are deducted. As will be discussed below, there are problems regarding foreign income. Deduction of U.S. taxes is proper in arriving at the amount subject to this tax.

(2) Accelerated depreciation is disallowed to the extent it exceeds straight-line depreciation. This is an unneecssary complication since only timing is involved. More importantly, it detracts from the investment incentive for new plants. Further, to the extent accelerated depreciation reduces the current income tax, the advantages of accelerated depreciation are already reduced since the deduction for income taxes will be smaller.

If this modification is required, then the investment base on which the profit allowance is computed should be adjusted to reflect the difference in tax basis due to accelerated depreciation. This point is discussed further below.

(3) No deduction or capital loss is allowed with respect to outlays treated as a "qualified investment". (As discussed in detail below, "qualified investments" are those investments in energy projects that may reduce profits subject to tax.) As a result, if a depreciable item costing $100,000 is treated as a qualified investment, no depreciation will be allowed on that asset in computing taxable income from energy sources. Operating in this fashion, the reinvestment incentive is greatly diminished since only the timing of the tax may be involved.

In addition, this approach will present many difficult compliance problems in identifying deductions attributable to specific assets.

In some regards this is similar to the investment credit as originally enacted. It required reduction of the depreciable basis by the amount of the credit. Therefore, in part, it provided some timing incentive. The investment credit was subsequently amended to create a greater incentive by eliminating the basis adjustment. As so amended, it also avoided the compliance problems similar to the ones anticipated under the current proposal.

If the proposal is not changed, clarification is needed in Section 4961(b)(1)(B). As written, it seems to disallow deductions for expenditures that are only attributable to qualified investments, i.e., expenditures that do not represent the cost of qualified investment but merely were attributable to the same property would be disallowed. For instance, the provision could be interpreted literally to disallow the cost of drilling a well on a lease if the cost of the lease were a qualified investment.

The only reasonable interpretation is that this provision is meant to apply to expenditures that were treated as qualified expenditures under the "binding contract" rule of Section 4960(c)(1)(B). If that is the intention, the citation in Section 4961(b)(1)(B) should be specific.

In addition to the modifications contained in the bill, the income subject to the proposed tax should not include dividends from energy companies that are themselves subject to the tax, or there may be double taxation.

Foreign profits are included in the bill in the same manner as domestic profits. That is fundamentally wrong as discussed above. Further, to the extent refining and marketing profits on foreign crude are realized in the United States, those profits will be subject to this excess profits tax since downstream operations are included.

Profit Allowance.—The bill provides that profits as determined above shall be reduced by the "profit allowance" which is 20 percent of the average net investment in energy properties.

The profit allowance based on investment is a key essential to any excess profits tax measured by net income since it will permit some profit increase for expansion. It also minimizes discrimination among competing companies. Of course, the difficult problem is in establishing the rate of return to be allowed.

At first impression, many will be inclined to believe the 20 percent rate proposed in the bill to be excessive when compared to historical rates of return. However, it must be recognized that the proposed rate of return is on a very different base. It uses the tax basis of investments in properties rather than the book basis which is traditionally used in financial reporting. Probably without exception, the book basis of any taxpayer in the oil and gas business will be substantially higher than the tax basis. The difference is primarily attributable to three items: intangible drilling costs, percentage depletion, and accelerated depreciation. For tax purposes, IDC may be currently expensed. Thus, the tax basis is zero. For financial reporting, IDC is generally amortized rather than expensed. Similarly, for tax purposes, the greater of cost or percentage depletion is deducted from leasehold investment. Only cost depletion is deducted for financial purposes. Accelerated depreciation will also reduce the basis in assets below the book basis since, for financial purposes, no accelerated depreciation is used.

Because of these reductions of the base for computing the profit allowance, the rate of return on a tax basis must be substantially higher than 20 percent if the objective is to provide a 20 percent return on book basis.

Since drilling expense is one of the essential expenditures to increasing oil and gas supplies, there is substantial merit in expanding the definition of investment to include IDC. Excluding IDC from the investment base would be fundamentally wrong. The fact that IDC has been deducted for income tax purposes does not mean that there is no cost to the operator on which a return must be included. If the base is not expanded, no rate of return or profit allowance will be permitted on IDC. This will severely distort the calculation of producing profits.

Earlier it was mentioned that taxable income from energy sources should not be adjusted for the difference in accelerated and straight-line depreciation. If that adjustment is required, then the investment on which the profit allowance is computed should be adjusted upward to reflect the difference. Certainly it is inconsistent to deny the deduction for accelerated depreciation and, at the same time, reduce investment by the accelerated depreciation in determining the basis for computing the profit allowance.

The base should be expanded to permit a profit allowance on leased property. Leasing property is an effective method of spreading a limited amount of capital. However, if no return is allowed on leased property, taxpayers may be influenced by the operation of the excess profits tax to purchase rather than lease. Furthermore, property is used in the production of profits from energy sources whether it is leased or owned. For these reasons, leased properties should be included in investment. A reasonable approach is to capitalize rental property at eight times annual rentals. (This method has long been satisfactorily used in state income taxation to allocate income to the individual states.)

Section 4962, Net Investment in Energy Sources, refers to the "equity interest of the taxpayer". It provides further that such equity interest shall be determined by "taking into account indebtedness". The meaning of these phrases is not clear. Presumably, the "tax basis" of property is the investment on which the profit allowance is computed. The tax basis includes indebtedness on property. We are concerned that the term "equity" coupled with the phrase referring to indebtedness could be interpreted to require that debt be subtracted from the asset basis. We doubt that that is the intent, but clarification is needed.

Whatever rate of return is ultimately established, it should not be less than the historical rate earned during periods when investments and reserves were being increased. It is unlikely that even that rate will be sufficient since costs and risks have increased so greatly as a consequence of moving to the deeper offshore and remote areas such as the North Slope.

Reinvestment.—After deducting the profit allowance from profits, the remainder may be further reduced by investments in qualified energy projects.

A qualified energy project is one within the U.S. that expands or improves existing energy sources or furthers the exploration for, research on, or development of new energy sources. Further, the Federal Energy Administration must determine the projects that qualify. This may be done generally rather than by approval of individual projects.

This definition seems adequate with one exception. It is not clear that processing and refining facilities are included. Additional refining capacity is needed within the U.S. Also, processing facilities for oil shale or coal gasification will be required at great capital costs. Such activities should be included under the reinvestment provisions of this bill.

The bill provides that profits from energy sources in excess of the profit allowance must be reinvested or contracted for by the end of the taxable year following the year such profit is earned. Amounts which the taxpayer contracts to expend must actually be expended within two years to qualify. Because of the long lead-time involved in many projects—especially offshore production and oil shale or coal gasification plants—it is doubtful that the time period provided in the bill is adequate. At least one more year should be permitted under each provision. The taxpayer would thus have until the end of the second taxable year and could include expenditures to be made within three years under a binding contract. The maximum time period would still be just five years.

A carryover of excess qualified investments should be permitted. That would avoid hardship cases where large investments are made in one year but, more importantly, it would eliminate a potential deterrent to current spending. In other words, if no carryover were permitted, a taxpayer could be influenced to defer spending in excess of "usable" qualified investments. The carryover will eliminate such considerations.

It was earlier stated that foreign operations should be excluded from the bill. If they are not, reinvestment of foreign profits should also be permitted outside the United States.

Consolidated Returns.—The bill does not specify who the taxpayer is in the case of an affiliated group of companies filing a consolidated Federal income tax return. It should be made clear that the consolidated group is the taxpayer for purposes of this tax. Otherwise, profits from some functions, such as oil and gas production that may be in a separate company, could not be reinvested in activities of other affiliated companies such as a separate coal or shale oil company. Also, since taxable income, the starting point for computing the tax under this bill is proposed on a consolidated basis, all other calculations under the tax should be consistent.

Termination.—The bill does not contain a termination clause. An excess profits tax should be imposed, if at all, only during emergency periods. It should never become a permanent part of the tax structure. The bill should provide a termination date or a reasonable provision for phasing it out.

Summary, Gravel Proposal.—If the oil industry is to be singled out for an excess profits tax measured by net income, Senate bill 2806 provides a reasonable framework. It is based on an allowable rate of return rather than historical profits, thus permitting absolute profits to increase and minimizing competitive discrimination because of prior performance. Further, it provides for reinvestment of excess profits.

However, if the bill were to be enacted, it should be amended as follows:

1. "Profits from energy sources" should be clarified to specify the downstream operations that are included.
2. Depletion should be deducted in determining profits.
3. Accelerated depreciation in excess of straight-line should not be added to taxable income. If it is, the investment base should be adjusted accordingly.
4. Deductions attributable to qualified investments should not be disallowed.
5. Dividends should be excluded from "taxable income from energy sources."
6. Foreign profits should not be included.
7. IDC costs should be added to the investment on which the profit allowance is computed.
8. Rental property should be capitalized at eight times the annual rental payment and included in investment.
9. Refining and processing facilities should be qualified investments.
10. More time should be permitted in which to reinvest profits.
11. A carryover of excess qualified investment should be permitted.
12. If foreign operations are included, reinvestment should be allowed outside the United States.
13. Consolidated returns should be permitted.
14. A termination provision should be added.

McGovern-Aspin Excess Profits Tax Proposals

The McGovern-Aspin proposals would impose an excess profits tax beginning January 1, 1973, on corporations engaged in the production, manufacture, or sale of any form of energy. The tax would be 85 percent of the excess of taxable income over a surcharge exemption which is the greater of (1) the average taxable income for the base period of 1969 through 1972, or (2) 6 percent of invested capital. Excluded from income subject to the 85 percent surcharge is an amount equal to any increase in investment in energy properties or activities above the average investment during the base period.

The principal problem in these proposals is the use of prior profits as the measure of excess profits. That approach is unsound primarily because it discriminates among taxpayers and largely restricts additional profits potential. The reduction of profits subject to tax because of increased net investment partially cures the problem in that it encourages some reinvestment. The bill provides an alternative profit allowance, ostensibly a 6 percent return on investment—far too low to be very meaningful.

Taxable income.—The "taxable income" upon which this tax is based is the same as for calculating regular federal income tax. As discussed in commenting on the Gravel proposal, taxable income should be adjusted as follows:

1. Foreign operations should be excluded.
2. Income taxes should be deducted in arriving at "excess profits."
3. Consolidated tax return should be specified.
4. Dividends should be excluded.

Base Period Income.—The first surcharge exemption in computing the excess profits tax is average taxable income for the years 1969 through 1972. Since

it is based on prior periods, it would affect taxpayers differently as a result of differences in taxable income in the base period. In other words, a taxpayer with low taxable income during the base period would likely be affected more adversely than a taxpayer with high taxable income during the same period. The differences in taxable income may be the result of many things such as large lease abandonments in the base period. For example, a taxpayer may have averaged $50 million taxable income during the base period before deducting an average $25 million abandonment loss. If the taxpayer had the same $50 million taxable income subject to this proposal and no abandonment loss, $25 million would be treated as excess profit even though actual profits before extraordinary losses are the same. Because of differences of this type, any proposal that relies on historical operations will discriminate against similarly situated taxpayers.

Adverse changes in the tax laws can also "create" profits under this proposal. In 1969, taxable income was computed with a 27½ percent depletion deduction. Reducing the rate to 22 percent increased taxable income. However, this proposal operates to treat the loss of depletion as excess profits. That result cannot be justified under any reasonable theory.

Using prior profits also tends to perpetuate base period performance which may have yielded profits that were already too low, and prevents expansion since no significant increase in profits can be realized.

Investment Allowance.—The bills would permit a reduction of taxable income by 6 percent of net investment (presumably for tax purposes) in lieu of average taxable income in the base period. For example, a taxpayer with losses during the base period could deduct 6 percent of its tax investment from taxable income before computing excess profits; i.e., anything over 6 percent of investment would be considered excess profit. Since there is no provision for deducting income taxes in determining the base, the "profit allowance" is really much less than 6 percent.

The alternative of deducting an investment allowance is certainly better than allowing credit for only prior taxable income. However, the rate proposed is obviously far too low.

As discussed under S. 2806, calculating the rate of return on tax investment is very misleading since tax basis in the minerals industry is almost certain to be much less than book basis because of the different treatment of IDC, depletion and accelerated depreciation. Thus, a 6 percent rate of return on a reduced tax basis equates to a smaller return on the book basis, the conventional method for financial reporting.

Apart from the smaller base, the allowance is determined before taxes, thus, again overstating the return on investment. For example, if taxable income were $120,000, income tax were $58,000 (implying $62,000 net income after tax), and invested capital were $1,000,000, the excess profits tax would be computed as follows (assuming that the investment allowance is greater than average base period income and no reinvestment):

Taxable income	$120,000
Less: Investment allowance (6 percent x $1,000,000)	60,000
Amount subject to EPT	60,000
Tax at 85 percent	51,000

Thus, $60,000 of the $62,000 net income after income tax is treated as "excess profits". Therefore, the actual profit allowance under the proposals is only $2,000 or 0.2 percent. After both taxes, the profit would be $11,000 or a return on a tax basis of 1.1 percent.

The actual effective rate of the investment allowance will vary depending upon the relationship before-tax of income and investment, but it will always be substantially less than 6%. It is also possible for the combined taxes to exceed taxable income, i.e., the excess profits tax creates an after-tax loss. Any proposal that can create a combination tax rate in excess of 100 percent is obviously defective.

At the profit levels permitted under these bills, it would be impossible to generate or attract capital for the industry. To provide some realistic opportunity to expand energy sources, the alternative profit allowance should be expanded along the lines of the Gravel bill with the modifications suggested to it. Essentially, that would include in the investment base IDC and capitalized leased property and allow a rate of return no less than rates earned during periods when capital spending and reserves were being increased.

Reinvestment.—After deducting average base period taxable income (or the alternative investment allowance) from taxable income, a further deduction would be allowed to the extent average net investment increased over average base period investment. Certainly a reinvestment alternative is an essential part of any excess profits tax that will promote more energy. Thus, the basic concept of the reinvestment provision within these proposals is sound. However, the manner in which this reinvestment provision operates greatly reduces its incentive value.

Since only the increase in average net investment over the base period is "creditable" against the excess profits, the taxpayer must spend at least the amount by which investment is reduced through depreciation or capital asset dispositions before any amount would qualify for the special reinvestment deduction. To illustrate, if average net investment for the base period were $100 million and the annual depreciation rate were 10 percent, the average net investment at the end of the first year would be $95 million (the average of $100 million at the beginning of the year and $90 million at the end of the year). To maintain the same average investment, the taxpayer would have to spend $10 million (because of the averaging). However, the $10 million would not be treated as a reinvestment since there was no increase in average net investment. Similarly, if the taxpayer abandoned a worthless mineral property with a cost of $30 million, and paid that same amount for another lease, none of the expenditure would reduce the excess profits tax.

Since the reinvestment is keyed to prior investments, the incentive value of reinvestment is greatly reduced—especially when coupled with a surcharge exemption that allows an after-tax return on investment of substantially less than 6 percent. To be effective, the reinvestment provision should allow a special deduction for all such expenditures. This should be done along the lines of the reinvestment provisions we have suggested for the Gravel bill.

Summary McGovern-Aspin Proposals.—These proposals are basically defective since historical profits are used in computing the tax. An alternative profit allowance based on an allowable rate of return is permitted but the rate (substantially less than 6 percent) is far too low. A reinvestment provision is included but its incentive value is greatly reduced since only amounts in excess of capital recovery (depreciation, etc.) qualify.

The bills could be improved by the following amendments:

1. Taxable income should be modified to exclude foreign operations and income taxes should be deducted.
2. Base period taxable income should be adjusted for extraordinary items.
3. The rate of return for the profit allowance must be substantially increased.
4. The investment base should be expanded to include IDC and capitalized rentals.
5. Reinvestment should include all expenditures for energy related projects.

Administration Proposal: Emergency Windfall Profits Tax

The Administration has proposed a "windfall" profits tax which would be, in essence, a graduated tax based on the difference between the crude oil base price on December 1, 1973, and the actual or imputed sales price. These is no provision for plowback although the proposal suggested that Congress might consider (1) allocating the receipts to an Energy Development Bank for financing energy projects and (2) a refund of the tax to operators who reinvest their profits into energy producing projects. The President, in the January 19 Energy Message, stated that the reinvestment provision should be included.

Excess Profits Base.—Unlike either of the previous discussed proposals, the excess profits under the Administration plan would be based on the price of crude. The tax would be levied on crude oil produced in the United States, at rates which would increase as the price of the crude increases. The base price would be gradually modified so that after three years the tax would not apply to amounts below the expected average "long-run supply price", i.e., the price would balance supply and demand in the long run. However, for an additional period of two years beyond the initial three-year period, the tax would continue to apply to prices in excess of the long-term supply price, at tax rates ranging up to 85 percent.

One problem with this approach is that the initial base price must be established without any clear rationale for selecting any specific price, i.e., there does not appear to be any particular reason for selecting the December 1 price. Thus, establishing a base price is rather arbitrary.

The preferable approach would be to subject only prices in excess of the long-run supply price to the tax. Treasury estimated that to be about $7.00 per barrel. As discussed earlier, prices less than the long-term supply price cannot produce excessive profits.

The Administration proposal gives some recognition to the $7.00 long-run supply price by adjusting the base price upward over a three-year period. However, over the three-year period, several billion dollars would be diverted from the industry. Total tax payments would depend upon the amount of crude produced, including the amount of new supply brought on stream, the market price of crude not subject to price controls, and the ceiling prices permitted to be charged on crude subject to price controls.

If the tax is to apply to prices less than the long-run supply price, there could be a substantial deterrent to maximizing production. For example, to induce additional recoveries, price controls were recently removed from stripper well production so that it is now treated as "new" oil. Under the higher prices the economic life of marginal production may be substantially extended, thus increasing total recoveries. However, the current proposal would impose an immediate tax of about 89¢ a barrel if sales are at $7.00, the estimated long-run supply price, or $3.43 per barrel on oil selling at $10.00. Thus, the tax would be a substantial additional cost of production which would negate the effect of the price increase for stripper wells and reduce the life of marginal production. Any such effect could be greatly minimized by applying the tax only to prices in excess of the long-run supply price.

The proposed tax has been widely criticized as an excise tax which would have no effect because it would be passed on to consumers. In fact, the 85 percent rate would make it virtually impossible to pass on the tax, since a price increase many times the tax would be required.

Reinvestment.—If the recognition of the long-run price is deferred three years, much of the adverse effect of the proposal may be avoided by permitting reinvestment of the excess profits. The reinvestment provisions should be along the lines discussed in the Gravel proposal above. One of the most important provisions is the definition of qualifying expenditures. In our view, qualifying expenditures should not be limited to expenditures for additional oil and natural gas discovery and production and research and development of alternate energy sources. The energy supply job does not end with the production of raw crude and gas, nor is it limited simply to research and development of alternate sources. Qualifying expenditures should cover all energy sources and should include expenditures from the R&D stage, through exploration, production, refining or manufacturing, and transportation.

An adequate time period must be permitted to make the expenditures. For example, a rule could be adopted that the expenditures would qualify if actually made within two years following the close of the tax year or if a firm contractual obligation therefor is made within that two-year period.

Termination.—The Administration proposes that Congress review the tax during its stated five-year term to assure that it is not continued beyond the point where it can perform any worthwhile function and to avoid the risk that the tax could become embedded in the market mechanism and result in a permanent and unnecessary increase in energy costs. This we wholeheartedly endorse.

Summary, Administration Proposal.—If only applicable to prices in excess of the long-range supply price and if a reinvestment provision is included, the Administration proposal may be preferable to other suggestions for taxing so-called windfall or excess profits.

Conclusion

In conclusion, we have shown a continuing need for current tax provisions. Percentage depletion and the intangible drilling cost deduction still appear the best tax incentives available to assist in the development of new energy supplies. The foreign tax credit must also be retained if American companies are to compete in the exploration and development of foreign sources of petroleum. And if U.S.-controlled companies are not involved, it will be extremely difficult and costly to obtain needed imports.

On the domestic side, I am convinced that the oil industry does not have excess profits and should not be singled out for an excess profits tax. If however, an excess profit tax is to be enacted, it should permit some growth and expansion of profits if we are to have a reasonable opportunity of increasing energy supplies. Thus, a reinvestment provision and a profit allowance based on a return on investment are essential.

APPENDIX A

TAXATION OF INCOME OF FOREIGN BRANCHES; DIVIDENDS AND INTEREST FROM FOREIGN SUBSIDIARIES UNDER THE TAX SYSTEMS OF CERTAIN MAJOR COUNTRIES IN THE FREE WORLD

Country	Basis of taxation	Foreign branches		Income from foreign subsidiaries	
		Taxability of income	Treatment of foreign income taxes	Dividends	Interest
Australia	Incorporation	Taxed at normal rate, exempt if subject to taxation by host country [1].		Exempt, if taxed by host country or the foreign tax credit may be elected.	Exempt, if taxed by host country.
Austria	do	Taxed at normal rates, exempt if subject to tax by host country [2].	Credit under per country limitation	Taxed at normal rates, with direct taxes as a credit.	Taxed at normal rates.
Belgium	Residence	Taxed at a reduced rate, exempt if subject to tax of host country [1].		Taxed at a reduced rate	Taxed at a reduced rate if taxed by country of source.
Canada	do	Taxed at normal rates [1]	Credit under per country limitation with 5-year carry-over provision.	Exempt up to 1976	Taxed at normal.
Denmark	do	Taxed at 50 percent of normal rate [1]	Credit under per country limitation	Taxed at normal rates, excess foreign income taxes refunded.	Taxed at normal rates.
Finland	Incorporation	Taxed at a reduced rate, exempt under most treaties [1].	Deduction only	Taxed at normal rates	Do.
France	do	Exempt from taxation [2]		Taxed at 5 percent of normal rate and foreign tax credit for direct taxes.	Taxed at normal rate, credit for withholding taxes.
Germany	do	Taxed at a reduced rate, exempt under most treaties [1].	Credit under per country limitation	Exempt or the foreign tax credit may be elected under the deemed paid system.	Taxed at normal rate.
Greece	do	Taxed at normal rates [2]	Credit	Taxed at normal rates	Do.
Indonesia	do	Exempt [2]		Exempt	Exempt.
Italy	do	Taxed at normal rates [1]	Credit allowed if there is reciprocity	Taxed at normal rates and foreign tax credit for direct taxes if there is reciprocity; otherwise direct taxes deductible.	Taxed at normal rates.
Japan	do	Taxed at a reduced rate [1]	Credit under overall limitation, except for income not taxed by host country.	Taxed at a reduced rate	Taxed at a reduced rate.
Netherlands	Residence	Income exempt if taxed by host country losses allowed against domestic income, with a carryover provision.		Exempt, if subject to tax by country of source.	Taxed at normal rate.
Norway	do	Taxed over 50 percent of normal rate exempt under most treaties [1]	Deduction	Taxed at normal rate with credit for taxes withheld at source.	Taxed at normal rate with credit for taxes withheld at source.
Spain	Incorporation	Taxed at normal rate, exempt under most treaties if taxed by host country [1].	Credit under per country limitation	Taxed at 67 percent of normal rate	Taxed at a reduced rate.
Sweden	do	Taxed at normal rate, exempt under most treaties if taxed by host country [2].	do	Exempt	Taxed at normal rate.
United Kingdom	Residence	Taxed at normal rate [1]	Credit under per country limitation, with no carryover or carryback for excess creditable foreign taxes.	Taxed at normal rate with foreign tax credit under deemed paid system.	Do.
United States	Incorporation	Taxed at normal rate [1]	Credit, under either the overall or per country limitation.	do	Do.

[1] Similar tax treatment for foreign branch losses.

[2] No tax benefit from net foreign branch losses.

The CHAIRMAN. I want to thank you gentlemen very much for the statements you have presented and the information you have brought to us. In view of the fact that you speak for a great number of other producers, I would like you to respond to some additional questions to give us further financial breakdowns. For example, I would hope more of the companies could do what has been done by Gulf Oil Co., breaking down profits made on domestic production, comparing that to the profits made in your foreign production and also your other operations. After you separate this information out, we can see whether the oil producers in the United States are making excess profits that should be taxed away or that should be forced to be returned through renegotiation or something of that sort.

I believe Mr. Swearingen made the statement that he was telling people in June 1973 that this emergency was headed our way. I would like to refer anyone who is sufficiently curious to look at a speech I made in 1959 explaining just exactly how serious this problem was going to be when we were at the mercy of those Arab countries. They had organized the Organization of Petroleum Exporting Countries (OPEC) at that time.

Mr. HENRY. Yes.

The CHAIRMAN. They had announced their purpose was to get a much higher price for oil. As long as the United States was an exporter of oil and could produce more than its requirements when necessary, the OPEC countries were not in a position to crack their whip, but anybody could see that once you had to rely upon them for as much as a third of your energy, they could pretty well call the tune and we would have to dance to it. As a result they now have us, as well as all the rest of the free world, pretty much at their mercy.

But, unfortunately, those who believe in the economics of free trade would like to make assumptions that are not safe to make in the area of trade.

For example, free trade works fine as long as everybody abides by the rules of free competition. However, when all the countries that have oil for sale proceed to organize and insist that the price be not what it costs to produce it at a fair profit, but what the price would be for those who don't have oil to acquire energy from some other source, which is just what I predicted in my 1959 speech, the whole system is disrupted. Now we see ads in American newspapers informing us that what it costs to produce oil in the Near East is not the proper way to look at the present price situation. You look at what it would cost to obtain oil from our own sources. That is an entirely different matter. I am sorry to say my speech didn't have much effect at that time.

I hope the Mid-Continent Oil & Gas Association will look back at the speech I made to their association in New Orleans about that same general period. I pointed out that if we were at the mercy of those people it would be hard to conceive of how high they would push the price of the energy they were selling to us.

Finding ourselves in this situation, now our only option is to do the same thing I was advocating back in 1959; maintain the capacity to produce our energy requirements here and use that as leverage in trading with those people to persuade them to be more reasonable in how they price their product. Do you gentlemen see any other way we can regulate foreign oil producing countries?

Mr. HENRY. No, sir, I don't see any way, Mr. Chairman.

Mr. DUNLOP. I think it is fundamental we could offer a high degree of self-sufficiency. As I say, 85 to 90 percent, that figure is not important as of itself but it is in that area and we must proceed on that job.

Amplifying just a little bit in connection with the question you identified with myself and then with Mr. Henry, if you take the anticipated Free World capital financial requirements between now and 1985 in the dollars that will be expected to be expended, that is recognizing the inflation, it is going to be somewhere in the neighborhood of $1,350 billion, and the profit requirement to make available that sum is somewhere around three-quarters of a trillion dollars, $750 billion, and if you take the——

The CHAIRMAN. Pardon me, what does your last statement refer to, three-quarters of a trillion dollars?

Mr. DUNLOP. That would be the profit requirement that the industry would have to realize if it is going to meet a financial requirement of $1,350 billion, Mr. Chairman, and that $750 billion averaged out between 1970 and 1985, in 1973 we were approximately as an industry $1 billion less than that average in a period when we are being accused of having realized windfall profits, exorbitant profits, and I think that is germane to the statement you made when Mr. Henry was giving his statement.

The CHAIRMAN. Well, of course, this is one alternative. If someone thinks they can find a better answer I would welcome this suggestion. I hope there are capable people devoting their energies to this problem. As you know, one suggestion which has been made is that the Federal Government ought to go into the oil and gas business, with Federal money to hopefully produce oil cheaper and make it available to the public cheaper.

In the last analysis, wouldn't that just be a matter of taxing the money away from the public and doing the same thing our free enterprise system would have done for us had we not forced them out of business?

Mr. DUNLOP. I don't think there is any question about that, sir, and I don't think you would get the efficient results that the record of the industry over the years demonstrates that we have had. This has been a highly efficient productive industry. It has not realized exorbitant profits over the years and it has done the job and our purpose in being here today, sir, is to ask for a continuation of a political and economic climate that will let us get on with the job and get the results that the American people have a right to expect.

The CHAIRMAN. If I may ask, is there any impediment to a foreign country coming over here and bidding for a lease and producing oil in this country?

Mr. SWEARINGEN. There is not now that I know of.

The CHAIRMAN. So that if any one of the companies——

Mr. SWEARINGEN. But there are, Mr. Chairman, discussions about export of oil from the United States and restraints on this. If a foreign country came here and did spend money to bid on leases they would have to anticipate in the present environment that the oil would be used in the United States and not exported to their home base.

The CHAIRMAN. Yes. But the point I had in mind was the rules of

the game have been such that, any foreign company or nation has been free to come over here and drill for and produce oil if they wanted to, isn't that correct?

Mr. HENRY. Yes, sir, that is correct, Mr. Chairman.

The CHAIRMAN. But the fact of the matter is that their producers have not found it attractive to come over here and compete in our area while our production companies have found they can go into their backyards and compete with them, as in the North Sea area?

How many American companies are competing with the European countries in the North Sea, for example?

Mr. HENRY. It would be my guess, Mr. Chairman, every major American company is competing in the North Sea, major and good-sized independents and some smaller independents. I am sure each of us has a position in the North Sea in direct competition with European companies.

The CHAIRMAN. So every one of our major companies has enough hustle and get up and go to compete with the British and Germans and others in the North Sea, while they don't feel they have what it takes to compete with our production companies on the Continental Shelf, is that correct?

Mr. HENRY. No, sir, I think you are exactly right.

The CHAIRMAN. So, in effect, if we put the Government in the business of trying to produce oil instead of the oil companies, it amounts to a declaration that even though our producers are the most efficient in the world, they are still not good enough to produce for the American economy.

Mr. SWEARINGEN. Mr. Chairman, may I just remark in this connection we have made a computation of our own company where our own profits last year were 2½ cents a gallon on all of the gallons of oil products we make. Some other companies have published figures which range around this 2 cents.

If you took all the profits away from this business you wouldn't affect the price to the consumer by more than 2 cents a gallon. But the profit is the Indian that drives forth the additional supplies we are all looking for.

The CHAIRMAN. If I have read these charts correctly, it appears to me that if we do not act further adversely to the industry, the industry ought to be able to put us in a much better position to face those from whom we must buy oil on the world market by the fall of this year. Is that a fair statement?

Mr. TRUE. Yes, sir.

The CHAIRMAN. In other words——

Mr. SWEARINGEN. Mr. Chairman, you said by fall of this year?

The CHAIRMAN. Yes.

Mr. SWEARINGEN. I think our shortage situation is going to persist longer than the fall of this year, but I think we can certainly make a start toward solving it.

The CHAIRMAN. Well, the rate of drilling is very markedly up. If we deregulate gas we could get a lot more gas in fairly short order, can we not, as well as oil?

Mr. SWEARINGEN. No, sir, I don't believe we can get any substantial amount in a very short period of time. It is going to take some accelerated leasing of offshore acreage, as Mr. Dunlop has pointed out.

This is solely under the control of the Federal Government as to the rate at which this acreage is made available for exploration and drilling. There is a good bit of activity that is now going on to drill in areas which have not been economic to drill at the prices for gas that have existed in the past, or prices for oil that have existed in the past, but to drill those wells and bring them on to production is going to take a longer period of time than 6 months, Mr. Chairman.

A start has been made, but I think we are talking about a program here that is going to run 2 or 3 years before we see any substantial additional supplies of oil and gas come forth as a result of the price inducement that now exists to invest money in looking for additional supplies.

The CHAIRMAN. Let's see what the situation will be by this coming December. About how much do you estimate the industry could increase production in this country between now and December?

Mr. SWEARINGEN. Mr. Chairman, I wouldn't be—my own estimate would be if we were to hold production level we would be doing a very good job. Production this year is running about 400,000 to 500,000 barrels a day; that would be 4 to 5 percent lower than the corresponding month of a year ago because of the declining productivity of the wells in this country.

We have to make up that decline first, to hold production level, and we have got to accelerate our exploration production efforts to increase it beyond the level that now exists. I would be much surprised if we could do very much in the way of raising production above present levels by the end of this year.

The CHAIRMAN. Is that generally correct?

Mr. HENRY. May I just expand a little bit. I think perhaps one of the most significant things, in response to your question, is the response to the stimulus of the unchanged prices and the tax structure of the industry per se. Each of us have reported capital budgets for 1974 which are far in excess of what we spent in the past and I think the lease sales which are coming up and the dollars which have been paid and will be paid are a direct reflection of the increased pricing structure and, hopefully, the nontampering with the economics and the taxes and so forth and so on.

So I think philosophically the direct answer to your question is the industry has already responded hopefully to an increase in prices and the stratification of the tax structure in this country.

Mr. DUNLOP. I think another aspect of it, Mr. Chairman, is the availability of facilities to drill the wells, the equipment for the wells and to bring them into production.

As you are familiar, when you drill off the coast of Louisiana, and do get a discovery, then you have got to put a platform on there, a production platform, to maybe accommodate 18 or 24 wells, whatever the size of the structure may be, to drill all those wells, and then equipment, and frankly that is a 3-year period of time to get a job like that done, and then the shortages of steel and other materials that exist, I think we have even got a greater task than we may have had in the past. So I do think Mr. Swearingen's estimates are pretty much on target so far as my own view would be.

The CHAIRMAN. Would you further enlighten me on this point. It seems to me if I had Mr. Simon's job I would be trying to press the

industry to do more drilling in proved areas since you have a much better chance of producing oil and if you have a choice between drilling a 10-barrel-a-day well and a 100-barrel-a-day well by all means drill the 100 barrel well first.

To what extent do we have the potential of increasing our production by concentrating drilling in the areas where we can get the greatest production most rapidly?

Mr. DUNLOP. Well, I would suspect that the greatest areas of substantial production are in the areas that have either currently been leased by the Federal Government or yet to be leased, and if we are looking—you are familiar with the recent sale in the latter part of last year of acreage in the Gulf of Mexico, where a substantial amount of acreage was made available, hopefully, there will be a major discoveries and, hopefully, major discoveries of oil. But they are going to take quite some time before we determine if oil is there and then to develop that oil and to bring it ashore so that it can be available for the consumer 3 to 5 years away.

Mr. SWEARINGEN. Mr. Chairman, may I add a comment on this?

The CHAIRMAN. Yes.

Mr. SWEARINGEN. There are some areas in the United States where closer spacing, doubling the number of wells in a field, could in a short period of time produce additional oil. In most of these areas, however, drilling in a known field is not going to increase the reserves ultimately recovered. It may let you recover the oil this year instead of 5 years in the future but you are borrowing from the future to a great degree when you do this kind of thing.

To my knowledge, there are no major areas of the United States, certainly it is true in our company, where there is a big backlog of proven locations to drill which will add to the long range supplies of this country. We try to keep abreast of all those to the extent we can.

I can cite you one particular example with which I am familiar. Several years ago we went out to Denver, Colo., into an area where gas had been known for quite some period of time. It is in a relatively tight formation, and at the prices that existed up until the last year or two it was uneconomic to develop this gas.

We went in there and drilled some wells. We believed that prices were going to have to go up, and so far we have drilled about 200 wells on there, and we plan to drill another 200 or 300 wells in this area; altogether we will have a trillion feet of gas at this point in this area. This gas is not now being marketed. The reason it is not being marketed is because we have made an arrangement to sell this gas to one of the major transmission companies. The authorization request to extend their pipeline from Kansas into Colorado to transmit this gas is now before the Federal Power Commission, and nothing can be done to sell this gas until the Federal Power Commission acts to approve the sale. I don't say this is typical of every case; I cite it to you as an instance.

But there are other areas—trying to respond further to your question—there are areas where additional oil is known in tight or marginal formations that a higher price will bring forward either by conventional means or waterflooding or some of the more exotic technologies which have been developed in recent years, but it is going to take—the price is going to have to justify the cost before this oil and gas is going to be available.

The CHAIRMAN. That brings me to another point I wanted to ask about: The best figures that I am aware of would indicate that where we produce oil we are lifting above the ground only one barrel for every three barrels that are below the surface. With waterflooding you can recover some oil that is left. You mentioned that other exotic techniques are being developed, isn't that correct, Mr. Swearingen?

Mr. SWEARINGEN. That is correct. The industry has been spending a great deal of money and a great deal of effort to develop techniques that will permit you to recover this additional oil.

If I may use an analogy: if you spill a spot of grease on your shirt you can rub it off with water and get part of it off, or if you want to you can buy some soap and mix with the water and you can get some more of it; but you may not get all of it until you send it to a dry-cleaner to use a still more expensive method to get all of it removed from your shirt.

Oil does not occur in a ground, in a lake or a river; it occurs in a rock that is about like a concrete sidewalk, and it won't come out all by itself any more than the gasoline in your gasoline tank will flow back out of the spout. Something has to push it out.

You can, when you drill into an oilfield and there is gas associated with the oil; the gas expands on release of the pressure and pushes oil to the surface. When that gas is exhausted we can take gas from another source or we can inject water and push an additional crop of oil out. If we want to move a step beyond that we can inject certain kinds of liquid hydrocarbons or we can treat the water with chemicals. The chemicals are very expensive and you are going to lose some of them in the process, but you can get some additional oil by doing this; and then there are some thermal methods under development where you either inject heat into wells to heat up the oil to flow more rapidly or you burn part of the oil underground; and we do have techniques that can be employed in many existing fields to raise the recovery of oil in place from the present level—your figure is about right—typically 35 percent, to perhaps twice that and in some instances even higher; but each one of these things is going to entail additional investment and much higher operating costs.

Even in a waterflooding attempt you typically have to inject 10 barrels of water in order to get one barrel of oil out. You have to handle the water and have all the costs of moving it. The costs of getting this additional oil are moving up, and the price has to justify it, whether the consumer has to pay for it—let's put it this way—whether he pays for it in terms of the price of the oil or whether he pays for it in the form of a tax subsidy.

The CHAIRMAN. It seems to me if you recognize the fact that it costs more to produce oil in this country than it does to produce it in the Near East, which is where the great surplus is, unless we can persuade those people to sell us oil for a more reasonable price until we have achieved energy self-sufficiency, then I fail to see why we should not let people who would be willing to do so produce some of our own higher cost oil. The oil you would get by secondary and tertiary recovery methods is enormously more expensive than that recovered by simply putting a pipe down and letting the oil flow out at whatever rate you want to crack the valve. It would seem to me that it is to our advantage to encourage those people to produce this oil while we are trying to obtain self-sufficiency.

Mr. SWEARINGEN. Mr. Chairman, just as another point in this regard, it has been mentioned that two of the companies represented at the table, of which mine is one, recently bought a shale oil lease from the Federal Government in the State of Colorado. If the price of the oil produced is only $5.25 we will never make the investment to bring that lease into production. It will cost too much. We estimate that the initial expenditure on top of the $200 million bonus is going to be somewhere in the $200 million to $300 million range, and to bring this lease into full production is going to require an investment of somewhere within the range of $3 to $5 billion, depending on what a dollar will buy.

The CHAIRMAN. My wife and I felt very fortunate yesterday. We got up about 6:30 a.m., didn't even take time to get a cup of coffee, rushed down to our car, got in a line which was about a block long at that point, to get into one of Mr. Dunlop's Sun Oil Co. stations, and after about a half hour we managed to get to the pump and get some gas. We felt extremely fortunate. We didn't have to buck a two-block line to get the gas.

My understanding is that if we vote for the conference report that is before the Senate we might be able to get that gas a penny a gallon cheaper than we would pay otherwise. What I want to know is how much longer is that line that my wife and I were in going to be?

Mr. HENRY. Senator Long, if it is very important to get that money we might consider reducing the Federal or State gasoline tax by a penny a gallon.

The CHAIRMAN. Well, that is worth considering. If we are going to put more taxes on the company we ought to try to use those new funds in a way that may help the consumer or help us get more fuel.

What is your response, Mr. Dunlop? That is your station where I found some gas.

Mr. DUNLOP. Mr. Chairman, may I say we appreciate very much your buying perspective; you are really right on target.

I share Mr. Henry's statement in this regard, there is no question about it if we reduce these economic incentives we are going to inhibit supply and what we are anxious to do is to enhance supply and this is the purpose for which we are here today, with the hope that the Government will have an orderly policy of making lands available to us, reconciling the environmental goals and the energy goals and certainly providing a tax climate, maintaining the present tax climate, so we can get on with the job. And then I hope when you come into a Sunoco station, sir, you won't have to wait long and we can take care of all your service needs in addition to getting gasoline.

Mr. TRUE. Mr. Chairman, on two or three items I agree with what has been said this morning about the leadtime that is necessary to develop significant additions to this country's production.

The National Petroleum Council during the period 1970–72 developed some statistics on what would be required in the future to reduce this country's dependence on foreign and, particularly, Eastern Hemisphere oil. These figures are now being quoted. The important fact is that we are already 2 years late getting started in doing the things that the National Petroleum Council recommended were necessary 2 years ago. So until we do get started we are not gaining.

The other thing I would like to report is that there is some opportunity for rather rapid increases if the incentives and economics are

attractive. In the Powder River Basin in Wyoming which produces almost one-third of the total which on mining production as of now since the price of oil has increased, been allowed to increase, almost 60 percent of the oil moving out of that basin is classified either as new or released oil. In other words, primarily it is secondary recovery oil of projects that have been spectacularly successful and have increased production.

Second, it has been a result of very rapid increase of exploration in an area that is known for small fields and relatively high short-lived production. So historically the increase in the past 12 months has really developed some additional efforts in the Powder River Basin in Wyoming.

The CHAIRMAN. I am not sure I got that. What percentage did you say of the new oil we are getting results from this high price?

Mr. TRUE. Sixty percent of the oil moving out of the Powder River Basin in Wyoming, and it produces almost, not quite, a third of the total oil that the State produces is classified under COLC regulations as new or released crude.

The CHAIRMAN. So it has been the higher price in that area that has caused that 60 percent increase.

Mr. TRUE. That is correct, and it has done it in two ways, stimulating drilling for small but prolific short-lived fields and implementation of rapidly responding but again reasonably sure-fire secondary recovery projects.

The CHAIRMAN. If we rolled the price back to $7.09 on these stripper wells and these secondary recovery wells, can you give us any idea of how much that will reduce our oil production?

Mr. TRUE. I can't directly answer you on that, Mr. Chairman. I do know that many of the projects that are now underway not only in the Power River Basin but in the entire Rocky Mountains, and incidentally, a recent world oil projection for 1974 indicated a 40.9-percent increase in wildcats under conditions as they existed as of the first of the year, I do know a lot of that work would not be done, both in secondary and in additional drilling.

I can tell you another rather significant example: Some 10 years ago we undertook to waterflood a rather major sized reservoir in northeastern Wyoming in muddy sand and the secondary recovery was not successful, and because of the low price of oil we were forced to abandon it.

Now, had we been doing that this year that would have been commercial and we would not have abandoned it and we would have added quite a bit of oil. But strictly from an independent's view as far as drilling is concerned, a rollback in the price of crude does three things: First, it reduces the number of dollars obviously that we would have. We are talking about rolling the price back say from $10 to $5. Well, this means that after you take taxes and royalties off of the $10 you have the balance of that available as cash flow to the independent and he can spend that. So this is a very positive factor in what he is going to spend in exploration and development.

Second, you have the incentive or the reward approach. Any independent is going to spend a whale of a lot more money looking for $10 oil than he is looking for $5 oil, simply because the reward is greater.

Third, I think this probably hasn't received the proper attention, there have been lots of independents who have financed their operations with banks and lending institutions at values of oil that are over $5, and if that price is rolled back to $5 they are going to be in real financial problems, and possibly even worse than having to discontinue their exploration programs entirely they may go out of business simply because the return isn't there.

Mr. DUNLOP. I think, Mr. Chairman, the response that Mr. Swearingen made a moment ago may be somewhat germane to the question you raised. He indicated if we could hold production level with the current incentives that would be about the best you could hope for at this point in time. Some figures that we developed, we had anticipated that with the fall off in reserves, and the price remaining constant, that we would suffer a deterioration of about 5 percent with these increased prices. We have been able to maintain our production at essentially the level that existed a year ago.

The CHAIRMAN. I would like to have your views on the naval petroleum reserves——

Mr. SWEARINGEN. Mr. Chairman, before we leave this subject may I just add another remark.

The CHAIRMAN. Yes.

Mr. SWEARINGEN. In direct answer to your question, if the price of oil were rolled back from $10 to $7.10 the only production that would go out of the picture would be that which costs more than $7.10 to produce on an out-of-pocket basis. I think this is a very small percentage. I would hazard a guess, it is less than 1 percent.

The thing that you would do, however, is decrease the supply you may have 1, 2, and 3 years from now as a result of lower investment and lower intensity of effort to find new supplies or bring forth new secondary recovery.

The Treasury, I believe, has testified, Mr. Shultz, that their estimates are that the price elasticity of supply of oil is 1 to 1. If the price doubled the supply of oil will double. I rather, in my own view, think this is optimistic but nonetheless this is an estimate that does have some support and does have some status, and I am firmly convinced in my own mind that a higher price is going to be the best inducement to bring forth additional supplies. Whether a doubling of the price will double the availability or whether it would increase the availability 50 percent I think the effects are substantial.

The CHAIRMAN. I would like to ask about the potential of producing more oil from the naval petroleum reserves. Many of the bright boys over at the Pentagon have said they could not support an oil import quota system on a national security basis because if war came, whatever oil they needed would be taken from the civilian population come war or a defense emergency.

If that is correct, as long as we have any oil in the country and it belongs to the Pentagon in the event of a defense emergency or war, can you explain what the excuse is for not drilling these naval petroleum reserves?

Mr. SWEARINGEN. Mr. Chairman, I am neither a Member of Congress nor do I work for the Navy and I don't know that I have a firm answer.

I am told, however, that ever since the Navy discontinued the exploration program up there in Alaska in 1953, and they spent $50 million and found nothing of any consequence up there by that effort, that they have requested additional funds to carry out further exploration on naval petroleum reserve No. 4 and that these funds have either been deleted from the Defense Department's budget either by the Defense Department or by the Office of Management and Budget or by the Congress. I am not familiar enough with this to tell you exactly where this occurred. But I understand that they have made efforts to carry on exploration but have not been successful in securing the funds.

The CHAIRMAN. They have some others. If these prospects are sufficiently enticing and constitute a petroleum reserve, couldn't you get somebody to drill it if you gave them a lease?

Mr. SWEARINGEN. There is no question you could get somebody up there to spend some risk money looking for oil. But I will have to remind you that the Navy did drill some 40-some-odd wells up there, some of them were shallow wells, some of them were deep wells, but they didn't find anything but very small oilfields and gasfields that were of no use to anybody.

I would say that the geology changes as you go from east to west across the North Slope. There have been estimates tossed around of figures of reserves in naval petroleum reserve No. 4 as high as a hundred billion barrels. I think this is just absolutely nutty. The reserve is not as large as the State of Louisiana and in the State of Louisiana you have been drilling and producing oil for 75 years and the total amount of oil found in Louisiana to date has only been about 22 billion barrels, and for anybody to talk in terms of a hundred billion barrels up here I think is silly. If as much as 10 billion barrels or 15, why you would be very lucky to find that.

All I can say is we have been out drilling on acreage of 35 million acres, a little bit larger, off the Grand Banks of Canada in the ocean for more than 10 years and we have spent $75 million and we haven't found anything yet. It may be up there but somebody has to spend some money to find it.

The CHAIRMAN. My impression is that if you want to use an oil reserve in wartime you would do well to drill in peacetime to find where it is.

Mr. SWEARINGEN. Absolutely.

The CHAIRMAN. Come wartime you are going to be short of materials, you will be short on labor and worse, you will be short on time. If you really want to call on these reserves, it is to your advantage to have the wells already in place so you don't have to spend months and years drilling and laying pipe. All you have to do is crack a valve and out comes the oil.

If you want this oil available in emergencies you ought to have it developed to the point where you know where it is and you are in position to get it very quickly. Otherwise, I think you would find that it is illusory.

Mr. Henry mentioned Senate Resolution 45 that was passed in May 1971, and on which many days of hearings were held and a mass of information has been accumulated. Except for the Alaska Pipeline Act, what other legislation that could increase gas or oil supplies has the Senate passed that you know of since May 1971, with the exception of the Alaskan pipeline?

Mr. HENRY. I don't know any, Mr. Chairman, that has been passed by the Senate to deal directly with the energy problem, if I understand your question.

The CHAIRMAN. Yes, the energy problem.

Mr. HENRY. Refreshing my memory the Alaska pipeline is the only one. The Environmental Act went the other way.

The CHAIRMAN. That inhibits you from producing more oil, but you can't think of any act other than the Alaskan pipeline.

Mr. HENRY. No, sir. I can think of the depletion allowance cut from 27½ to 22, which I don't think was a helpful measure. The investment credit which has been on again, off again over the past years has taken certainty out of the investment market which has been in the past. I can think of some that inhibit our ability to produce energy sources.

The CHAIRMAN. Can you tell me anything that has come out of the Senate Energy Committee hearings that has helped this problem?

Mr. HENRY. Mr. Chairman, I can't think of anything that has come out of the Senate Energy Committee that has helped in any way at all.

The CHAIRMAN. I understand that imports, before the embargo, constituted 35 percent of domestic consumption. It might be useful to explore what kind of import policies the major companies would advocate to achieve self-sufficiency.

Would you favor a quota based on, in part the expansion of U.S. production and refinery capacity, a variable levy on imports, plus a special quota on Arab oil which is obviously at this point not a reliable source of supply, a graduated tariff, or a fixed tariff scheme with rebates to those who expand domestic crude or refinery capacity. Do any of those suggestions appeal to you as a way we might be able to move toward self-sufficiency?

Mr. DUNLOP. At this point in time, Senator, with the shortage situation in which we find ourselves and the indications of the future that Mr. Swearingen identified that we continue to be short unless the Arab nations restored production to levels that existed heretofore and then permitted them to increase, frankly, I think that these suggestions that were contained in the statement are really academic. I think the big issue at this point in time is, hopefully, we can raise our imports to take care of some of the real needs of the American people and coincidentally with that to get on with the job of developing our self-sufficiency and then I think the issues you have identified could be appraised at some later time. I just don't think they are germane at this point in time in the desperate situation that exists with the need for petroleum.

Mr. SWEARINGEN. Mr. Chairman, may I respond to this also. With all due respect to your question, I believe it is predicated on an erroneous assumption. We are not going to have imports from outside the United States pressing into the U.S. market. Foreign oil today is much higher in price than domestic oil is. The reverse was true 2 years ago where it was important to preserve the efforts to find additional supplies in this country. Today if you had no tariff, if you had no duty, if you had no quotas you are not going to find oil flowing into the United States to the detriment of the supplies in the United States and I think really your question is to a considerable degree moot because I don't believe we are ever going to see the price of foreign oil go down significantly from the level we find it today.

The CHAIRMAN. Do you gentlemen all agree, that the price of foreign oil cannot be expected to come down significantly? That will be bad news to the man in the White House who just had that conference.

Mr. HENRY. I share that view. I don't think the price is going to go down significantly regardless of the White House.

The CHAIRMAN. Do you agree with that?

Mr. DUNLOP. I think you are going to see the price of foreign oil continue at high levels. When we say "high levels" I think we have to identify some foreign oil has moved as high as $20 a barrel. I would hope that would not continue to be the case but the Shah of Iran is already on record that he has, in effect, placed a floor of $7 and that $7 is over in the Persian Gulf and when you bring that oil from the Persian Gulf to the United States you are talking pretty close to $9 to $10 depending on what your freight rates are. So I think what is high is a relative statement.

I would hope there would be reductions from the $20 level but I would be—I just don't think you are going to see it come down below $7 to $10.

The CHAIRMAN. Of course, there is a lot of difference between $7 and $10 but you think it might come down to $10 in this country.

Mr. DUNLOP. I am hopeful that it might come down but I don't think we have any assurance of that being the case.

The CHAIRMAN. I see Mr. Swearingen smiling. What is your reaction to that situation?

Mr. SWEARINGEN. Mr. Chairman, I would like to point out that the countries outside the United States that have large oil supplies differ in their populations and need for income. As an example, Iran has 32 million people, they can spend all of the income that they can get their hands on in an effort to industrialize, modernize, and improve the standard of living of the people in that country. The Shah has announced he wants to, in his lifetime, bring the standard of living up to the level of Europe. He has 32 million people to work with.

Nigeria is a country of also about 30 million people. Indonesia has about 150 million people. Those latter two countries many of the people live below the level of poverty. Their problem is to get enough food to eat.

On the other hand, you have some other countries with very small populations, Saudi Arabia with 7 million people, Libya 2 to 3 million people, Kuwait with less than a million, the Trucial States with 300,000 to 500,000, and these people are receiving more income than they know what to do with. At the present level of $7 we are talking about they are receiving seven times as much money as they were receiving 2 years ago, and they had so much 2 years ago they didn't know what to do with it.

So you might say well, these people ought to cut the price down a little bit, they don't really need all this money. And yet I will just point out, one, what I think is a salient fact: Do you think for 1 minute that King Faisal is going to sell his oil at a price lower than the Shah is getting for his oil 100 miles away on the other side of the Persian Gulf? With the pressures on at least these three countries which are big suppliers, Iran, Nigeria, and Indonesia, I think the pressures are going to be there to hold the price up or to increase it

further, and that the opposite pressures from the low population countries are not going to override.

The CHAIRMAN. Now, we have two situations we face: One is the problem of producing oil domestically, and I think you gentlemen have been very forthright in giving us your judgment as to what the problem is in moving toward self-sufficiency here.

The other part of the problem is American companies doing business overseas. It has been proposed that we deny the depletion allowance and the current deduction for intangible drilling expenses to American companies doing business overseas, and deny them the benefit of the foreign tax credit.

What would that do to American companies doing business overseas?

Mr. HENRY. Mr. Chairman, that is absolutely going to make us noncompetitive with the foreign oil producing countries in each of these countries overseas. The Japanese, British, the Dutch, the French have various degrees of foreign tax credit and exemption from taxes in the home country.

The CHAIRMAN. Do all these countries have a foreign tax credit for their producers?

Mr. HENRY. Mr. Chairman, in one form or another, it may not take the same form, but it is exemption or forgiveness or credit or offset of some kind or another. All the countries have it in their laws. But the important thing is it does not accomplish anything. What it does, as we see it, is remove from us the ability to compete favorably and take away from the United States whatever little control we have over that oil, reduces our ability and reduces our opportunity to make the oil available to this country, and accomplishes nothing logical that I can see.

The CHAIRMAN. Is your opinion the same?

Mr. DUNLOP. I would share that point of view. I would think the important issue is that the American companies have the opportunity to diversify their sources of supply so that we limit our dependence upon any one nation or any one area, and if these opportunities for developing diverse sources of supply are limited—I am talking about the financial incentives—then I think this is to the prejudice of the American companies, and more importantly, to our ability to take care of the American market.

The CHAIRMAN. Can you explain what benefits the United States receives when there is an embargo by the Arab countries on oil being produced by American companies coming from their countries to the United States? What advantage do we obtain by having these American investments abroad?

Mr. DUNLOP. Well, I think we have to recognize that during the current embargo situation we have been prejudiced in terms of that particular production. But I think we will also have to recognize there are other areas of the world where American companies have had investments, South America, other areas in the Persian Gulf, as you know, Iran has stepped up, maintained, stepped up its production, so had we not had that diverse source of supply I think we would have been in very real difficulty. The fact we have had these incentives has lessened our exposure in the current situation and, hopefully, the embargo will be eliminated at some point in time so that the diversity of supply will even be increased.

Mr. HENRY. Mr. Chairman, it is not an either/or proposition. In other words, we don't have to decide between the U.S. and non-U.S. sources. Basically, as we said before, we will make investments in either or both places in order to get the supplies that are required. So I don't think there is any doubt in anybody's mind that the money which is generated by foreign producing operations brought back to the United States and reinvested in the United States is a good thing. So I don't think we need to face ourselves but we should face the question that you put: Why should we do it ? What constructive points come out of denying the U.S. companies the opportunity to compete in the world? Those are the questions that need to be answered. My answer is "None."

The CHAIRMAN. Would it be correct to say that in the other areas not embargoing oil shipments to the United States that American companies have done what they can to shift more of their production to the United States?

Mr. HENRY. Would you repeat that, Mr. Chairman.

The CHAIRMAN. I will repeat it, it is fair to say in the areas that are not embargoing oil to the United States, such as Venezuela, just to mention one, that American oil companies, to the extent they are capable of doing so have been trying to shift their production to the United States?

Mr. HENRY. Yes, sir, Mr. Chairman. That is a fair statement. I think the prices which were shown by Mr. Swearingen and our company on the shale oil exactly have shown that exactly, the increased capital budget for 1974 seems illustrative of that point.

Mr. DUNLOP. That is exactly the case, American companies operating abroad have been attempting to take care of the need of the American markets to the extent of their capabilities.

The CHAIRMAN. I was led to believe by perhaps something I saw in the press that some of you were not good citizens, or at least one of your competitors was not, when King Faisal told an American oil company it was not to deliver Arabian oil to the U.S. Navy that the company complied with that order.

Now it is my understanding that those people were made aware of the fact that if they did not comply with that order their wells were going to be nationalized. On the other hand, they did have oil production in other parts of the world that they made available to the U.S. Navy. It was simply a matter of saying "If we give you oil out of that tanker our investments will be nationalized, but we have some other oil that can tide you over just as well as this one." It is not just a matter of providing oil. If you don't comply with an order of the national Government, it will nationalize your wells. Is that a correct assessment?

Mr. SWEARINGEN. I think, on that particular problem I think, it is correct. Our company was not involved on that but I think your statement is correct.

May I return to your previous question for a moment? The Arab embargo was levied against the United States and several other countries. As an example only the country of Iran does not impose such an embargo. I think most of the companies engaged in international trade tried to see to it that the shortage was as evenly distributed among the countries that they served as it was possible to do. By this it meant substitution of, say, Iranian oil for Arab oil previously coming

to the United States and taking the Arab oil to Europe and Japan or some other country that was not under embargo limitations, so the operations of the companies in the supply situation has been such as to mitigate the effect of the Arab embargo of imports of oil into the United States.

The CHAIRMAN. Doesn't it stand to reason where you have a scramble for oil and there is not enough to go around that, generally speaking, the British companies will, if they can, try to see that Britain is treated fairly; the German companies will try to take care of Germany; and the Japanese companies will try to take care of Japan; and the United States will take care of the United States if they can.

Mr. SWEARINGEN. I would agree with that.

Mr. DUNLOP. I would share that point of view.

The CHAIRMAN. You had better do so if you don't want your taxes increased.

[Laughter.]

Mr. SWEARINGEN. Mr. Chairman, I have experienced the same problem in getting gasoline at my stations as you have, so I am very much interested in seeing this situation solved as rapidly as we can, and I think it is unfair to characterize people like myself in the oil business as being unpatriotic citizens. We are citizens of this country. We are interested in its welfare just as much as any of a number of other classes of citizens I can name.

The CHAIRMAN. There is a group that makes a lot of suggestions about how we should write tax policy. Right now they are advising in ways that prompt editorials suggesting we should tax the oil companies the same way we tax other companies so we would eliminate the items that you gentlemen think should be preserved to meet the needs of this industry. I find myself somewhat curious to know just exactly like whom are we supposed to tax oil companies, banks? We have special tax provisions that are designed to accommodate the special problems of banks. These provisions determine the size of reserves they can set aside. The same thing applies to insurance companies. Tax provisions for insurance companies are pretty much tailored to their situation. The building and loan industry receives the same treatment. Real estate people receive similar treatment. The laws in each of those areas are pretty much tailored to their problems. Even the beverage industry has laws tailored to accommodate their bottle breakage problem.

Can you tell me just who we are supposed to pattern the tax laws for the oil industry after?

Mr. DUNLOP. I would submit, sir, that I think we have got to tax each industry in relationship to the job that we expect of it, and a lot of the critics of the oil industry are identifying the profits realized by the oil industry, total profits, and then they only relate one item of income tax to that profit level, and if you take a look at the total taxes incurred and paid by the oil industry in comparison with other industries, and if you take it on a sales dollar or revenue basis you will find that this industry——

The CHAIRMAN. My staff advises me if you can get the butterfat of your product up to 45 percent you can qualify to be taxed as a dairy.

[Laughter.]

Mr. DUNLOP. We would like to examine that possibility.

I think a lot of our critics, very frankly, Senator, they look at only one element of tax to which this industry is subject and then indicate we are not paying our fair share of taxes.

In recent studies by the American Petroleum Institute undertaken on its behalf by Price Waterhouse, indicated on a sales dollar basis this industry is paying its fair share of the tax load.

Mr. TRUE. Mr. Chairman, may I add as an independent, if there were some method devised to where our risk in exploring for oil were commensurate with the risk of a bank or a corner grocery store I think we would be perfectly willing to be taxed in the same way. But our risks are different. They are inherently different. It is a high risk hazardous business, and our tax bases just has to be different in order for us to stay in that business.

The CHAIRMAN. You have mentioned the high cost of bids on shale and other bids for off-shore leases. I would like to ask this panel, and the view might vary among you, how you would feel about two things: First, using the option that is available already in the Mineral Leasing Act where instead of asking for bids on a cash basis you could leave the other end open. Just ask for a flat down payment of far less than the bid would be, and ask that the bid include a royalty that the company would pay over to the government.

And second, what would your reaction be to the British system where they seek not so much front end cash, but drilling commitments requiring that large amounts of money be spent as rapidly as possible in developing those resources.

Would you gentlemen favor me with your views on that?

Mr. SWEARINGEN. Yes; I will respond to that, Mr. Chairman.

Taking your first question first as to whether royalty bidding would be preferable to the present system of cash bidding, I think there are some very great hazards in moving in this direction. We have some examples before us where the State of California has leased some of the State property on a royalty basis, where people actually came in and bid a 100-percent royalty or more than a 100-percent royalty in a few rare cases.

The CHAIRMAN. How could they do that?

Mr. SWEARINGEN. This was because of the posted price in the field and the facility nearby to process their oil and they were trying to buy a crude supply even at a loss to themselves. The trouble with royalty bidding in the long run is, and well, let's take a case of wells 50 to 100 miles offshore, where the facilities are put in and the operating costs are high, if high royalty has been bid the time finally comes when the participation oil by the operator does not provide enough revenue to offset the cost of continuing the operations but there still may be a 50- or 75-percent royalty to be paid to the Federal Government. Well, the operator goes in and says to the Government. "Look, we have got to renegotiate our deal here. I can't afford to continue operating this so let's sit down and cut this royalty back from 50 percent to 25 percent."

Now, if this is the process that is followed or if you toss out the original operator and say we are going to open it up for bid to the next operator; what you then have is an open invitation for people to come in and bid extremely high royalties without ever any expecta-

tion of having that continue through the life of the production, and I think you can argue that there might be some premature abandonment of properties or it makes another case here for the Federal Government to step in and operate these properties themselves with all of the attendant costs and difficulties and operating on a basis where the profit motive does not insure efficiency in operation.

I think this is the real difficulty in moving in this direction.

Now, as to the question of the British system I am sorry to have to say this but I don't believe our Civil Service is of the quality of the British Civil Service.

I will put it in these terms: Can you imagine the furor that would occur in the United States here if Dave True, an independent, and I, and some other major companies, bid on a particular lease along with Mr. Independent Jack Jones whom we never heard of before, and somebody in our Civil Service says "I want it to go to Standard of Indiana" or "I want it to go to Dave True instead of Jack Jones," and Jack Jones comes in and says, "I am going to file a lawsuit against this." You run the risk of corrupting the Civil Service, and you run the difficulty of having the awards contested in the courts, and I think our own history in this country pretty clearly demonstrates that, when the Government is procuring or selling something the only way to do that without incurring great risk and criticism is by a bid basis, and I don't believe that we could effectively employ the British system in this country. There are some other difficulties but that is the most prominent one.

The CHAIRMAN. Is that the view of you other gentlemen?

Mr. DUNLOP. Essentially, Mr. Chairman, that would be my view. I would just add this further thought. Under the bid system we are bidding in relation to what we believe are marketplace economics possibilities and I don't think there is really any substitute for the marketplace determining what we should do.

How we make our best judgment when we bid on a lease that is offered in terms of what we think the marketplace is going to be and I think that has worked very, very effectively and therefore I would subscribe to a continuation of our present procedures.

The CHAIRMAN. What is your view on that, Mr. True? You have been associated with the independents for years.

Mr. TRUE. Well, first, Mr. Chairman, of course, I don't compete and have no intention of competing for either foreign or off-shore leases in our own country, but on the continental United States we compete under present conditions very satisfactorily. We have three, actually four ways to go. Part of the Federal lands are let to competitive bidding and we can bid on them in competition with the majors and do. They are not of a magnitude bid for off-shore leases, but the reserves are of a magnitude, so we do compete on the present competitive bid on shore leases.

The operation we file on if we are the first one there and the first one interested in a particular area and obtain a lease without any competition. However, if there is competition for that particular lease we enter into a simultaneous drawing where every applicant has an equal chance to obtain that lease at a set cost and even if we don't win that drawing we still have a chance to go to the major and make a farm out on that acreage, if that major doesn't want to drill it him-

self, or we have a chance to go to another independent to either buy or farm out from him. So we compete very effectively on on-shore Federal acreage under the present statutes, and some. My larger independent friends have, of course, competed under the present setup off shore by forming consortiums or groups and spreading the risk among several of them and bidding a cash price.

However, I must admit that there are elements in the, among the independents who would like to go offshore and I am not one who wants to go offshore because of the very nature of my operation prohibits me from even considering the unlimited liability without corporate protection is too great for an individual. I am willing to gamble most everything that I own but if I have to put up my wife's house and her only coat, why she is not going to let me do that. [Laughter.]

So personally, I am not interested in offshore operations. But some independents do believe that there should be some sort of a total development which would be payable in cash if that amount of money was spent in exploration and development over the term of the lease.

Mr. SWEARINGEN. Mr. Chairman, may I have one more remark, I don't want to prolong this discussion but it is an important point. Each of the last three sales of Federal acreage has brought $1,600 million, a total of $5 billion in the last 3 months. The claim is frequently made that the independents cannot participate because of the high prices that are paid.

I would like to point out to you the Federal Government itself is contributing to these high prices. There is a scarcity of offshore acreage available. The Federal Government has parceled this out at such a rate as to extract the highest prices they could possibly get. As Mr. True pointed out, there was a period of time a few years back where there was no leasing offshore for a period of a couple of years. I think it is obvious to anyone, that if the Federal Government were to lease 10 times as much acreage in one sale as they have been in the habit of leasing in the last three, you are not going to get 10 times as much money, there isn't $16 billion to be paid for the acreage where you pay $1.6 billion now and the prices would go down.

I don't think you can argue too much with government servants trying to get the highest price they can, but after all there is a scarcity value attached to the acreage offshore, there is a need to accelerate the exploration and development of this acreage and I think the Government itself ought to make a step toward solving the problem of supply in this country.

The CHAIRMAN. Well, thank you. I appreciate what you gentlemen have had to say here today. You have been very helpful to the committee, and I must apologize for the fact that I called these hearings during the recess of the Congress. Other Senators requested that I postpone them so that they could be here. Had I done that these hearings could not be printed and the information you have made available to us would not be available to the Senate when it returns after the recess. For that reason I felt we should go ahead and hear your testimony.

I assure you I will do my utmost to see that my colleagues read what you said but I will just remind you what Burton Wheeler told me. He said,

If you want the Senate to know about what you are trying to tell them you had better plan to make that same speech at least twice, once to the group you find around and once to another group.

I think in your case you may have to make it 50 times but you have something that should be heard.

Mr. DUNLOP. Thank you, Mr. Chairman. We appreciate the fact you are here today and the leadership you are giving to this very, very important issue.

The CHAIRMAN. Thank you. I will submit to you gentlemen, if you would be kind enough to respond, additional questions that members of this committee may want to submit to you after the recess.

Mr. HENRY. Thank you.

The CHAIRMAN. The next witness we will call is Mr. M. A. Wright, chairman of Exxon.

Mr. Wright, we are happy to have you here today. Under your old company name before you changed it we had one of your largest refineries in my home town of Baton Rouge and a great number of people from my part of the country didn't know there was any other company beside yours when I was a small boy, and we think your company has done a very fine job in our State, and I am sure that you can be very helpful to us. I think that was the spawning ground for quite a few of your executives in years gone by, too.

STATEMENT OF M. A. WRIGHT, CHAIRMAN AND CHIEF EXECUTIVE OF EXXON CO., U.S.A., ACCOMPANIED BY A. L. MONROE, COMPTROLLER, EXXON CORP., AND W. T. SLICK, JR., SENIOR VICE PRESIDENT, EXXON CO., U.S.A.

Mr. WRIGHT. Mr. Chairman, could you give me an idea as to how much time you would like for us to take, which might have something to do with our presentation.

The CHAIRMAN. Well, you can suit yourself, Mr. Wright. You can either abbreviate this statement or if you want to deliver your whole statement you can do that.

Mr. WRIGHT. Thank you very much.

My name is M. A. Wright, I am an executive vice president and director of Exxon Corp., and I am also chairman and chief executive of the Exxon Co., U.S.A., and it is in that capacity that I am responsible for all the Exxon Corp.'s petroleum operations in the United States.

I have accompanying me here at the table today, on my right is Mr. A. L. Monroe, who is comptroller of the Exxon Corp., and on my left is Mr. W. T. Slick who is the senior vice president of Exxon, U.S.A. I brought these fellows along to answer all of the hard questions that you might pose particularly when we get into details. We do appreciate this opportunity to share with you some of our thoughts on matters that are being considered by this committee.

The CHAIRMAN. I would suggest, Mr. Wright, that you abbreviate your statement. I know you have prepared it in such a fashion that you can accommodate the committee. I personally will study every word of it, but since we have another witness after you it might be better if you abbreviate it. I will read your entire statement.

Mr. WRIGHT. I will be delighted to do so.

As you gentlemen know, there have been widespread charges which have been occasioned by the significant increase in 1973 earnings that the oil companies are taking advantage of the current energy shortages to reap what is known as windfall profits. There have been suggestions that major oil companies have deliberately fabricated or contrived the current situation to gain competitive advantages. While these charges are totally unfounded, they have achieved sufficient prominence that they are diverting the attention of the public, the administration, and the Congress away from the real problems facing this country. This exercise is not only time consuming but, more importantly, uses talents which could better be spent in developing solutions to the problems that this Nation faces.

I would like to make one point at the outset regarding foreign oil operations which you have been discussing here with the API group.

Underlying much of the criticism of tax provisions relating to foreign operations seems to be a conviction that if the United States would act to make investment abroad by international oil companies less attractive, then perhaps greater commitment would be made to develop problem resources in this country. While this Nation certainly needs more effort directed toward increasing its energy-producing capacity, these investments must be attractive in and of themselves, or they will not occur.

Discouraging foreign petroleum activity therefore is not the answer to this country's domestic energy problems.

In my filed statement I have discussed earnings growth, return on investment, profits growth with respect to Exxon profitability as well as other companies. The statement also discusses petroleum raw materials, product prices, and capital expenditures, both past and future. We tried to highlight some of the factors beyond our control that have limited expenditures by our company in our efforts to expand in the past and have commented very briefly on the outlook for the future. Our statement also included detailed answers to the nine questions which were prepared by the committee staff.

Now rather than going into detail on these matters which will be of record I would like to summarize it for you very briefly.

Exxon earnings on U.S. petroleum operations increased 16 percent in 1973 over 1972, which is roughly in line with the 14 percent increase in sales which resulted from our efforts to meet the U.S. demand growth. Over the past 10 years Exxon growth in earnings on both domestic and foreign operations has been in the 11 percent range, which is well in line with other manufacturing companies.

After declining for many years on a constant dollar basis retail prices for gasoline and home heating oil began to move upward during the last half of 1973 and this was due mainly to the dramatic increases in value placed by foreign producing governments on crude oil that was being imported into the United States. These increases in producing government takes have been passed through to the U.S. market in accordance with the existing price control regulations.

Over the past 10 years Exxon's total capital and exploration expenditures for petroleum operations in the United States have amounted to $7 billion. Over 60 percent of our expenditures went toward finding new reserves and developing additional new productive capacity.

Total expenditures for exploration and production during this

period were over three times as great as the taxes saved due to the depletion benefits.

We would have preferred to increase our expenditures during this period but access to new offshore oil and gas reserves was severely delayed by Government limitation on the number and size of lease sales.

In addition, investments in the Alaskan pipeline and for drilling in the Santa Barbara channel were delayed by environmental considerations. Uncertainties in the administration of the import program inhibited decisions to construct new refineries during the period from 1968 to 1972.

Exxon's foreign operations have in no way been detrimental to our ability to make investments in the United States. Our foreign earnings, plus depreciation and off-shore debt, have been more than sufficient to fully finance new foreign investments for many years. Exxon's capital needs are increasing substantially. Over the next 4 years we anticipate spending about $6 billion in the United States. This is an amount nearly equal to our expenditures over the past 10 years, and we will be severely tested in meeting our future financial needs.

It is of utmost importance that national tax and price policies affecting energy be consistent with this country's energy objectives. We believe it appropriate that the existing tax and price policies affecting energy be reexamined. This should be accomplished through a comprehensive rather than a piecemeal approach giving full recognition to the unprecedented need for private capital which will be required to develop new energy supplies.

Exxon supports the removal of price controls as soon as practicable. In the long term, a new energy supply/demand equilibrium can be established more efficiently by market forces than by Government intervention and regulation. Higher prices would dampen demand by eliminating noneconomic uses of energy and, at the same time, provide both the incentive and means to increase energy supplies.

On the other hand, of course, we recognize that domestic crude oil prices should not rise overnight to levels typified by recent auctions of foreign government-owned crude. However, today's crude oil price controls have some serious defects. "Old" crude prices have been held at levels significantly below those which have evolved for "new," "released" and "stripper" oil. This two-tier system has disrupted crude markets and introduced many distortions in domestic operations. And the longer these two major segments of domestic crude oil supply are subject to completely different price treatment, the larger the distortions will become and the more difficult it will be to take the remedial action which will be required sooner or later.

Actions need to be taken immediately to end the two-tier crude oil price system. All crude oil should be put under a single price ceiling structure which allows for variances in crude oil quality and transportation differences. This would, of course, require legislative action on "stripper" oil. Some averaging of currently existing prices for oil in various classifications—old, new, released and stripper—would be an appropriate way to establish the initial ceiling on all crude oil. This would provide sufficient current incentives to accelerate efforts to develop other energy resources.

However, the Government and the public must recognize that it will be necessary for energy prices to rise to market clearing levels for new energy sources, such as synthetics from coal and shale. Higher prices will also provide the cash flow and incentives for expanded exploration for oil and gas in new geologic provinces. Ceiling prices on crude oil should therefore be allowed to rise in the future until it is clear that prices are sufficient to bring forth the supplies needed to achieve domestic self-sufficiency within an acceptable period of time. Ceilings would also have to be adjusted to account for the effects of increasing costs and any changes to tax burden if the ability of petroleum companies to generate and raise needed capital is not to be impaired.

In the interest of the consumer, we believe that price ceilings, or margin controls, in the refining, distribution and marketing segments of the industry will continue to be appropriate in the near future—and compliance should be vigorously enforced. At the same time, however, controls must be administered so that each segment of the industry will be able to continue to expand operations as needed while avoiding distortions of normal market forces to the maximum extent possible.

Now numerous alternative measures have been proposed in recent weeks to prevent so-called "windfall" profits from occurring. Several of these have been directed primarily toward domestic petroleum operations, and I would like to comment briefly on them at this time.

S. 2589, the proposed price rollback amendment to the Emergency Petroleum Allocation Act of 1973, has a number of shortcomings. This bill does not acknowledge the distortions which have been created by the two-tier crude price system, and does not require that it be ended. While S. 2589 does recognize that legislation is needed to correct the existing problems related to "stripper" oil, we believe it patently unsound to legislate commodity prices as this measure would do. The administration's proposed emergency windfall profits tax would basically be an excise tax on production. This new tax would be very complex, particularly if the two-tier price system is retained. In itself, the administration's proposal would appear to be a revenue raising device and therefore would not protect the consumer from even higher prices. It does not recognize the need to control prices until shortages are no longer a critical problem. It would be viewed by some as a punitive tax against the industry at the very time that more productive effort is needed.

A number of excess profits taxes have been proposed. This committee has already heard testimony on excess profits taxes in previous hearings, so I can only add a very few brief comments. Of course, as you know, excess profits taxes are inequitable and most difficult to administer. But more fundamentally, no one, at least to my knowledge, has been able to develop an adequate definition for excess profits. Furthermore, high incremental tax rates would tend to encourage inefficiency at a time when inflation is a major national problem. So, in the final analysis, any tax proposals which address profits must be applicable to all industries, not just petroleum, since, as we have shown, the profit performance of the petroleum industry is consistent with the general improvement in business profits as a whole. Thank you.

The CHAIRMAN. Thank you very much for your statement, Mr. Wright.

Do you subscribe to the statements made by some of the New York banks to the effect that if the petroleum industry is to do what is to be expected of it between now and 1985, to raise the needed capital out of earnings as well as borrowings, that it will need a profit rate of about 18 percent.

Mr. WRIGHT. Yes, generally speaking, that is within the range that we would see. I think we have another piece of information.

The CHAIRMAN. In other words, you are going to have to attract a tremendous amount of capital and you have to earn about half of it and borrow the other half. At least that is what I am led to believe. Borrowed funds will have to be paid off as well as interest on the loans. Is there any real dispute about these figures because those who want to limit your rates of return below that level ought to at least justify some other figure as an appropriate target.

Mr. WRIGHT. No, generally speaking, we would agree with those figures, and this may be somewhere near in our own case, something of the order of our return last year, 1973, and if this rate of return were carried on in the future it appears that we would, on a very close balance probably be able to finance our program which we have laid out for the future.

The CHAIRMAN. You said that was about your return last year, but I believe you just testified that on your domestic production your return was about 11 percent.

Mr. WRIGHT. I think that the numbers that we were talking perhaps on the part of the bankers has to do with return on shareholders' equity. We have a finance man who might be able to explain it.

The CHAIRMAN. I would like you to reconcile those figures if you can. I would like to know, based on your latest projection, about what you would have to make domestically in the United States in order to do what is expected of Exxon in the United States.

Mr. MONROE. Three points. The return that we quoted, the 18 percent was our return on shareholders' investment. The return Mr. Wright quoted on petroleum investment is for the U.S. division is on our total assets. It will run lower than what you have on your shareholders' investment but our return on total assets in the United States is slightly above the return on total assets worldwide.

The CHAIRMAN. Give me the figures for operations within the United States. What would your figure be on your domestic production of oil?

Mr. MONROE. On capital employed?

The CHAIRMAN. I am just trying to ask you whether you think that the 18 percent rate of return the Chase Manhattan Bank thinks is priper, which is one of the banks that makes loans to you, as well as the First National City Bank of New York, is about the return you need to justify their loans and to finance the balance of your future capital needs out of earnings.

Mr. MONROE. Let me comment this way, Senator Long. We have said that our return that we need to finance our next 4 years is somewhere in the 15- to 16-percent range.

Now the longer you get out to 1985, as the gentleman said earlier today, it takes longer and larger investments for the synthetics and

the deeper offshore oil and in all probability it will take a higher return than the 16 percent range. We have not studied it in that depth after 1985 but in the next 4 years it appears we need a 15 to 16 percent for the total corporation which is fairly constant within our United States and foreign to finance our program of $6 billion in the United States for the next 4 years.

The CHAIRMAN. Well now, do you think you are making that now or were you making that in 1973 or 1972?

Mr. MONROE. We made it in 1973. We were not making it in 1972.

The CHAIRMAN. That is on your domestic production.

Mr. MONROE. That is right.

The CHAIRMAN. So when we talk about the great profit that this company reported, reporting a very good year compared to the previous years, actually, if I understand your testimony, based on what the people who loan you money to drill more wells think you would need to be making, you are just about on target as far as U.S. operations are concerned.

Mr. MONROE. That is right.

The CHAIRMAN. So if you cut back below that point, it will be more difficult for you to find the capital to drill the wells that your company would be expected to drill.

Mr. MONROE. That is right.

Another point when you move into the offshore and the synthetics, as they pointed out this morning, the leadtime before you start geting a return on your investment is much longer than it has been on conventional drilling. It takes 3 to 5 years before you start getting a flow whereas now you can do it is 6 months to a year on onshore, so you have a bigger financial load on your investment.

The CHAIRMAN. Does your company operate a large number of stripper wells.?

Mr. WRIGHT. Well, by definition, the definition now being used at any rate, 10 barrels or less, yes, we have a substantial number of them. I think probably proportionally speaking we have fewer than the industry at large, however.

The CHAIRMAN. It was my impression that the major companies including yours had been gradually abandoning the stripper operations to the independents. Is that correct?

Mr. WRIGHT. Well, of course, over the years as we approached, let's say economic depletion of old fields, you know when the return gets quite low, why we have sold these, put them on the market for the reason that some of these smaller companies, the more independent companies are able to operate some of these kind of things at a lower cost because of the way they handle them. So we have done that.

The CHAIRMAN. In other words, there comes a time, I would assume, and if I am not correct I wish you would correct me on this, when a very efficient company finds it can no longer make any money with a well, even though some little fellow who has his own truck and his own gin pole and sort of operates out of his hip pocket might manage to make a few dollars profit out of it, while your company, having to hire people to do the same thing at the labor rates that you would have to negotiate would find it no longer profitable.

Mr. WRIGHT. That is right. We sold over the years, we have sold when our wells get down to two or three barrels a well to people who

would operate it themselves. They would spend part-time farming, part-time operating or they would hire a man who was involved in farming in the area to look after pumping a few wells and he would have a part-time job out of it and these kinds of things go on and we recognize it is a part of the industry, a very important part.

The CHAIRMAN. The suggestion will be made that there be a very heavy tax increase by denying you depletion allowances, intangible drilling costs, and also your foreign tax credit on your overseas operations. Previous witnesses have testified that if that were done your companies would no longer be competitive overseas; is that correct?

Mr. WRIGHT. That is absolutely true. Of course, I think when we look at our overseas operation we find the income tax abroad on our operations was very high; they run on the order of 70 percent. Here in the United States our U.S. tax run slightly over 30 percent. When you put it all together, our overall income tax burden for our corporation is around 60 percent.

Now, then, if you give thought to the idea of eliminating foreign tax credits, well this would mean we would have double taxation abroad, of course, and this would also mean that we could not compete foreign with Dutch companies, the British companies, and other companies who are our real competitors, because they would be operating with lower tax rates.

The CHAIRMAN. Would you give me some idea as to what the advantages are to the United States to have Exxon, Gulf, Texaco, and other American oil companies producing in these foreign lands?

Mr. WRIGHT. Let me carry it back just a few years, maybe a number of years, Senator. You know our company is a very old company, and we have been in the international business for 60 years or so, longer than that, I believe Esso U.K.—I went to their 75th anniversary in 1966, so they have been in business 70-odd years, and we have been searching for oil and developing markets abroad over a greater, longer period of time. And, as an example, we have the major oil-producing field in France, which we discovered around 1950. We actually got into Europe producing in Romania, which was before World War I, and this was an exporting nation and exporting crude for the rest of Europe.

We have been in Australia in more recent times, and at the present time we have mostly the oil being produced in Australia; we produce about 300,000 barrels of oil in Australia, which is about half of their consumption and, of course, as you also know, we entered into Venezuela back in the 1930's to develop oil for export there and that is the oil that is flowing into this country quite freely now, which is a very important thing to us.

We went to the Middle East in 1947, I believe it was, and this was to develop crude oil for foreign markets, not for the United States. In those days, well, the United States had surplus producing capacity and was actually exporting itself.

In Libya, we discovered the first oil in Libya in 1959, and so all around the world we conducted a large foreign operation, which has been somewhat disassociated with the United States and as of last year the corporation had about 6 million barrels a day of foreign oil business.

In the United States we had a business of, you know, except for the

imports of heavy fuel oil, you might say a little over 1 million barrels a day. But most of this development abroad has been to satisfy markets abroad, and our imports into the United States have been quite nominal over recent years.

During most of the time of the import controls, which was in 1960 to a couple of years back, you know we had import quotas of about 50,000 barrels a day, and we would occasionally acquire other import tickets and may be get up to a 100 thousand barrels a day but our largest imports were in 1972 when it was 220,000 barrels per day. I only give this to you as background to indicate to you that our kind of a company or at least our company has not gone abroad to bring crude directly into the United States and compete with domestic crude in the past as some people mistakenly think. I have taken a lot of your time but I thought this might be of value to you.

The CHAIRMAN. On balance is your company and the other oil companies bringing dollars back to the United States or taking money from the United States?

Mr. WRIGHT. Well, you know, over the years we have always prided ourselves as having a plus balance of payments to the United States. Now I recall in the middle sixties we were always proud to let it be known that we were contributing something like a half billion, $500 million a year toward a $2 or $3 billion (surplus) in the United States. One of our companies has been one of the important contributors to our favorable balance of payments because of bringing the profits and the cash flow from abroad back into this country.

The CHAIRMAN. Would that be true for the past 6 months?

Mr. WRIGHT. I will have to see if Mr. Monroe can give you an answer.

Mr. MONROE. Would you accept an answer for all of 1973? It looks like we brought back $800 to $900 million from our operations in 1973.

The CHAIRMAN. You brought that back?

Mr. MONROE. We brought that much home after we met our investment requirement during the year 1973.

Mr. WRIGHT. Of course, what is obvious, bringing this amount of money in the United States is part of the financing that is available to us operating in the United States.

The CHAIRMAN. The money you made from your overseas operations and brought back here is part of the capital you are plowing back into drilling more wells and providing more money in this country.

Mr. WRIGHT. Very important and paying dividends to our shareholders.

The CHAIRMAN. Do you own most of your own tankers?

Mr. MONROE. Senator, I can put it in the record later but I think we own 50 percent of our tanker coverage in our international business.

The CHAIRMAN. Does it help to give this country a little more leverage in the worldwide oil picture which might be used to our advantage at some point if foreign countries decide they are going to be extremely unfair to the United States if the United States could demand that your company and others who have their own tankers or have control over tankers simply not move the oil from countries that are acting against what appears to be in the best interest of this country?

Mr. WRIGHT. Of course, over the years we have had a tanker fleet of some magnitude and during a couple of world wars why, of course, our ownership of these tankers have been very important, and national interests considerations are very high in this.

The CHAIRMAN. I know most of those fleets are not under U.S. flags. They are under flags of convenience, I believe.

Mr. WRIGHT. True.

The CHAIRMAN. Are they nevertheless subject to arrangements whereby they can be used to implement this country's foreign policy if they are required for that purpose?

Mr. WRIGHT. We maintain control of their operation.

The CHAIRMAN. So you maintain control of it and even though it is under a third country flag you would still be able to make your ships available to the United States if our interests required it.

Mr. WRIGHT. We always have.

The CHAIRMAN. It has always been that way and you would hope it would always be that way.

Mr. WRIGHT. Yes, sir.

The CHAIRMAN. In this period of power politics that we have been forced to become acquainted with in the years since World War II, the control of those tankers could be an important item, is that correct?

Mr. WRIGHT. Yes, it is.

The CHAIRMAN. We may not like to think of it in those terms but it is true.

Mr. WRIGHT. It is true.

The CHAIRMAN. Thank you very much, Mr. Wright, and your assistants. We appreciate very much the information you have made available.

Mr. WRIGHT. We are pleased to be with you. Thank you so much.

[The prepared statements with attachments of Mr. Wright follow:]

PREPARED STATEMENT OF M. A. WRIGHT, CHAIRMAN AND CHIEF EXECUTIVE, EXXON CO., U.S.A. (A DIVISION OF EXXON CORP.)

SUMMARY

1. Exxon's earnings on U.S. petroleum operations increased 16 percent in 1973 over 1972, roughly in line with the 14 percent increase in sales which resulted from our efforts to meet U.S. demand growth. Over the past ten years, Exxon's growth in earnings on both domestic and worldwide operations has been in the 11 percent range, well in line with other manufacturing companies.

2. After declining for many years on a constant dollar basis, retail prices for gasoline and home heating oil began to move upward during the last half of 1973, due mainly to the dramatic increases in value placed by foreign producing governments on crude oil exports to the U.S. These increases in producing government takes have been passed through to the U.S. market in accordance with existing price control regulations, and they must be paid if the consumer is to have the product.

3. Over the past ten years, Exxon's total capital and exploration expenditures for petroleum operations in the United States have amounted to $7.0 billion. Over 60 percent of our expenditures went toward finding new reserves and developing additional productive capacity. Total expenditures for exploration and production during the period were over three times as great as the taxes saved due to depletion benefits. We would have preferred to increase our expenditures, but access to new offshore oil and gas reserves was severely delayed by government limitations on the number and size of lease sales. In addition, investments in the Alaskan pipeline and for drilling in the Santa Barbara Channel were delayed by environmental considerations. Uncertainties in the administration of the imports program inhibited decisions to construct new refineries from 1968–1972.

4. Exxon's foreign operations have in no way been detrimental to our ability to make investments in the U.S. Our interests abroad and the future energy needs of this country do not present conflicting priorities. While this nation certainly needs more effort directed toward increasing its energy-producing capacity, these investments must be attractive in themselves, or they will not occur.

5. Exxon's capital needs are increasing substantially. Over the next four years, a period in which our capital spending plans are fairly well developed, we anticipate spending about $6 billion in the U.S., an amount nearly equal to our expenditures over the last ten years. We will be severely tested in meeting our future financial needs.

6. Government has the key role to play in establishing the environment necessary to allow private companies to attract the required amounts of capital funds. It is of the utmost importance that national tax and price policies affecting energy be consistent with the country's energy objectives.

7. We believe it appropriate that the existing body of tax and price policies affecting energy be re-examined. This should be accomplished through a comprehensive, rather than piecemeal, approach, giving full recognition to the unprecedented need for private capital which will be required to develop new energy supplies.

8. Exxon supports the removal of price controls as soon as practicable. However, we recognize that price ceilings on energy raw materials must be accepted—but only so long as international supply/demand balancing mechanisms cannot function efficiently.

9. Today's crude oil price controls, however, have some serious defects. Actions need to be taken immediately to end the two-tier crude oil price system. All crude oil should be put under a single price ceiling structure which provides sufficient incentives for efforts to accelerate the development of other energy resources. Ceiling prices on crude oil should be allowed at levels sufficient to bring forth the supplies needed to achieve domestic policy objectives within an acceptable period of time. In the long run, the interests of the nation are best served, we believe, by relying on market forces to bring about a balance between supply and demand.

10. Tax policy affecting the petroleum industry needs to be consistent with national objectives for energy and fiscal policy affecting all business. Excess profits tax proposals, the Administration's tax proposal, and the crude price rollback amendment S. 2885 are all inconsistent or inappropriate measures at a time when the urgent need is for increased effort to develop the nation's energy resources.

STATEMENT

INTRODUCTION

Mr. Chairman, I am M. A. Wright, Chairman and Chief Executive of Exxon Company, U.S.A. and Executive Vice-President and a Director of Exxon Corporation. I welcome this opportunity to provide some of our thoughts on the matters before this Committee.

There have been widespread charges, occasioned by significant increases in 1973 earnings, that oil companies are taking advantage of current energy shortages to reap "windfall" profits. There have even been suggestions that major oil companies have deliberately fabricated or contrived the current situation to gain competitive advantages. While these charges are totally unfounded, they have achieved sufficient prominence that they are diverting the attention of the public, the Administration, and the Congress away from the real problems facing this country. This exercise is not only time-consuming but, more importantly, uses talents which could better be spent in developing solutions to the nation's immediate and long-range energy problems.

In my statement I will first review Exxon's financial performance, with particular emphasis on putting the 1973 results in perspective, and then address the nation's future energy needs and capabilities. I will offer our views on the respective roles which private industry and the federal government should play in achieving this nation's energy objectives.

My testimony will touch on most of the points raised by the Committee's questions. Complete answers to each are attached to my statement as Appendix A.

In accordance with your request, I will confine my discussion to Exxon's U.S. petroleum operations except for those matters where domestic/foreign interrelationships are pertinent.

However, I would like to make one point at the outset regarding foreign oil operations. Underlying much of the criticism of tax provisions relating to foreign operations seems to be a conviction that if the U.S. would act to make investment abroad by international oil companies less attractive, then perhaps greater commitment would be made to develop petroleum resources in this country. While this nation certainly needs more effort directed toward increasing its energy-producing capacity, these investments must be attractive in and of themselves, or they will not occur. This not only requires the prospect of adequate returns as affected by contemplated market prices, but also the removal of existing obstacles to investment, such as, for example, those limiting the availability of federal offshore areas for exploration and development of potential oil and gas reserves. Discouraging foreign petroleum activities, therefore, is not the answer to this country's domestic energy problems. Moreover, increased and substantial imports of oil for a number of years are unavoidable. Consequently, it is not in the nation's best interests to discourage U.S. companies from participating in the development of added volumes and diversified sources of foreign oil supplies.

ROLE OF PROFITS

Before turning my attention to Exxon's earnings performance, I would like to comment briefly on the role of profits in the private enterprise system. Too often, it seems, when we see reports of favorable business earnings, these reports are accompanied by critical commentaries which imply that profits, especially the large dollar profits earned by major industrial companies, are somehow bad *per se.* This attitude overlooks the fact that profits are what enable private companies to provide goods and services for consumers, dividends for shareholders, and jobs for employees.

Profits are necessary for private industry to provide a return to shareholders who have invested in the business and for reinvestment by industry. Most major corporations have thousands of shareholders—both large and small. Exxon Corporation, for example, has over 700,000 shareholders, including numerous individuals, educational institutions, charitable foundations, pension funds, and other institutional investors.

The question of the level of profits must be viewed in the context of the size and future economic viability of the company. If a firm is to stay in business and grow, it must make sufficient profit to attract capital through new equity or debt. No one would be willing to invest in or lend to a firm that has a low profit or is expected to have low profits in the future. The anticipation of profits, therefore, must be high enough to attract external funds if the firm is to prosper and grow.

EARNINGS GROWTH

I now want to discuss Exxon's profits and profitability. As indicated in Appendix B, last year Exxon Corporation's worldwide earnings were $2.4 billion, up by 59 percent. This largely reflected improvement from a previously depressed performance in our operations abroad. Earnings from petroleum and natural gas operations grew 48 percent in the Western Hemisphere outside the U.S. and 83 percent in the Eastern Hemisphere. In addition, devaluation of the dollar (which resulted in local currency earnings being translated into higher dollar amounts) and improvement in the performance of our chemical operations each contributed about $150 million to the increase in earnings. In our worldwide petroleum and natural gas business, earnings amounted to about 1.9 cents per gallon.

Earnings in the United States were $833 million, a growth of 16 percent over 1972, which was in line with the 14 percent increase in sales resulting from our efforts to meet U.S. demand growth. Even though domestic production was down slightly, we were still able to run our refineries near or at capacity for most of the year by increasing imports of crude and unfinished products by 70 percent over 1972 levels. During July refinery runs reached 1,331,000 barrels per day, an all time high for us. This reflects the numerous steps taken during the year to increase refinery capacity.

The Committee's request for data covering a ten-year period recognizes that the earnings performance of a firm or industry must be viewed in a longer-term context. Only in so doing can the effect of short-term factors be averaged out and a true pattern of earnings growth discerned. The period 1964 to 1973 is a representative time frame to use in examining the earnings performance of the petroleum industry and in comparing petroleum earnings to those in other

industries. It encompasses two periods of both maximum refining capacity utilization and spare capacity for the industry. These ten years also include periods of both rapid economic growth and of recession for the overall economy.

As shown on Exhibit 1, the earnings growth since 1964 for both Exxon Corporation's worldwide operations and our U.S. petroleum operations has been in the 11 percent per year range. For perspective, growth rates are also shown for the petroleum industry, other manufacturing, selected industry groups and companies in each group. Exxon's earnings growth was slightly above the average for the petroleum industry. When compared with other manufacturing companies, Exxon's increase in profits is well in line.

RETURN ON INVESTMENT

Neither absolute dollar earnings nor changes in earnings, taken alone, is a useful measure of the profitability of a company. Business analysts generally agree that the relation of a company's profits to an investment base, such as total assets, equity, or total capital employed, is the best measure of profitability for capital-intensive industry. This criterion indicates whether a given business enterprise is worthwhile relative to some expected norm or to an alternative investment.

Exhibit 2 contrasts Exxon Corporation's worldwide and U.S. petroleum operations' return on capital employed with that of companies in other industries. Our 1973 corporate return of 15.5 percent and the 17.2 percent return on U.S. petroleum operations are not exceptional when viewed in light of leading firms in other industries, either in terms of the level or the increase over 1972.

In the January 1974, issue of *Forbes*, 851 companies were ranked on the basis of return on total capital over a five-year period. The highest ranking major petroleum company was Exxon Corporation in 211th place. Higher up the list, there were some smaller petroleum companies as well as a diversity of other companies including MacDonald's, Coca Cola, Xerox, Anheuser-Busch, IBM, and General Motors.

EFFECTS OF DEPLETION OF OIL AND GAS RESERVES

It is important to recognize that the single most important asset owned by a petroleum company like Exxon is its reserves of crude and natural gas. These reserves were acquired over a long number of years and for many companies, my own included, represent the base assets of which the Company is built. Increasing rates of production of low cost reserves discovered many years ago compared with production of relatively higher cost reserves discovered in recent years have had a favorable but economically unrealistic effect on Exxon's return on capital employed since 1964, as shown on Exhibit 3.

Here the return for Exxon's U.S. petroleum operations (solid line) is contrasted with the ratios of crude and natural gas reserves to annual production for each year (dashed lines). This so-called "R/P ratio" is a measure of the rate at which Exxon's reserves are being depleted. As can be seen, this ratio has declined over the period from 19 to about 8 for crude oil and from 36 to 9 for natural gas. As the decline in R/P ratios clearly shows, our reserves are being depleted at an ever-increasing rate: production has increased significantly while reserves (excluding the North Slope of Alaska which is not yet on production) have dropped by 35–40 percent.

In general business terminology, we have been liquidating our inventories (oil and gas reserves) over the period. Generally, these reserves were acquired many years ago when drilling and other costs were lower. To replace the produced reserves today will cost many times over the original cost. Thus, the increase in and level of return on capital employed shown is higher than it would have been had we been able to replace all or a greater proportion of the reserves produced over the period.

The fact that neither Exxon nor the industry was able to do so is, of course, the reason that domestic production of oil and gas has peaked and is declining. This is certainly not in the best interests of this nation.

EARNINGS TO REVENUE RATIO

Profitability is also sometimes measured by the ratio of earnings to revenue. This measure may be used to analyze an individual company's performance through time, but it has only limited validity when used to compare different industries or even different companies within an industry.

The earnings to revenue ratio does not recognize capital employed, and therefore can be used only to elevate firms or industries whose capital, labor, and sales structures are similar. Capital intensive industries will characteristically have a higher earnings to revenue ratio than those that are predominantly engaged in merchandising or other activities requiring only limited capital investment. It is meaningless, for example, to compare the ratio of earnings to revenue for retail establishments which typically average about two percent with manufacturing industries which run in the five to ten percent range.

As requested in the Committee questionnaire, we have provided data on Exxon's U.S. petroleum earnings to revenue ratio for each year since 1964 (Exhibit 4). By this index, Exxon's profitability has not changed significantly since the mid-1960's.

PETROLEUM PRICES

I now want to turn to those developments which led to the significant changes in petroleum product prices last year.

To put this matter in its proper context, however, I want to begin by showing the prices the average U.S. consumer has paid for petroleum products over the last ten years. As Exhibit 5 shows, retail prices in constant dollars for gasoline and heating oil declined over the period 1964–1972. However, during the last half of 1973, petroleum product prices began to move upward mainly due to the dramatic increases in value placed by foreign producing governments on crude oil exported to the U.S. and other consuming nations. The producing government take on Arabian Light crude rose from $1.50 per barrel in January 1973, to about $3.00 per barrel by the end of the year. Then in January of this year, it jumped to $7.00 per barrel.

Increases such as these have been passed through to the U.S. market in accordance with existing price regulations. Neither the U.S. government nor the oil companies can roll back these foreign crude prices; they must be paid if the consumer is to have the product. Foreign crude from affiliated companies is priced into the U.S. at open-market levels, with the basic standard applied being that of an arm's-length transaction. Recently, market prices have been very difficult to measure and as a result, Exxon inter-affiliate prices have been increased much less rapidly and have essentially only covered increased costs incurred by the supplying affiliates. The inter-affiliate pricing procedures followed are in accord with U.S. income tax regulations. Past audits indicate that complying with these regulations does not allow for a shift of profits abroad.

During 1973, the Cost of Living Council allowed domestic crude oil prices to rise in several distinct increments:

1. *April, May, 1973:* A general price increase of 25 to 35 cents per barrel occurred during Phase III. However, the 23 large companies subject to Phase III controls could not use the higher prices on their own production as a basis for increasing product prices.

2. *August 20, 1973:* At the beginning of Phase IV, a 35 cents per barrel increase in crude price was permitted, which was passed on to product prices.

3. *Fall, 1973:* Beginning in September, certain categories of oil were released from price control regulations, and in November oil from stripper wells was exempted by legislation. The price for this so-called "new," "released" and "stripper" oil rose steadily as the alternate cost of competitive foreign crudes rose. By the end of December, this oil sold for $10 per barrel as compared to $5.35 per barrel for "old" oil. This two-tier price system for domestic crude oil has resulted in prices for uncontrolled oil far above levels that could be sustained in a rational market and has introduced many distortions in domestic crude operations. The effect on 1973 income was not significant, however, because most of the increases in price and in exempted volumes in 1973 occurred during the last quarter, but were not fully reflected in product prices until 1974.

4. *December 19, 1973:* The Cost of Living Council permitted a $1.00 per barrel increase in crude prices late in December. This increase, however, had no effect on 1973 product prices since it could not be reflected in product prices until 1974.

The permitted increases in domestic crude prices are helping profits. Whether or not these are "windfall profits" bears closer examination.

Even the term "windfall profits" means different things to different people, depending on one's point of view. If a homeowner has to sell a house he bought

for $10,000 twenty years ago at $30,000 in today's market, some might say he had a windfall profit. But he doesn't think so—for he must replace it, and a similar house will cost him $30,000 or more. The government doesn't think so either and consequently, the homeowner isn't taxed on his "windfall profit" if another house is purchased within a year. Oil companies have a similar problem. To stay in business, companies must replace reserves being produced today at much higher costs. In this context, then, the term "windfall profit" is hardly applicable.

Wholesale petroleum product prices have risen significantly over the past year under the pressure of higher crude costs. There has, however, been some overstatement of the magnitude of these increases which, in turn, has caused many to believe that oil companies have been taking advantage of the public.

The Bureau of Labor Statistics has recently reported that the refined petroleum component of the Wholesale Prive Index increased 125 percent in 1973. While this index is quoted as an indicator of the general level of wholesale prices in the U.S. for petroleum, it more accurately reflects spot market transactions. During 1973 these consisted primarily of sales of high-priced imported oil products. In other words, quotations on a small portion of the market have been assumed to apply to the whole market. The BLS has recognized the problems with this index and is working to correct the situation.

In our own case, Exxon's wholesale prices went up significantly less than the BLS index would indicate. For product which we supply primarily from domestic sources such as motor gasoline and home heating oil, the 1973 increases were 21 percent and 41 percent, respectively, not in line with the 125 percent overall price increase as reported by the BLS. On one product, residual fuel oil, which is supplied almost entirely by imports, our wholesale price did increase by over 90 percent in 1973, reflecting higher foreign prices.

Wholesale price increases have varied from company to company, largely as a function of an individual's company's level of reliance on imported supplies and uncontrolled domestic crude. This same factor has resulted in regional price distortions. For example, the northeast states are experiencing very high heating oil prices. This region is supplied to a very great extent by independent resellers who, when foreign oil was much cheaper than domestic oil, petitioner for and received special imports rights. Increasingly, these individuals based their business on imported oil, and this made them vrey price competitive. However, under current circumstances, their prices are well above those of Exxon and many other companies, and the northeast states are experiencing higher average prices than the nation as a whole.

CAPITAL EXPENDITURES

Let me now turn from profits and prices and address the uses to which we at Exxon have put the earnings realized over the past ten years. An analysis of the Company's performance indicates our wilingness to fund all available investment opportunities indicated to be economically attractive.

As Exhibit 6 shows, annual capital and exploration expenditures have ranged from one-half to one billion dollars. The large year-to-year variations are related principally to the amounts spent for purchase of new leases offshore. While our success in competing for the leases offered had in effect, the most important factor affecting the level of expenditures was the amount of acreage offered for lease by the federal government. Exxon's total expenditures shown for the period amounted to $7.0 billion. Over 60 percent of this was spent in finding new reserves and developing additional productive capacity, as shown in the shaded part of the bars on the chart.

The tax benefits realized from the depletion allowance are shown in the solid line. Each year's exploration and production expenditures exceed the tax benefits of depletion by a wide margin. For the period, the amount reinvested is 320 percent of the taxes saved.

During this period both Exxon and the petroleum industry converted from a traditional principal reliance on internally generated funds for financing investments to raising increasing portions of their needs externally. From the end of 1964 until the end of 1973, long-term debt for Exxon Corporation tripled from $850 million to about $2.6 billion, and the rate of divided payout decreased from 67 percent of earnings to 39 percent. Thus, even with increased retained earnings and a Rights Offering to shareholders in 1970 which brought $376 million in equity capital to the Corporation, massive amounts of new debt were necessary. Both the domestic and foreign sides of the business showed the strain of an earnings growth lower than capital expenditures growth. The continuation of

increasing capital requirements, inflating working capital needs, increasing debt and debt service burden, and a decreasing rate of dividend payout to shareholders without an adequate growth in profitability is not a viable situation for the Corporation. As the reply to Question 6 indicates, it will be necessary for the petroleum industry to generate higher returns if it is to attract the new capital necessary for it to make the investments needed to meet future demand for products.

As our answer to Question 9 shows, foreign earnings, depreciation, and offshore debt increases, taken together, were more than sufficient to fully finance new foreign capital expenditures and other investments. The portion of earnings from abroad which were in excess of those reinvested contributed to Exxon's available resources for general corporate purposes.

Thus, the difficulties in raising sufficient funds to meet our future capital requirements cannot be solved by cutting off or purposely burdening foreign operations. To the contrary, actions taken which lessen our ability to compete abroad or otherwise limit foreign investment could conceivably reduce the funds available for investment in the U.S. For example, the stream of foreign earnings contributes to the factors by which the capital markets view the amount and quality of new corporate debt. We see no conflict between this country's interests and our role as a multi-national company. Our interests abroad and the future energy needs of this country do not present conflicting proiritles. As we have discussed on any number of occasions, the major factors affecting Exxon's level of expenditures in the U.S. are the actions and policies of the U.S. government.

FACTORS LIMITING EXPENDITURES

Perhaps the most important point which I can make regarding the expenditure levels shown on Exhibit 6 is that they are not as high as we would have preferred, particularly in the later years. During this period the petroleum industry has been subjected to short-sighted and uncoordinated governmental policies which significantly impacted the investment plans of all petroleum companies including Exxon.

Exploration and development of new offshore reserves was severely delayed by the government's limiting the number and size of lease sales. During this period Exxon was strongly urging an accelerated leasing schedule and was prepared to spend the money necessary to purchase and develop an appropriate share of the acreage offered. What actually happened, however, is that environmental concerns and other government policies retarded leasing, with only one general lease sale being held between May 1968 and September 1972, a period of over 50 months. It is impossible to determine how much more we would have spent in recent years if leases had been offered, but no doubt it would have been substantial. For example, in December of last year we spent $344 million at one lease sale alone. This sale was one of several held in the past year or so and part of the Administration's new program to greatly accelerate leasing.

Environmental delays have also been a major factor affecting other recent investment plans. If the Alaska pipeline and drilling in the Santa Barbara Channel had been allowed to proceed on the basis of original schedules, we estimate that Exxon would have spent some $800–900 million on these two projects alone over the past four or so years. The Alaska pipeline is now moving ahead after years of delay, having finally been freed from legal-environmental entanglements by Congressional action. Also, we have some encouragement that resumption of drilling and development off Santa Barbara will be permitted shortly.

U.S. refining capacity grew at a rate of 4.3 percent per year from 1966 through 1972. Nevertheless, uncertainties created by the administration of the Mandatory Oil Import Program, particularly regarding crude versus product imports, inhibited decisions to construct major new refineries in the critical years of the late 1960's and early 1970's. These were reinforced by rapidly changing environmental regulations affecting refinery siting, design, and operation. Again, it is encouraging to note recent government actions which have been an important factor in announced industry plans to expand domestic refinery capacity.

Many factors which bear on Exxon's and other oil companies' investment planning are largely beyond our control. As the examples chosen amply represent, there is a critical need for coordinated government policies which balance other priorities with this nation's energy objectives.

U.S. ENERGY OUTLOOK

Now let me turn to the future. I would first like to discuss the long-term outlook for energy supply and demand in the U.S. and then look at the physical and financial needs this will impose upon the petroleum industry and Exxon.

As you know, in both the world and in this country fundamental changes are under way in the energy situation. While we are painfully aware of the current oil supply problems in the United States, and of recent dramatic increases in the cost of foreign oil, we hope that at least some of the elements in the current situation—particularly the oil embargo by certain Middle East producing nations—are temporary. Nonetheless, important basic changes are occurring in the ability of the United States to meet its energy needs, in the willingness of the Middle East oil-producing nations to increase production sufficiently to meet the world's growing demands for their resources, and in the cost of energy to all nations.

Thus, the United States faces higher energy costs for many years ahead. This will impose substantial social and economic adjustments on our country, which has traditionally enjoyed abundant and relatively cheap energy. Although serious efforts to conserve energy and to use it more efficiently may be expected to have an important impact, it is clear that major efforts are needed to develop additional energy supplies. But there are physical, technological, regulatory, and environmental constraints on the rate of development of new energy supplies, especially for the next ten to fifteen years.

Nuclear power is growing rapidly but is constrained by regulatory delays and construction limitations. Coal usage is limited by environmental problems associated with both its production and consumption. Long lead times will be involved in building up significant volumes of production of synthetic fuels from coal and oil shale. New energy sources such as solar and fusion power will not make a significant contribution until the next century.

Inevitably, the nation's dependence on foreign areas—including a number of Middle East oil-producing nations—to meet its energy needs will continue for some years to come. However, some of the Middle East oil-producing countries may not view their long-run economic interests as being served by continuously increasing production to meet growing energy demands. They are naturally interested in using the income from their oil resources to establish a solid foundation for their own economic growth, but in view of their limited capital needs, may be inclined to stretch out the life of their resources in order to maximize the flow of income over time. Thus, concern about future access to adequate energy supplies has led some consuming nations of Western Europe and Japan to embark on a competitive scramble for bilateral trade agreements with oil-producing nations to provide for future oil supplies.

Beyond these uncertainties, the role of the private international oil companies is changing. First, most of the OPCE governments are now in partnership with the international companies in producing operations; nonetheless, the private companies will play a significant role in producing operations for some time to come. Second, price and production volume decisions no longer seem to be a subject for negotiation, but are largely determined by the OPEC producing governments alone. To some extent, price and production volume decisions are also becoming a matter for political resolution among producing and consuming governments. Finally, the growing cost of oil imports by consuming nations will result in massive income transfers to the Middle East oil-producing nations, and the necessary adjustments in national balances of payments and in international currency relationships could severely threaten the smooth functioning of our international monetary system. It has been estimated that by 1985 the oil-producing nations will have more than $600 billion of investable surplus funds seeking secure outlets abroad, even if these countries dramatically increase their own development programs.

It is clear that the U.S. will need to rely heavily on its own domestic petroleum resources. Unfortunately, while demand for petroleum is rising, the trends in domestic production of oil and gas are downward. Excluding discoveries on the North Slope of Alaska which have not yet been made available for use, production of crude oil has exceeded additions to reserves every year since 1966. A similar trend has occurred in natural gas since 1967. As a result, production of both oil and gas has peaked and is now declining. By 1985, U.S. production of oil and gas from existing proved reserves will have declined to less than half the current production rates. Major new oil and gas development programs will be needed, therefore, if these energy sources are to fulfill their share of U.S. energy needs in future years. Technical experts generally agree that this country

has a substantial resource base; the future potential for both oil and gas is believed greater than the total amount discovered to date. Exploration and development of these supply resources must be accelerated in order to meet future energy needs.

To hold production at about today's levels from now through 1985, the petroleum industry will have to drill a total of about 325,000 new oil and gas wells. About 130,000 miles of new pipelines will be needed to transport the oil and gas produced from new discoveries. Increases in refining capacity averaging over 500 thousand barrels per day will be needed each year over this period to convert crude oil into the products needed by the nation's consumers.

The cost of finding, developing, transporting, and refining petroleum supplies is rising yearly. Increasingly, the search for oil and gas is being carried into more difficult and costly areas, such as the Arctic, offshore waters, and deeper inland wells. Public demands for environmental cleanliness are also adding to the cost of producing, refining, and distributing petroleum products. And finally, the cost of simply replacing equipment which was originally installed 15 or 20 years ago has increased tremendously as a result of inflationary trends in the nation's economy. Over the past 15 years, refinery construction material costs have gone up by 42 percent and construction labor wage rates have increased by 165 percent. Just since 1970, the cost of oil field tubular goods has increased 25 percent; steel line pipe, 49 percent; and offshore platforms, 72 percent.

FUTURE CAPITAL NEEDS

The petroleum industry's future capital requirements in the United States are estimated at two to three times the annual levels of the past decade. A recent study by the First National Bank of Chicago indicates that through 1985 petroleum industry expenditures will be some $250 billion; financing this requirement is estimated to require net income growth of 15–21 percent per year. In an era of expanding capital requirements on the part of all industry, petroleum companies such as Exxon will no doubt be challenged to remain competitive in attracting funds from investors. Our ability to do so is, of course, highly influenced by the results which the investment community expects we will achieve and, also, by the degree of risk or uncertainty with which the petroleum industry is viewed.

With regard to Exxon's U.S. petroleum operations specifically, it must be recognized that we are part of a multi-national corporation involved in producing many forms of energy and petroleum-based products. The Corporation's ability to attract funds is a function both of its domestic and foreign return levels and of the stability which characterizes these returns.

Over the next four years, a period for which our plans are fairly well developed, Exxon Company, U.S.A. anticipates capital spending of about $6 billion in the U.S. This assumes that external factors, such as facility siting delays because of environmental concerns, do not limit our investment opportunities. While Exxon's longer term expenditure levels are more indefinite, they will be up considerably over the past.

This projection for Exxon, as well as that which I mentioned previously for industry, suggests that we will be severely tested in meeting future financial requirements, particularly when considered in light of similar increases in spending requirements for other industries.

As regards the overall petroleum industry, one must certainly question its ability to attract the required amount of capital if historic return levels do not increase significantly over historic levels. In my judgment, even the 1973 return levels may be low, particularly when viewed in perspective of the forward need for capital.

GOVERNMENT/INDUSTRY ROLES

If the private sector is to generate the necessary capital, petroleum earnings must begin at 1973 levels and grow from there at a healthy rate. Private companies do possess the technical and organizational abilities to explore for and develop needed energy resources, and to conduct research to improve those abilities. Furthermore, the private sector has demonstrated its willingness to risk capital to increase supplies of energy wherever private companies have been given access to the land areas required in connection with energy development. In view of these factors, we are firmly convinced that the private sector can and should be relied upon to make the investments required to increase the nation's energy supplies.

It must be recognized that government has the key role in solving the energy crisis. Truly, a national consensus will be required to do the job ahead, both regarding energy resource development and energy conservation.

NATIONAL OBJECTIVES AND TAX AND PRICE POLICIES

Exxon for some time has urged that the United States establish a series of comprehensive objectives for energy. Such objectives would be helpful to all in that they would describe the direction in which the nation should be heading. As a case in point, we support the President's proposed objective that the United States move rapidly toward an acceptable level of self-sufficiency in energy.

The accomplishment of the nation's energy objectives will require that it orient all national policy affecting energy toward that same end. New policies concerning such matters as energy conservation and efficient use will be required. Equally important, existing policies will require reexamination. In this connection, it is of the utmost importance that national tax and price policies affecting energy support the accomplishment of the country's energy objectives.

The existing body of tax and price policies concerning energy contains numerous elements. Some, such as price controls, are of recent origin and were designed to address specific short-term and hopefully temporary problems. Others, such as percentage depletion for mineral resources and other tax provisions, have been in existence for many years and were designed to serve long-term national purposes. We believe that these tax provisions have been of benefit to the country.

However, in today's circumstances of major change, we believe it appropriate that national tax and price policies affecting energy be reexamined. It is not clear that the body of policy that exists today is suitable, either to today's needs or the needs of the future. Many proposals for change in national tax and price policy have been advanced and undoubtedly more will be forthcoming. It is our view that the merits of any individual proposal can be determined only if it is examined in the context of national tax and price policy in total and, in the process, tested for consistency with the country's long-term objectives for energy. Unless such a procedure is followed, there will be considerable risk that forthcoming actions will be detrimental to the national interest.

Therefore, we believe that a comprehensive, rather than piecemeal, approach is critically needed at this time. And it is imperative that such an approach give full recognition to the unprecedented expenditures of private capital which will be required to develop new energy supplies if national objectives for energy are to be achieved.

The U.S. is presently in a very difficult energy situation. The country is today experiencing actual shortages of energy, and the effects of these shortages are already being reflected in announced lay-offs and rising prices. Under these circumstances, Exxon believes that no individual segment of society, including the petroleum industry, should benefit at the expense of others. It is government's responsibility to see that this does not occur.

On the other hand, excessively stringent price controls or other measures which may appear to benefit the consumer in the short run may be detrimental to his interests in the long run. An appropriate balance between these conflicting interests will be necessary.

Exxon supports the removal of price controls as soon as practicable. In the long term, a new energy supply/demand equilibrium can be established more efficiently by market forces than by government intervention and regulation. Higher prices would dampen demand by eliminating noneconomic uses of energy and, at the same time, provide both the incentive and means to increase energy supplies.

On the other hand, Exxon recognizes that domestic crude oil prices, if allowed to rise overnight to levels typified by recent auctions of small volumes of foreign government-owned crude, would result in profits on the part of domestic producers so large that they would be clearly unacceptable to the public.

We recognize that price ceilings on energy raw materials must be provisionally accepted—but only so long as international supply/demand balancing mechanisms cannot function efficiently. Today's crude oil price controls, however, have some serious defects. In the first place, legislative action in connection with the Alaskan pipeline late last year granted exemption to so-called "stripper" oil production. Second, in the desire to encourage additional production, no ceilings were set on "new" and "released" crude. As a result, "old crude prices have been held at levels significantly below those which have evolved for "new," "re-

leased" and "stripper" oil. This two-tier system has disrupted crude markets and introduced many distortions in domestic operations.

In our judgment prices for uncontrolled "new," "released" and "stripper" oil have reached levels above those that would obtain if international markets were functioning in a more normal fashion. And the longer these two major segments of domestic crude oil supply are subject to completely different price treatment, the larger the distortions will become and the more difficult it will be to take the remedial action which will be required sooner or later.

Actions need to be taken immediately to end the two-tier crude oil price system. Legislative action is needed to solve the "stripper oil" problem. All crude oil should then be put under a single price ceiling structure which alows for variances in crude oil quality and transportation differences. Some averaging of currently existing prices for oil in various classifications—old, new, released and stripper—would be an appropriate way to establish the ceiling on all crude oil. This should provide sufficient incentive for now to accelerate efforts to develop other energy resources.

Government and the public must recognize that it will be necessary for energy prices to rise to market clearing levels for new energy sources, such as synthetics from coal and shale. Higher prices will also provide the cash flow and incentives for expanded exploration for oil and gas in new geologic provinces. Ceiling prices on crude oil should therefore be allowed to rise in the future until it is clear that prices are sufficient to bring forth the supplies needed to achieve domestic self-sufficiency within an acceptable period of time. Ceilings would also have to be adjusted to account for the effects of increasing costs and any changes to tax burden if the ability of petroleum companies to generate and raise needed capital is not to be impaired.

In the long run, we believe that the interests of the nation are best served by relying on market forces to bring about a balance between supply and demand. Our problem concerns the transitional period—which we hope will not be to drawn out—starting from today's price arrangements deriving from near-panic auction buying abroad and a two-tier system at home.

In the interest of the consumer, we believe that price ceilings, or margin controls, in the refining, distribution and marketing segments of the industry will continue to be appropriate in the near future—and compliance should be vigorously enforced. At the same time, however, controls must be administered so that each segment of the industry will be able to continue to expand operations as needed while avoiding distortions of normal market forces to the maximum extent possible. The petroleum industry is highly competitive and consists of literally tens of thousands of participants active in various segments of the business. It is essential that the combination of government allocation and rationing programs and price controls utilized to cope with the present energy problems work to preserve the competitive character of the industry and seek to avoid disadvantaging any segment of the business.

PENDING LEGISLATIVE PROPOSALS

Numerous alternative measures have been proposed in recent weeks to prevent so-called "windfall" profits from occurring. Several of these have been directed primarily toward domestic petroleum operations, and I would like to comment briefly on them at this time.

S. 2885, the proposed price rollback amendment to the Emergency Petroleum Allocation Act of 1973, has a number of shortcomings. This bill does not acknowledge the distortions which have been created by the two-tier crude price system, and does not require that it be ended. While S. 2885 recognizes that legislation is needed to correct the existing problems related to "stripper" oil, we believe it patently unsound to legislate commodity prices as this measure would do.

The Administration's proposed Emergency Windfall Profits Tax would basically be an excise tax on production. This new tax would be very complex, particularly if the two-tier price system is retained. In itself, the Administration's proposal would appear to be a revenue raising device and therefore would not protect the consumer from even higher prices. It does not recognize the need to control prices until shortages are no longer a critical problem. It would be viewed by some as a punitive tax against the industry at the very time that more productive effort is needed.

A number of excess profits taxes have been proposed. This Committee has already heard testimony on excess profits taxes in previous hearings, so I will make only very brief comments. Excess profits taxes are inherently inequitable

and impractical to administer. More fundamentally, no one to my knowledge has been able to develop an adequate definition of excess profits. Furthermore, high incremental tax rates would tend to encourage inefficiency at a time when inflation is a major national problem. In the final analysis, any tax proposals which address profits must be applicable to all industries, not just petroleum, since as we have shown, the profit performance of the petroleum industry is consistent with the general improvement in business profits.

SUMMARY

I would now like to summarize briefly the comments I have made.

Exxon's earnings on U.S. petroleum operations increased 16 percent in 1973 over 1972, roughly in line with the 14 percent increase in sales which resulted from our efforts to meet U.S. demand growth. Over the past ten years, Exxon's growth in earnings on both domestic and worldwide operations has been in the 11 percent range, well in line with other manufacturing companies.

After declining for many years on a constant dollar basis, retail prices for gasoline and home heating oil began to move upward during the last half of 1973, due mainly to the dramatic increases in value placed by foreign producing governments on crude oil exports to the U.S. These increases in producing government takes have been passed through to the U.S. market in accordance with existing price control regulations, and they must be paid if the consumer is to have the product.

Over the past ten years, Exxon's total capital and exploration expenditures for petroleum operations in the United States have amounted to $7.0 billion. Over 60 percent of our expenditures went toward finding new reserves and developing additional productive capacity. Total expenditures for exploration and production during this period were over three times as great as the taxes saved due to depletion benefits. We would have preferred to increase our expenditures, but access to new offshore oil and gas reserves was severely delayed by government limitations on the number and size of lease sales. In addition, investments in the Alaskan pipeline and for drilling in the Santa Barbara Channel were delayed by environmental considerations. Uncertainties in the administration of the imports program inhibited decisions to construct new refineries from 1968–1972.

Exxon's foreign operations have in no way been detrimental to our ability to make investments in the U.S. Our interests abroad and the future energy needs of this country do not present conflicting priorities. While this nation certainly needs more effort directed toward increasing its energy-producing capacity, these investments must be attractive in themselves, or they will not occur.

Exxon's capital needs are increasing substantially. Over the next four years, a period in which our capital spending plans are fairly well developed, we anticipate spending about $6 billion in the U.S., an amount nearly equal to our expenditures over the last ten years. We will be severely tested in meeting our future financial needs.

Government has the key role to play in establishing the environment necessary to allow private companies to attract the required amounts of capital funds. It is of the utmost importance that national tax and price policies affecting energy be consistent with the country's energy objectives.

We believe it appropriate that the existing body of tax and price policies affecting energy be re-examined. This would be accomplished through a comprehensive, rather than piecemeal, approach, giving full recognition to the unprecedented need for private capital which will be required to develop new energy supplies.

Exxon supports the removal of price controls as soon as practicable. However, we recognize that price ceilings on energy raw materials must be accepted—but only so long as international supply/demand balancing mechanisms cannot function efficiently.

Today's crude oil price controls, however, have some serious defects. Actions need to be taken immediately to end the two-tier crude oil price system. All crude oil should be put under a single price ceiling structure which provides sufficient incentives for efforts to accelerate the development of other energy resources. Ceiling prices on crude oil should be allowed at levels sufficient to bring forth the supplies needed to achieve domestic policy objectives within an acceptable period of time. In the long run, the interests of the nation are best served, we believe, by relying on market forces to bring about a balance between supply and demand.

Tax policy affecting the petroleum industry needs to be consistent with national objectives for energy and fiscal policy affecting all business. Excess profits tax proposals, the Administration's tax proposal, and the crude price rollback amendment S. 2885 are all inconsistent or inappropriate measures at a time when the urgent need is for increased effort to develop the nation's energy resources.

EXHIBIT 1

Earnings Growth—1964–1973

Industry [1] *and company*	*Percent*
Petroleum	9.8
Other manufacturing	8.6
Office equipment and computers	14.8
Drugs	11.8
Aircraft	11.8
Printing and publishing	9.8
Auto	6.0
Steel	2.1
Exxon Corp.	10.9
Exxon (U.S. petroleum)	11.1
Xerox	28.9
IBM	15.5
Eli Lilly	19.8
McDonnell-Douglas	18.7
New York Times	17.0
General Motors	8.7
United States Steel	3.6

[1] First National City Bank of New York ; 9 months 1973.

EXHIBIT 2

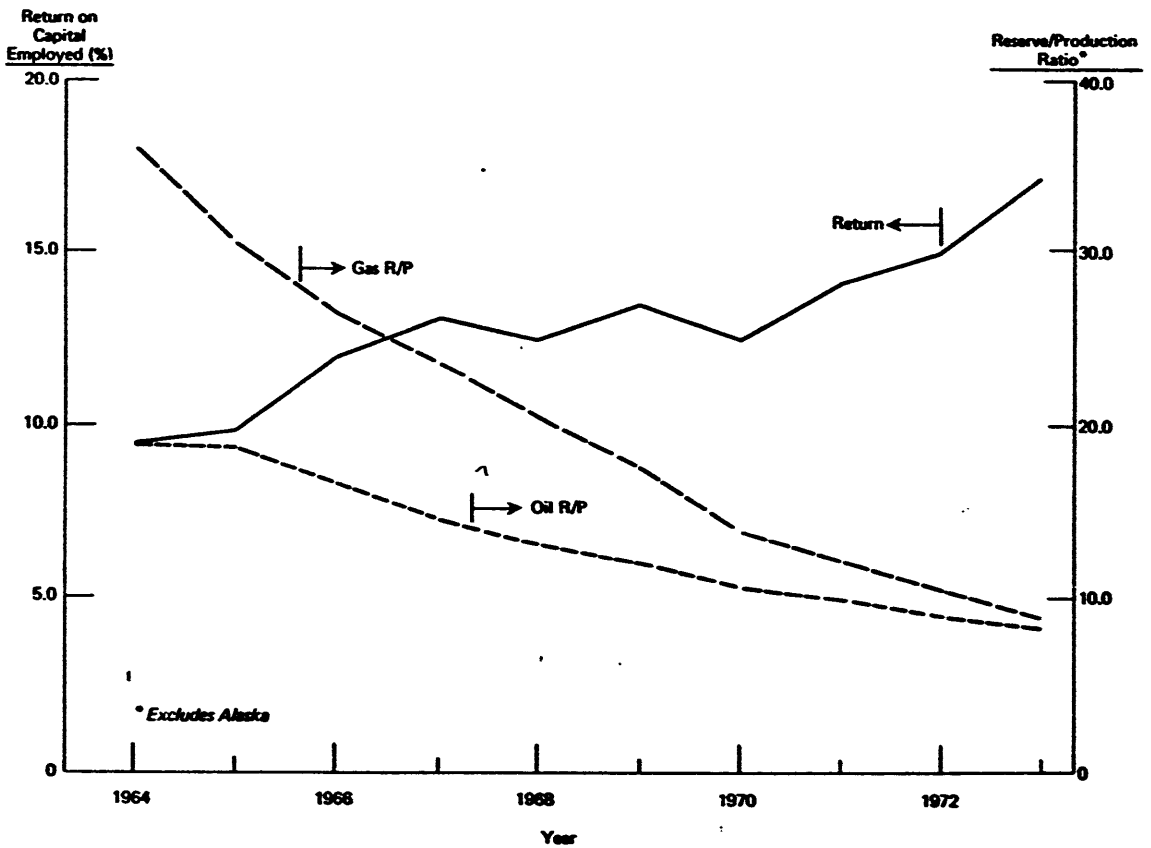
RETURN ON CAPITAL EMPLOYED (PERCENT) SELECTED COMPANIES

	1972	1973
Exxon Corp.	10.8	15.5
Exxon (U.S. Petroleum)	15.0	17.2
Eli Lilly	20.6	[1] 23.9
Zerox	18.4	[1] 9.1
General Motors	16.5	[1] 20.3
IBM	16.2	[1] 17.8
Net York Times	10.6	[1] 14.9
McDonnell-Douglas	11.2	[1] 11.1
United States Steel	4.3	[1] 5.9

[1] Forbes—4th quarter 1972, 9 months 1973.

Exhibit 3

RETURN ON CAPITAL EMPLOYED AND RESERVE/PRODUCTION TRENDS
EXXON (U.S. PETROLEUM)



EARNINGS TO REVENUE RATIO

Exhibit 4

EXXON (U.S. PETROLEUM)

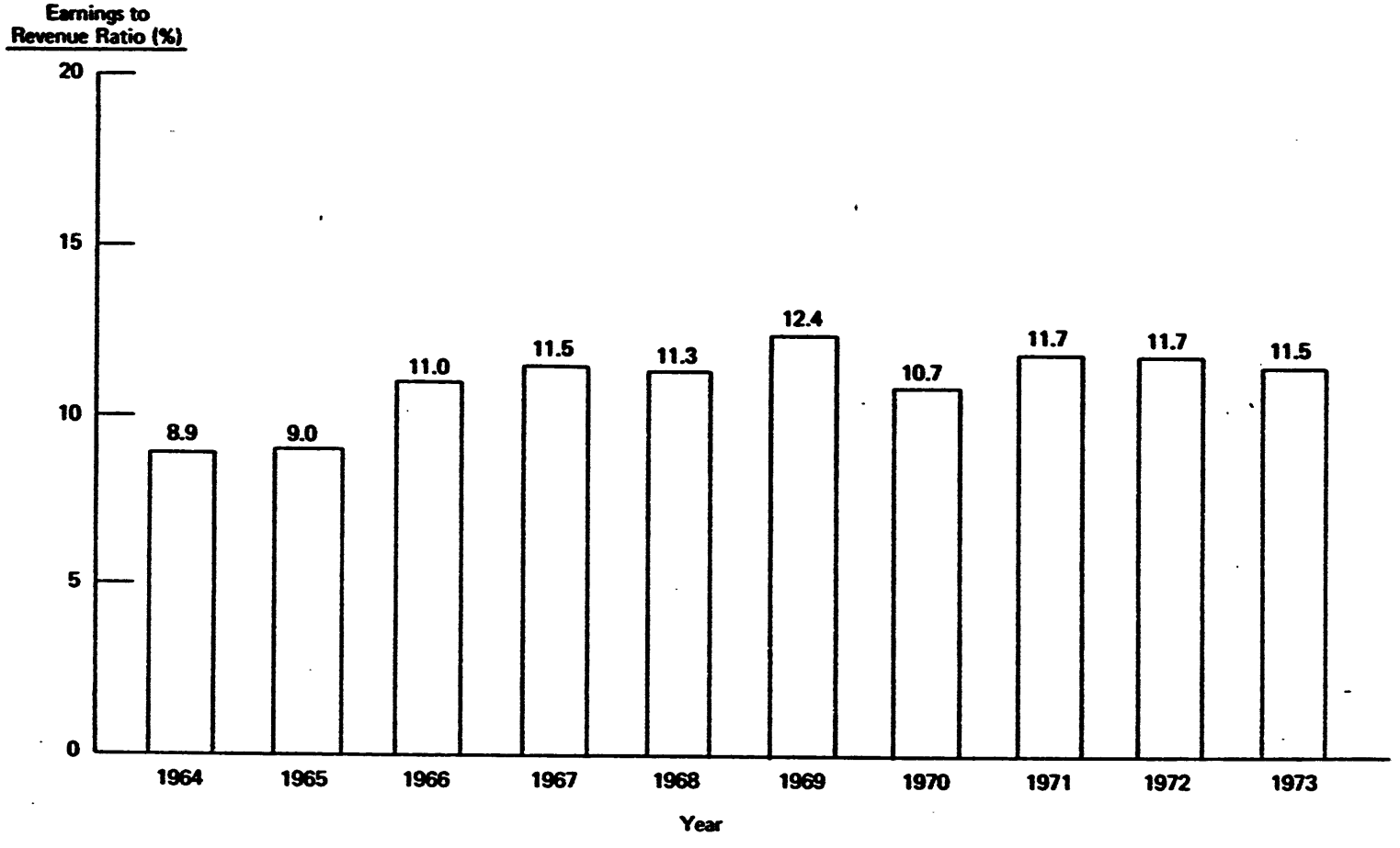
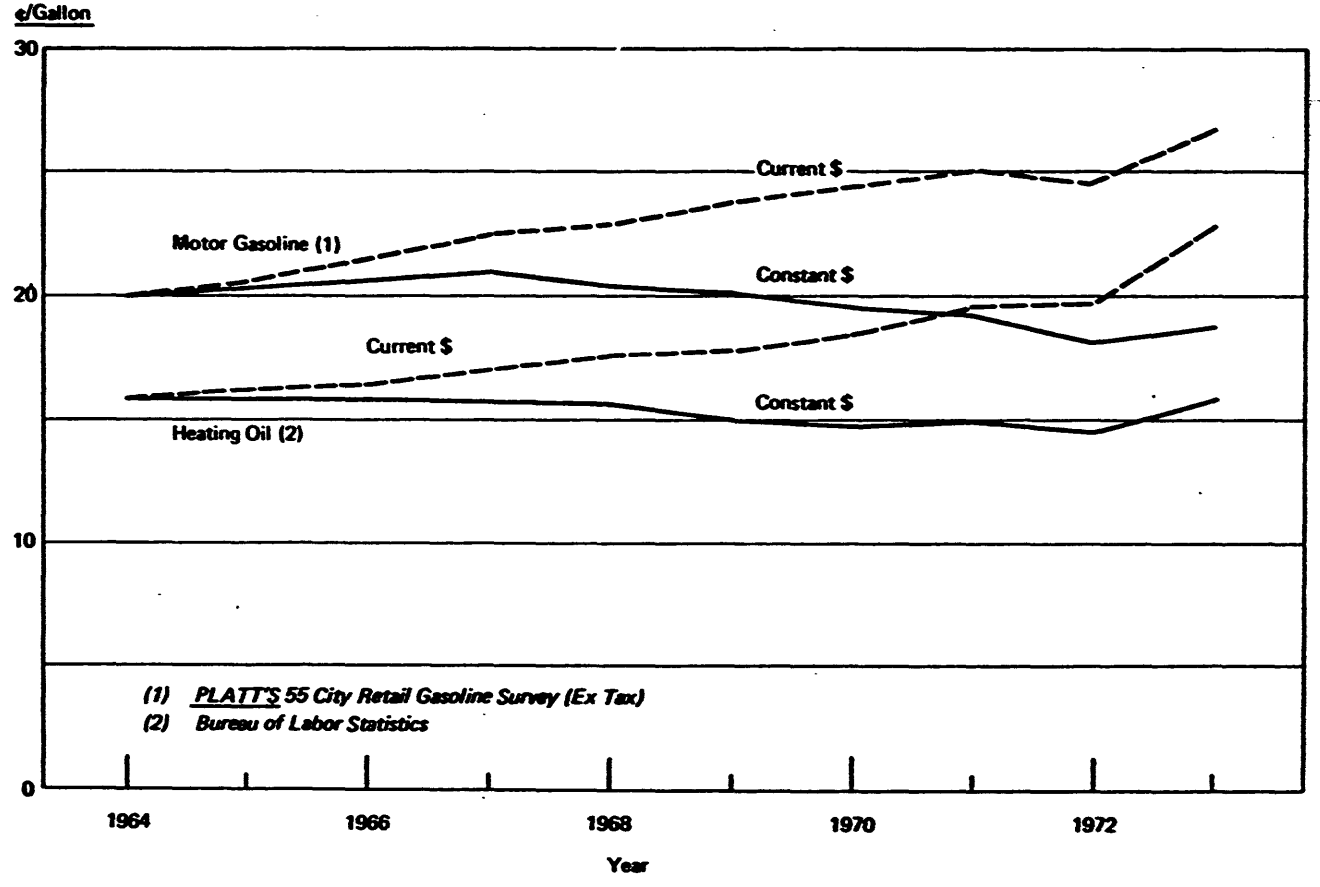


Exhibit 5

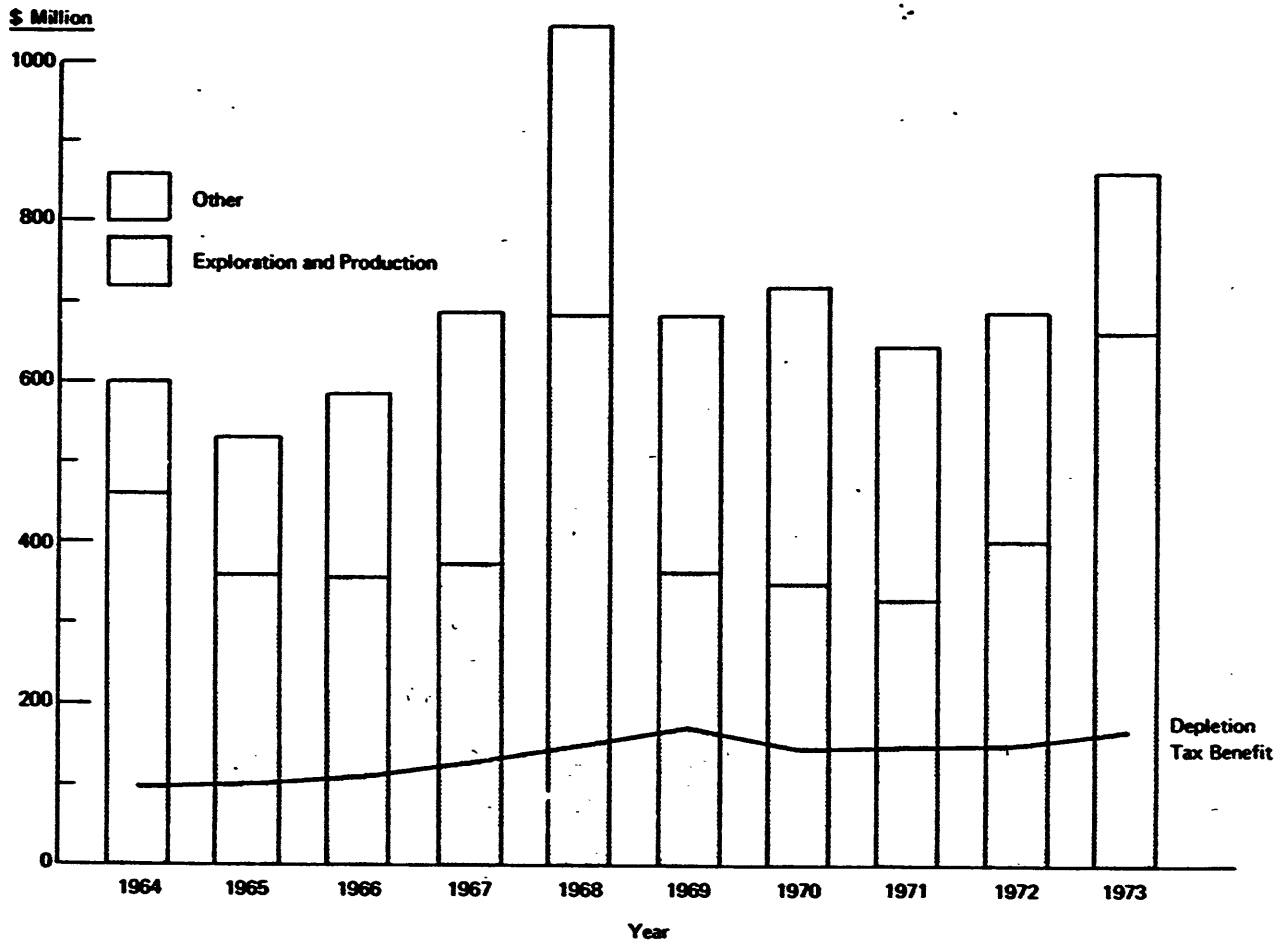
U.S. RETAIL PRODUCT PRICES
(ANNUAL AVERAGE)



TOTAL CAPITAL AND EXPLORATION EXPENDITURES

Exhibit 6

EXXON (U.S. PETROLEUM)



APPENDIX A

ANSWERS TO SENATE FINANCE COMMITTEE QUESTIONS, EXXON CO., U.S.A.

Question No. 1. What was the overall rate of return, after taxes, which your company realized on stockholders' investment devoted to exploration, development, production, manufacturing, transportation and marketing of petroleum products in the United States?

SELECTED RETURN CALCULATIONS

[In percent]

Year	Exxon Corp.		U.S. petroleum operations	
	Stockholders equity	Total assets	Capital employed (including borrowing)	Total assets
1964	11.7	7.7	9.5	8.1
1965	11.5	7.5	9.9	8.4
1966	12.0	7.7	12.0	10.1
1967	12.6	7.9	13.1	11.0
1968	13.3	7.9	12.5	10.4
1969	12.5	7.2	13.5	11.2
1970	12.4	7.1	12.5	10.1
1971	13.5	7.7	14.1	11.3
1972	12.8	7.3	15.0	11.4
1973	18.8	10.4	17.2	12.4

Note: Return on stockholders' investment for U.S. petroleum business is not calculated since Exxon Co., U.S.A., principal domestic operating company for Exxon Corp's petroleum business, is a division rather than a separate corporate entity.

(*a*) Where applicable, please give the source of this information. The primary source of this information is the records of Exxon Company, U.S.A. and published information released by the Exxon Corporation.

(*b*) Are these figures for U.S. operations different from the figures used in preparing the reports to stockholders and information provided the Federal Trade Commission for purposes of preparing its Rates of Return in Selected Manufacturing Industries? If so, please explain.

The data submitted in response to Question 1 are consistent with results reported to stockholders and the Federal Trade Commission for U.S. operations except for the exclusion in this response of amounts applicable to non-petroleum or non-U.S. operations.

(*c*) How does the rate of return on U.S. petroleum investment, as described above, compare with your rate of return on other investments?

Exxon Corporation, through its domestic operating company Exxon Company, U.S.A., is engaging in coal, uranium and land activities. However, these activities, in the aggregate, account for less than five percent of Exxon Company, U.S.A.'s assets and earnings. In addition, Exxon Corporation handles its domestic chemicals business through Exxon Chemical Company, U.S.A. 1978 chemicals returns were comparable to petroleum returns, but were lower in years prior to 1978.

Question No. 2. What is the rate of profitability to sales? To taxes, other than excise taxes? To labor costs? To total investment, including borrowed capital?

Year	Petroleum net income as percent of—			
	Sales	Taxes (excluding excise)	Labor costs [1]	Total investment (including borrowing)
1964	8.9	185.0	87.6	9.5
1965	9.0	167.2	94.6	9.9
1966	11.0	160.3	123.3	12.0
1967	11.5	154.7	135.2	13.1
1968	11.3	147.0	138.3	12.5
1969	12.4	148.6	152.9	13.5
1970	10.7	127.8	135.2	12.5
1971	11.7	141.7	150.0	14.1
1972	11.7	144.6	151.5	15.0
1973	11.5	137.1	167.7	17.2

[1] Manning levels were reduced 15 percent during 1964–73 period due to efficiency improvements and higher investment levels, while volumes grew substantially during this period.

Question No. 3. What is the total of exploration expense and capital investment in petroleum assets, in dollars, year by year, and as a percentage of the sum of (a) earnings (after taxes and dividends) and (b) exploration items which were expense? Please indicate whether this table is based on income for tax purposes or for financial book purposes.

Year	Amount (millions)	Percent of earnings (after taxes and dividends) plus exploration expenses
1964	601	231.2
1965	529	207.5
1966	585	206.9
1967	688	221.7
1968	1,044	316.6
1969	683	198.8
1970	719	214.7
1971	642	161.6
1972	689	159.1
1973	863	140.2

Notes: Above table is based on income for financial book purposes.
Exxon Corp.'s dividends as percent of earnings, were lower in 1971–73 than during 1964–70 period, thus reducing percentage shown in right hand column. If dividends were at earlier rate of earnings (or 65 percent) in 1971–73, percentage would have been:

	Percent of earnings (after taxes and dividends) plus exploration expense
1971	190.5
1972	188.4
1973	216.3

Question No. 4. Provide information as to the dollar amount of petroleum earnings paid out in dividends during the applicable period and show dividends paid as a percent of U.S. petroleum earnings. Assume dividends are payable out of U.S. petroleum earnings in the same ratio as U.S. petroleum earnings are to total earnings.

Year	Amount (millions)	Dividends as percent of earnings	Year	Amount (millions)	Dividends as percent of earnings
1964	$218	67.4	1969	404	64.9
1965	243	69.8	1970	373	63.5
1966	294	67.4	1971	379	56.1
1967	324	64.3	1972	398	55.6
1968	327	61.5	1973	325	39.0

Question No. 5. Fourth Quarter—1973 Earnings and Retail Prices. Please provide an explanation for any increase in U.S. fourth quarter 1973 earnings over earlier fourth quarter earnings. In this connection, it would be helpful if the explanation were to include an estimate of the proportion of increase attributable to (a) normal growth in sales, (b) inflation, (c) absence of soft markets due to shortages, (d) increase in ceiling price of domestic crude, and (e) any other factor increasing profit margin. To what extent are higher gasoline prices at the pump in the fourth quarter attributable to increases in cost reflected in the dealer tankwagon prices (explain the source of increase in costs)? To increases in profit reflected in dealer tankwagon prices? To increases in the retail margin (differentiate between company controlled retailers and independent retailers)?

Fourth quarter 1973 U.S. petroleum earnings were 15 percent above the fourth quarter 1972. The growth rate for the fourth quarter was slightly below the full-year growth rate of 16 percent. The major reasons for fourth quarter improvement were higher refinery operating levels and petroleum product sales and lower marketing expenses. Petroleum product prices were higher and prices on motor gasoline to dealers average 2½ cents/gallon above the last quarter in 1972. However, all the additional revenue due to higher prices for petroleum products were offset by increased costs for purchases of crude and products.

With respect to prices on gasoline sold to dealers or at the pump of company-operated stations during the fourth quarter of 1973, all increases in price were directly related to cost pass-through provisions allowable under Phase IV. Prices to our dealers were increased by two cents per gallon between October 1, 1973, and December 31, 1973. Pump prices at our company-operated stations were increased by the same amount. There was no increase in profit in dealer tankwagon prices or in retail margin in company-operated stations. We do not have precise data on pump prices actually charged by our dealers.

Question No. 6. Provide an estimate of your capital requirements in the United States for the period 1974–85, (a) assuming your rate of return on U.S. operations was the same as your average rate of return for the period 1964–1973; and (b) assuming your rate of return was one and one-half times your average rate of return for 1964–73. Assume for this purpose that you will be able to borrow directly up to 25 percent of your financial needs and are able to use off-the-balance-sheet financing for 13 percent of your needs. What is your view as to the validity of such financing assumptions as applicable to the circumstances of your company?

This question recognizes the importance of the Company's levels of return in determining its ability to finance the capital projects which ti can undertake. The ability to attract investment funds is directly responsive to the expected returns and evaluation of the risk to which the industry and the individual company is exposed. The domestic operations of Exxon are part of a multi-national Corporation whose ability to attract funds is a function both of its domestic and foreign levels of return, and the stability which characterizes those returns.

In the 1964–1973 period, Exxon's domestic petroleum operations had a return which averaged 10.4 percent on total assets. The response to the question of what these return levels suggest for the future is affected by a number of factors. The debt level at which the Company can maintain its financial strength is certainly an important one. Exxon believes the assumptions given by this Committee are reasonable for the U.S. industry as a whole, although the direct borrowing ratio of 25 percent of financial needs is a bit high for Exxon Corporation while the off-balance-sheet factor of 13 percent of needs may be slightly low, taking into account tanker charters and foreign operations. Another important factor is the degree of risk which surrounds the operations of the industry and the individual company. The ability to raise funds at certain levels of return is directly related to the risk to which those funds are exposed. Should there be additional operating risks, such as those associated with deepwater drilling, or should the investment

climate for the industry deteriorate due to political actions, higher return levels would be necessary to attract funds into the industry. A third major factor which affects the ability to raise funds in the future is the increasing competition which we expect for funds. Historical return levels for the petroleum industry may, therefore, not be adequate to compete effectively in capital markets in the future.

A fourth factor is that the petroleum industry is embarking on an era characterized by investment projects with very long lead times which require considerably more investment per unit of energy output than conventional production and refining of the past. Exploration and production in deep water, pipeline construction through the Arctic environment, manufacture of synthetic gas and oil from coal all involve higher risks, greater commitments of capital and longer periods between when the capital is expended and returns begin to appear than traditional petroleum investments. It is, therefore, particularly important at this time that our basic business continue to earn sufficient returns so that we may undertake these major new and expensive projects.

We have divided the forecast period given us by the Committee into two parts, the period from 1974–1977 and the period from 1978–1985. During the first four years Exxon's projections, for an assumed U.S. petroleum company structured and operated along the lines of Exxon USA, incorporating the return and debt assumptions given by the Committee, show an ability to devote to capital projects something less than $5 billion. At return levels of 1.5 times the 1964–1973 average rate of return, this number would be in excess of $7 billion. Actually, Exxon USA's capital expenditures are planned to approximate $6.0 billion, somewhat in excess of levels which the average returns of the past ten years, coupled with the Committee's financing assumption, would indicate could be financed.

For the 1978–1985 period, Exxon's capital requirements are much less definite than those in the nearer term. Based on outside studies and Exxon USA's historical position within the industry, it is estimated that in excess of $20 billion will be required in U.S. capital investment funds in the 1978–1985 period. Applying the Committee's financing assumptions to an assumed U.S. company for the same period suggests that its financing capability would be on the order of $15 billion. If Exxon USA's future rates of return were increased to 1.5 times their average historical levels, these calculations suggest an ability to raise the necessary funds for capital projects. A similar projection of industry's ability to raise capital funds suggest that historical return rates will not provide the funds which will be required. The increased returns characteristic of 1973 will improve these prospects.

We might suggest at this stage that we feel there is no definitive set of numbers and ratios that prescribe exactly the future potential for capital outlays. Generally, the oil industry had returns adequate to meet its investment needs during the 1950's but shifted dangerously toward inadequate return levels during the 1960's and in the first part of the decade; we earnestly hope conditions will permit us to pursue all available investment opportunities to help meet this nation's energy requirements from this point on. However, considering the long lead time and heavy capital investments per unit of energy output required for developing alternatives to conventional petroleum production and refining, the rate of return on our existing base load business will have to be maintained on a strong footing for several years.

Neither of these projections, taken together with the other factors mentioned previously, lead to the conclusion that Exxon or the petroleum industry is not equal to the task. Rather they suggest that both will be severely tested in meeting their financing requirements. Any erosion of returns or increase in the environmental risk to which the business is exposed would be a detriment to efforts to meet projected spending requirements. Investors are particularly attuned to the investment climate and any adverse changes in the external factors affecting the energy business would mean that companies must earn higher returns in order to provide the necessary amounts of investment capital. Any action which limits levels of return, or increases the risk to which the petroleum business is exposed, would jeopardize its ability to raise the necessary investment capital.

SENATE FINANCE COMMITTEE QUESTION NO. 6

INDUSTRY CAPITAL EXPENDITURE PROJECTIONS FOR 1974-85 PERIOD

[In millions of current dollars]

	1974	1975	1976	1977	Total 1974-77	1978-81	1982-85	Total 1974-85
Estimated capital expenditure capability using Senate Finance Committee assumptions:								
Projection Based on Industry Average Rate of Return For 1964-72 [1] (petroleum only)	9,695	10,240	10,805	11,420	42,160	52,415	65,180	159,755
Projection Based on 1.5 Times Industry Average Rate of Return 1964-72 [1] (petroleum only)	15,275	16,580	18,005	19,565	69,425	96,555	134,270	300,250
Estimated industry capital expenditure requirements: Projection derived from National Petroleum Council study case III [2]:								
Petroleum only					65,000	93,000	116,000	274,000
Total energy					76,000	108,000	137,000	321,000

[1] We have estimated that the average rate of return on stockholders' equity of the U.S. petroleum industry equals 0.9 percent. This is derived from the Chase Manhattan study of 30 major petroleum companies and our estimate that this group of companies constitutes approximately 80 percent of the U.S. petroleum industry.

[2] Study was adjusted to include marketing assets while being updated to 1974 and placed on a current dollar basis.

Question No. 7. What percent of your total United States sales of petroleum products during the applicable period were derived from foreign crude?

Year	Percent of U.S. sales derived from foreign crude			
	Total	Crude and unfinished imports	Heavy fuel oil imports	Other petroleum products imports
1964	35.2	8.8	24.4	2.0
1965	36.3	8.9	25.5	1.9
1966	36.3	7.5	26.4	2.4
1967	34.9	6.1	26.3	2.5
1968	34.4	6.0	25.3	3.1
1969	36.3	5.5	27.6	3.2
1970	39.2	5.6	30.6	3.0
1971	39.2	6.6	30.3	2.3
1972	43.2	10.9	29.9	2.4
1973	47.6	16.7	28.1	2.8

Question No. 8. Describe the typical situation in which you have contractual relationship with a foreign subsidiary involving a pricing problem. To what extent do you believe it possible for a United States company complying with the present tax regulations governing such relationships to shift United States profits to the foreign subsidiary? Do you recommend any alternative approach for regulation of such transaction to prevent the shifting of United States profits to foreign subsidiaries?

Our basic pricing principle is that transactions between our affiliated companies, both U.S. and foreign, are based on open-market prices. This principle recognizes that crudes and products are internationally traded commodities whose market prices respond to fundamental worldwide supply/demand forces. Under normal commercial and free-market conditions, Exxon believes that such pricing provides the soundest basis for the establishment of intercompany transfer prices.

Until early 1973, a substantial amount of open market trading of crudes and products took place which provided market prices which were used in the determination of inter-affiliate transfer prices. Developments in the international crude supply and political environment over the last year or so, however, have led to a disruption of normal supply/demand balancing mechanisms in the worldwide markets for both crudes and products with the result that market prices have risen very rapidly, and recently in quantum jumps. These increases are directly attributable to both the well-publicized unilateral producing country actions

and the willingness of anxious buyers to pay higher and higher prices to cover their requirements with scarce supplies. Under these conditions, market prices have been difficult to measure and as a result, Exxon inter-affiliate prices have been increased much less rapidly and have essentially only covered increased costs incurred by the supplying affiliates. It is anticipated that, when market conditions become less chaotic, sufficient open market transactions will again take place to establish an appropriate market price reference for interaffiliate pricing.

Our pricing principle is in accord with the regulations prescribed by the U.S. Treasury under Section 482 of the Internal Revenue Code. Section 482 enables the Internal Revenue Service to determine the true taxable income of a United States company in situations where such company has contractual relationships with its foreign subsidiaries. Detailed regulations have been issued under this Code provision setting forth specific standards for determining taxable income of U.S. companies dealing with related foreign subsidiaries by providing for distributing, apportioning, or allocating gross income, deductions, credits or allowances so as to clearly reflect income. The basic standard applied in such cases is that of an uncontrolled taxpayer dealing at arm's-length with another uncontrolled taxpayer.

These regulations are the most stringent regulations applied anywhere in the world. They have been most vigorously applied. Based upon the extensive and thorough Internal Revenue Service audits that we have experienced, we are of the view that compliance with present tax regulations does not allow for a shift of U.S. profits to a foreign subsidiary. As a result, we have no recommendation to suggest in respect of any alternative approach to that now contained in the existing regulations.

Provide information as to investments and expenditures outside the United States during the applicable period. Relate this information to the sum of (a) earnings outside the United States and (b) net equity and debt capital raised outside the United States, during the applicable period.

The table attached shows that foreign earnings, depreciation and offshore debt increases, taken together, were more than sufficient to fully finance new foreign capital expenditures and other investments. The portion of earnings from abroad in excess of those reinvested contributed to Exxon's available resources for general corporate purposes. Furthermore, these earnings streams contributed heavily to the "times-cover" formula by which the quality and possible amount of new corporate debt is judged. We should note that actions taken to reduce the foreign net earnings contribution to Exxon's corporate resources would directly impact its capacity to attract debt from both U.S. and foreign capital markets for any purposes, including new capital investments in energy resource development in the U.S.

ANSWER TO QUESTION 9—SENATE FINANCE COMMITTEE HEARINGS

EXXON CORP., CONSOLIDATED RESULTS—FOREIGN

[In millions of dollars]

	1964	1965	1966	1967	1968	1969	1970	1971	1972	Estimated 1973
Expenditures less depreciation:										
Foreign capital spending	562	545	645	931	918	1,039	1,084	1,141	1,267	1,437
Less foreign capital recovery	(345)	(363)	(377)	(424)	(445)	(467)	(464)	(607)	(597)	(660)
Net change in plant	217	182	268	507	473	572	620	534	670	77
Other foreign expenditures, net	132	103	7	47	62	(231)	98	197	16	[1]
Total	349	285	275	554	535	341	718	731	686	777
Foreign income	586	595	594	615	694	596	680	851	819	1,520
Foreign new debt and equity	34	79	70	90	217	115	328	201	[2](180)	175
Total	620	674	664	805	911	711	1,008	1,052	639	1,695
Foreign income and foreign new debt and equity in excess of expenditures less depreciation	271	389	389	251	379	370	290	321	(47)	[3]918

[1] Data not available at this time; it will be submitted later if the committee wishes.
[2] Foreign borrowings to enable the corporation to comply with the Department of Commerce's OFDI regulations during 1972, were not completed until the 1st 60 days of 1973, as permitted by the regulations.
[3] Preliminary subject to data on other foreign expenditures, net.

APPENDIX B

PRESS RELEASE, EXXON CORP., JANUARY 23, 1974

Exxon Corporation today estimated consolidated earnings for the year 1973 at $2,440,000,000 or $10.89 per share. This compares with 1972 earnings of $1,532,000,000, or $6.83 per share.

Fourth quarter 1973 earnings were estimated at $784,000,000, or $3.50 per share, as compared with 1972 fourth quarter earnings of $493,000,000, or $2.19 a share.

Mr. J. K. Jamieson, Chairman of the Board, said, "the 1973 earnings from our petroleum and natural gas business were about 1.9 cents per gallon of sales, up about one-half cent per gallon from 1972."

Exxon achieved a 18.8 percent return on shareholders' equity in 1973, compared with 12.8 percent in 1972. On the basis of assets employed, totaling about $25 billion at year end 1973, the return improved to 10.4% in 1973 from 7.3% in 1972. "I hope this signals the start of a period in which the Corporation will again be earning a rate of return on investment which is comparable to that of leading companies in other industries," the Chairman said.

Describing the year's results in different parts of the world, Mr. Jamieson said that in the United States, earnings from petroleum and natural gas operations were $833 million, up 16 percent from $715 million in 1972. This was essentially in line with an increase of 14.1 percent in product sales volume as Exxon went all out to supply customers with maximum quantities. "This means," he said, "that, while prices rose, particularly in the latter part of the year, these increased prices reflected higher raw material and product costs in supplying the additional sales volume."

Mr. Jamieson also pointed out that the Corporation's U.S. operations had been under government price and profit margin controls since 1971, and that 1973 earnings were within government-allowed profit margins. Return on average total assets employed was 12.4 percent compared with 11.4 percent in 1972.

Elsewhere in the Western Hemisphere, earnings totaled $458 million, for a return on assets of 18.2 percent, compared to $309 million and a 9.4 percent return in 1972. About two-thirds of the improvement originated in Creole Petroleum Corporation. In 1972, Creole's earnings had fallen as a result of lower sales volume accompanied by sudden, sharp increases in Venezuelan taxes which could not be fully recovered in the market place.

"It was in the Eastern Hemisphere that petroleum operations showed the largest absolute and percentage gains," said Mr. Jamieson. Earnings there were $998 million, up 83 percent from $544 million in 1972. "Major reasons were higher sales volume (before the Arab cutbacks in the last quarter), and a recovery of product prices throughout the year from the depressed levels of previous years," he explained. Also, according to the Exxon Chairman, devaluation of the dollar resulted in local currency earnings being translated into higher dollar amounts, and this accounted for about $150 million of the improvement.

"Returns on Exxon's large investments in the Eastern Hemisphere have been depressed for a number of years due to unsatisfactory product prices," he said. "In 1972, for example, the Eastern Hemisphere return was only 6.7 percent compared to 11.4 percent in the U.S. In 1973, the return improved to 10.0%, still below the level in the U.S.

"Throughout our worldwide chemical operations," said Mr. Jamieson, "we have been implementing a program to improve profitability. We have completed the divestment of marginal operations, achieved cost reductions, and have improved plant productivity. In addition, there has been a sharply increased demand for our products and an increase in prices from depressed levels. As a result, Exxon's chemical earnings improved sharply in 1973 to a level of $206 million. This represents a return of 14.3% on total assets, comparable to leading companies in the chemical industry.

In the remaining areas of the Corporation's activities, including nuclear, coal, minerals and land, as well as corporate interest income and expense and administrative costs, an improvement of $33 million was achieved in 1973.

Looking to the future, Mr. Jamieson emphasized that an adequate return on investment is necessary for financing the capital expenditures needed to develop energy resources. "In 1973, our capital and exploration expenditures totaled $2.9 billion, 11.5 percent more than in 1972," he reported. "For 1974 we have already announced a significant increase in our planned capital expenditures to a record

$3.7 billion. For the next four years, we plan to make $16 billion of capital expenditures, about two-thirds of which will go to find new oil and gas reserves, to build transportation facilities, and to develop other forms of energy. In addition to the needs to finance these large capital expenditures, additional money will be needed to cover the substantially higher cost inventories and receivables resulting from the increasing cost of crude oil and products."

Estimates of selected financial and operating data follow. Financial data are expressed in millions.

	1973	1972
Total revenues	$28,500	$22,438
Taxes and duties other than excise and income taxes	$4,533	$3,989
Excise taxes	$2,330	$1,761
Income taxes	$3,602	$2,346
Total income and other taxes	$10,465	$8,096
Percent of total revenues	36.7	36.1
Net income	$2,440	$1,532
Percent of total revenues	8.6	6.8
Chemical product revenues (including transfers to petroleum affiliates)	$1,880	$1,517
Petroleum product sales, barrels daily	6,155,000	5,701,000
Gross production of crude oil and natural gas liquids, including offtake under special arrangements, barrels daily	6,712,000	6,145,000
Refinery runs, barrels daily	5,759,000	5,146,000
Natural gas sales—billion cubic feet daily	9.7	9.3

	Earnings			Percent return on average total assets	
	Amount (million)		Percent increase		
	1973	1972		1973	1972
Petroleum and natural gas operations:					
United States	$833	$715	16	12.4	11.4
Other Western Hemisphere	458	309	48	13.2	9.4
Eastern Hemisphere	998	544	83	10.9	6.7
Chemical operations	206	52	296	14.3	3.6
Other	(55)	(88)			
Consolidated total	2,440	1,532	59	10.4	7.3
Per share earnings	10.89	6.83			

The CHAIRMAN. Next we will hear from Mr. Edward Symonds, vice president of the First National City Bank of New York. We are pleased to have you, Mr. Symonds. I believe you can help to educate us on this subject from a somewhat different point of view than those who directly produce oil themselves.

STATEMENT OF EDWARD SYMONDS, VICE PRESIDENT IN CHARGE OF ENERGY ECONOMICS, FIRST NATIONAL CITY BANK, NEW YORK, N.Y.

Mr. SYMONDS. Thank you, Mr. Chairman. I will make myself as brief as possible if I may because I know we are running a little short of time.

Mr. Chairman, my name is Edward Symonds, vice president in charge of energy economics in First National City Bank, New York. This is a field in which I have now worked for 25 years.

I am honored to participate in this panel on the financial results and prospects of the U.S. petroleum industry before the Committee on Finance. I have been charged with the task of commenting on trends in rates of return and petroleum investment. I should like to make a short statement outlining our findings.

No sound national policy can be framed without putting petroleum earnings in the relevant perspective—that is to say, in the perspective seen by the investor. Unless the profitability of the petroleum industry is high enough to attract investment resources away from the myriad of other possible uses, and into petroleum and kindred energy projects, the Nation's energy crisis and its increasing dependence on foreign supplies will continue to distort and limit its economic growth.

At the outset, let me briefly clear the decks by acknowledging that a number of different ways exist in which to measure rates of return. Our practice is to select that which is most readily understood by and acceptable to, investors.

We, therefore, look beyond ratios based upon Internal Revenue Service figures which are, of course, confidential, as to their source; or upon national income statistics, which define inventory and depreciation in different ways from those normally adopted for company book purposes. We also avoid reliance on specially-prepared questionnaires, where the answers may represent too small a sample of industry, or may not be prepared with the same accuracy as must be shown in the preparation of audited company reports. Consequently, our figures differ, for instance from those published in the Quarterly Financial Report for Manufacturing Corporations published by the Federal Trade Commission.

A further variance between the figures published by Citibank—in a series that we have maintained since 1937—and those private series sometimes published elsewhere in that we base asset totals upon figures at the first of the year, rather than using the average for the year, or quarterly estimates. This allows us both to complete our financial analysis earlier in the year, and to adhere to our policy of using audited figures rather than interim estimates.

We use net income after tax, since that is the pool out of which the investor receives dividends or other distributions. Net worth, which is of interest to the stockholder since it represents his equity in the company, is the investment base that we use.

The CHAIRMAN. How do you handle depletion allowances?

Mr. SYMONDS. Depletion allowances simply affect the tax payable and, therefore, are deducted prior to the arrival of a net income figure.

The CHAIRMAN. In other words——

Mr. SYMONDS. This is an architect's figure.

The CHAIRMAN. In other words, looking at net income, it doesn't make any difference whether you are talking about cost depletion or percentage depletion if I understand what you are saying, because you are looking at how much that company made on the money they invested; is that right?

Mr. SYMONDS. How much they made and what they made is there after tax money. They had made $1 million which was after all taxes were subject to cost, or percentage depletion had been paid.

The CHAIRMAN. That being the case, it wouldn't make any difference to you whether they were taking cost depletion or percentage depletion. In either event, you are talking about how much money they made after they got through paying taxes.

Mr. SYMONDS. That is right, Mr. Chairman. It would make no difference to our figures, but it would make some difference as to what tax that particular company paid.

The CHAIRMAN. As I understand it, and I want to get it straight, you are not concerned about how much taxes they paid or how much depletion they claim for tax purposes or what they did with their intangibles. All you are concerned with, from your point of view, is how much money they had left after they paid their taxes.

Mr. SYMONDS. That is correct, Mr. Chairman.

What do these figures reveal concerning the petroleum industry, in the perspective of other U.S. manufacturing industries? Let me summarize a 10-year tabulation that you may care to include in the record.

In the 10 years, 1963–72, a comprehensive group of approximately 100 petroleum companies achieved a rate of return averaging 11.8 percent. For the 40 or so largest integrated companies included in this total, the average was slightly lower, at 11.6 percent. To put these rates of return in perspective, over the same period and using the same definitions, a group of approximately 2,000 manufacturing companies (excluding petroleum) earned an average of 12.3 percent.

In a nutshell, this unfavorable rating of petroleum explains the historic decline in exploratory activity and the failure of refining capacity to keep pace with the growth of demand. The root causes of today's energy crisis are to be found in this failure on the supply side.

What of the earnings performance of 1973? As is now well known, the ability to maintain capacity operations in a period of strengthening prices (particularly abroad) allowed company profitability last year to stage a remarkable recovery. The same strengthening was generally true of other industries.

The CHAIRMAN. Let me ask you a question at that point.

The Indenpendent Petroleum Association testified yesterday. They referred to a Chase Manhattan Bank study, which is one of your New York competitors, and they said that looking at a study of this sort representative of their financial picture because the Chase bank had selected larger companies with larger profits than the independents. Looking to their group, which was speaking for thousands of independents, their profits weren't nearly that impressive or as favorable.

Do you have any reason to doubt that statement?

Mr. SYMONDS. I am sure that the larger the group you have, the more truthful—the more significant—your ratio. We take the largest group that is available. In other words, we take all the companies in the United States which publish annual reports and, therefore, we include all the majors, the middle-sized and the larger independents. We do not, however, include the individual operator down in Louisiana or other States who may have a less successful, may well have a less successful, operation than that represented in these ratios.

The CHAIRMAN. If you took 100 companies, wouldn't it stand to reason you would be looking at 100 of the large companies, that you wouldn't be looking at these thousands of independents?

Mr. SYMONDS. That is right. There are said to be 5,000 oil companies of whom a lot of them are mere one-man or family operations, if you will, Mr. Chairman.

The CHAIRMAN. That is right. So when they testify that these small independents, half of whom have gone out of business in the last 20 years, you would have no reason to doubt that their profit picture is

less favorable than what you are talking about here for these hundred that you have selected.

Mr. SYMONDS. No, we would have no reason to doubt that statement.

The CHAIRMAN. Yes.

Mr. SYMONDS. In a preliminary analysis of corporate earnings in 1973, Citibank calculates that manufacturing industries as a whole achieved an advance of 31 percent. While some groups, such as apparel, beverages, and rubber and allied products achieved little if any advance, others performed above the average. The petroleum sample of some 50 companies showed an advance of 51 percent, while similar samples of the iron and steel industry gained 54 percent and nonferrous metals gained 65 percent.

Data of the type we normally use are not yet available for an accurate profitability analysis for 1973. But a preliminary calculation indicates that the after-tax rate of return on net worth of U.S. petroleum companies was 15.5 percent in 1973, against 14.5 percent for the generality of U.S. manufacturing industries, excluding petroleum.

Moreover, as is well known, the pace of inflation speeded up last year, to a near record annual peacetime rate of 7.9 percent in the last quarter.

As is less well known, the gathering pace of inflation had its impact in raising paper profits on inventory, and in understating the real value of historic assets. This must have further widened the existing gap between nominal and real rates of return in industry. A detailed Citibank study shows that the real rate of return had, in any case, been lagging behind the nominal rate by several percentage points for the last quarter century.

In the context of history, even disregarding inflation, petroleum profitability has only now regained the levels achieved in the early fifties.

An alternative calculation has been made to indicate the relationship between after-tax earnings and total assets (that is, with the base defined to include borrowed funds as well as stockholder equity). Again on a preliminary sample of the petroleum data, this shows a rate of return of 9.1 percent, as contrasted with the 15.5 percent return on net worth by oil companies in 1973.

Bearing historic relationships in mind, and remembering that one swallow (in the shape of a greatly improved year) does not make a summer, I believe it to be a mistake to debate the case for punitive, special taxes on so-called windfall or excess profits.

Taking the widest possible sample and the most appropriate method of analysis, the best that can be said about petroleum's recent record is that profitability has returned to a level that will have to be preserved, if the extraordinary risks are to be borne and if the future needs of the consumer are to be met. The alternative will be to perpetuate the costly interruptions and dislocations through which we have recently been living. Like the present system of price controls, profit controls through new taxes would further dry up supplies and compound the existing consumer confusion.

I shall be happy to answer any questions that members of the Committee may wish to pose.

The CHAIRMAN. Have you analyzed this situation enough to separate out of the foreign earnings from the domestic earnings of these companies that you reported on?

Mr. SYMONDS. We have indeed, Mr. Chairman, through 1972, but it is too early in the year. We shall by March or April we shall have completed that knowledge base for 1973. And you appreciate although the companies in the statement at year end make some remark that foreign earnings were higher or lower, no detailed figures of the audited kind we use come out in the annual report until March. At that point we should analyze 1973. Meanwhile, we have data for 10 years, 1972 and earlier years.

The CHAIRMAN. Do I understand correctly, what you have testified to here is that you feel the profits that the companies are making now are about what they need to make if they are going to do what is expected of them?

Mr. SYMONDS. That would be a good generalization. I think one can't lay down a hard and fast figure and say that in order to attract the necessary capital the rate of return must be x. I think the rate of return needed depends on a great number of things such as will foreign operations become more or less risky. They seem to have become a great deal more risky. Will the rate of inflation get steeper? It has in fact got steeper. Will the money rate, the interest rates, the base rate Citibank charges increase? In 1957 it pays around 3 percent, now it is around 9 percent, so the climate in which the industry has to attract capital in our view is the essential determinant of what rate has to be shown to achieve the necessary increases in production.

The CHAIRMAN. Well, the way it was explained to me by witnesses from the Chase Bank was that they felt it would take about $1,350 billion, between now and 1985 to provide the free world's requirements of energy, and that they would estimate that perhaps about $500 billion, and that figure might now be $650 billion because of the inflation that has occurred in the last year, in order for the industry within this country to do its part. They also testified that it would appear to them that about half of that money should come from earnings and if the companies could earn enough to do half the job they felt that the lenders, including their bank, would be willing to put up the other half to finance this task. Is that about the way it looks to you in your bank?

Mr. SYMONDS. Yes, Mr. Chairman. We feel that is a somewhat pessimistic analysis. In the past a capital spending program which is after all where the expansion has to come from, merely the totality has come from internal company sources retained earnings depreciation or others right now it represented nearly the whole of it. Now it is about 80 percent. To go down to 50 percent which I think is the proposition you are making, 50 percent internal, 50 percent external, to our view would constitute quite a serious deterioration to the extent to which the industry is self-financing.

The CHAIRMAN. In other words you think the industry ought to be able to finance more than 50 percent out of earnings.

Mr. SYMONDS. There is no question traditionally it has so done and we deplore any marked change in the downward direction.

The CHAIRMAN. In other words, from the banker's point of view you would like the industry to be a little bit better risk than one that can only have 50 percent of the money that is needed for expansion.

Mr. SYMONDS. That is right.

If I could make a contrast with another industry, the electric power industry normally does draw more than half of its necessary financial

support for expansion from external sources but, of course, it is a far more secure and less worldwide type of business than is the oil business. So the theory is it is in a different position.

The CHAIRMAN. Could you make available to us and to the staff of the finance committee the tables that you have on the return of these U.S. petroleum operations?

Mr. SYMONDS. On the rates of return that you mention in my remarks?

The CHAIRMAN. Yes, the table on the return of U.S. petroleum operations.

Mr. SYMONDS. Yes, we do have also a tabulation on foreign and domestic earnings for the years through 1972.

The CHAIRMAN. We would like to have that. That would be very helpful to us.

Well, thank you very much, Mr. Symonds.

[The information supplied by Mr. Symonds follows:]

Source: City Bank Quarterly Energy Memo, January 1974.

Western Hemisphere, United States, and Eastern Hemisphere, seven international oil companies production and earnings comparisions 1962–72

	Net earnings (Millions)
Western Hemisphere:	
1962	$588
1963	590
1964	647
1965	619
1966	670
1967	785
1968	843
1969	849
1970	825
1971	1,002
1972	769
Eastern Hemisphere:	
1962	1,227
1963	1,429
1964	1,245
1965	1,353
1966	1,490
1967	1,451
1968	1,782
1969	1,818
1970	1,917
1971	2,236
United States:	
1962	1,129
1963	1,262
1964	1,412
1965	1,598
1966	1,821
1967	2,058
1968	2,229
1969	2,185
1970	2,101
1971	2,056
1972	2,110

The CHAIRMAN. That concludes our hearings at this point. We will make this information available to the Senate and we may conduct further hearings to obtain additional information. The committee will stand in recess subject to the call of the Chair.

Mr. SYMONDS. Thank you, Mr. Chairman.

[By direction of the chairman the following communications were made a part of the printed record:]

[Whereupon, at 1:15 p.m., the committee was adjourned, subject to the call of the Chair.]

ASHLAND OIL, INC.,
Ashland, Ky., February 14, 1974.

Hon. RUSSELL B. LONG,
Chairman, Senate Committee on Finance,
New Senate Office Building,
Washington, D.C.

DEAR MR. CHAIRMAN: We enclose for the record of your Committee's hearings on windfall and excess profits tax proposals, 5 copies of a statement by Mr. Orin E. Atkins, Chairman and Chief Executive Officer of Ashland Oil, Inc. An additional copy is enclosed for your convenience.

Asland is an independent refiner of petroleum, producing only about 15% of the crude oil it refines. The remaining 85% is purchased from others, including major integrated oil companies which are our principal competitors. We sell the bulk of our gasoline to independent marketers. Thus our profits are derived largely from refining and marketing. Unlike our major competitors, we do not have the tax-sheltered profits from oil production as an offset against both higher crude oil costs and higher taxes. For these majors, owning the bulk of their own production, higher crude oil prices add greatly to their profits; and these profits are further enhanced in value by the tax shelter of the depletion allowance.

Thus Mr. Atkins' statement is presented from the perspective of the independent refining/marketing segment of the oil industry, which has provided the true competitive vigor of the industry. For independent refiners, a windfall or excess profits tax applied to refining and marketing profits, as pointed out in Mr. Atkins' statement, would have very serious consequences. It would deprive Ashland and other independents of essential cash flows on which they must rely for investment funds required not only to enable them to play their full part in the urgently needed expansion of oil production and refining facilities, but even for their continued existence.

Mr. Atkins has therefore urged that in formulating tax proposals designed to assure that none may profit from the hardships of others, full account be taken of the tremendous disparity which exists in the consequences of a so-called windfall or excess profits tax as between integrated major oil companies and crude-deficient independent refiners and marketers.

Ashland's view as expressed in Mr. Atkins' statement is that the objectives of channeling increasing proportions of the industry's available investment funds into domestic energy resources and restoration of a substantial measure of equity to the taxation of oil industry profits can best be achieved by the following program:

(1) Modification of the depletion allowance to (i) exclude foreign production and (ii) establish a sliding scale as to domestic production under which the allowance would be reduced as the price of crude oil increases above a base price.

(2) Elimination of foreign tax credits on oil and gas income earned in OPEC countries.

(3) Full deductibility of all exploration and development costs in the year incurred, plus investment tax credits.

(4) Substitution of earned depletion for percentage depletion in accordance with the Canadian concept if the present program of percentage depletion is repealed.

We respectfully commend these recommendations to your consideration and we trust that you will find Mr. Atkins' statement useful in your analysis of this highly important matter.

Sincerely yours,

WILLIAM J. HULL.

STATEMENT OF ORIN E. ATKINS, CHAIRMAN AND CHIEF EXECUTIVE OFFICER OF ASHLAND OIL, INC., FEBRUARY 8, 1974

Mr. Chairman and Members of the Committee: My name is Orin E. Atkins. I am Chairman of the Board and Chief Executive Officer of Ashland Oil, Inc.

Ashland Oil is a Kentucky corporation with its headquarters in Ashland, Kentucky.

Although Ashland is engaged in all phases of the oil business—and in fiscal 1973 sold more than 470,000 barrels a day of petroleum products—we produce only about 15% of the crude oil we refine, purchasing the remaining 85% from others, including integrated major oil companies which are our principal competitors. And we sell the bulk of our gasoline to independent marketers. Thus, we qualify as an independent refiner, as the term is commonly understood in the industry. It is from the perspective of the highly competitive independent refining/marketing segment of the industry that we present our views concerning imposition of a so-called windfall profits tax on the energy industries.

The record before this Committee adequately discloses the huge magnitude of the capital which will be required to bring our country to an essential level of self-sufficiency in energy supplies by 1985. Estimates range from 500 billion to a trillion dollars. To carry out a project of this magnitude will require a national effort on an unprecedented scale. In a free enterprise economy, the principal source of the necessary capital must be the funds generated by the energy industries, supplemented by the investment of the savings of millions of Americans. These funds will not be forthcoming unless industry is permitted to earn a reasonable return on investment and a climate of confidence is encouraged by government policies.

We recognize, of course, the importance of equality of sacrifice. Simple justice requires that none should profit from the hardships of others. At the same time, measures taken to prevent injustice must not obstruct attainment of the imperative goal of self-sufficiency.

It is our firm conviction that so-called windfall profits taxes will do just that. Those who recommend punitive taxes on the overall profits of the petroleum industry fail to recognize the high level of spending typical of the industry which, with rapid inflation, seems certain to rise to even higher levels.

For example, over the past five years, we at Ashland have spent 159% of our total net cash generation for expansions. This year we will spend approximately 250 million dollars, some 50 million dollars more than our total expected cash generation. During the same period, we have written off for unsuccessful exploratory ventures more than 100 million dollars.

We have generated most of our income from refining and marketing while actually losing money on our crude oil operations. The exact reverse is true of the integrated major companies whose earnings from tax-sheltered crude oil production comprise by far the largest part of their total profits. Lacking the capital required to engage in programs of crude oil exploration on a scale comparable to those of the major companies, we have concentrated on efficiency in refining and marketing, where the special tax incentives and advantages provided for crude oil production are not available. As a result, during this period we have been subject to effective income tax rates in the range of 39% to 44%, far higher than the tax rates applicable to the integrated major oil companies.

We had historically been able to obtain crude oil in sufficient quantities at reasonable prices by purchasing from others. But in recent years as domestic crude oil production has leveled off and begun to decline, we have been subjected to drastic cut backs in supplies from major oil companies and the decline in the production curve in the older oil fields where we have direct lease connections has become precipitous.

Thus, we have been compelled to devote our resources increasingly to the search for crude oil at home and abroad. Any hope of success in that effort requires that we generate from our operations in refining and marketing cash flows sufficient to finance ventures entailing high risks and rapidly rising costs.

Windfall profit taxes aimed at overall earnings inherently jeopardize our ability to continue our urgent efforts to discover new reserves at home and abroad. Such taxes would severely restrict the funds generated from refining and marketing needed to enable us to build a supply base essential to our participation in the national effort to increase supplies. Indeed, even on the conservative assumption that the United States' oil industry will have to spend some 300 billion dollars between now and 1985, or 25 billion dollars a year, as its part of that effort, Ashland Oil's outlay for expansion based upon its 3% portion of the United States petroleum market would have to reach 750 million dollars annually—or five times our current oil-related capital expenditures.

The Committee is, or course, aware of the drastic increases in crude oil costs which have occurred in recent months. For Ashland, depending for some 85% of its crude oil supplies upon oil purchased from others, restraint upon a pass through of these higher costs in higher prices of refined products would be a severe blow. Our crude oil costs have risen from an average of $3.83 a barrel refined in January 1973, to $5.88 a barrel in December 1973. Two of our refineries are almost totally dependent on Canadian crude oil on which the Canadian Government imposes an export tax of $6.40 a barrel effective February 1, 1974, and our total crude oil supply is made up 53% from foreign sources, including Canada, as to which the United States cannot exercise price controls. Thus, a restraint on crude oil cost recovery would deny us the refining and marketing profits upon which we must rely for investment funds.

An excess profits tax would have a precisely similar effect, for as pointed out earlier these are profits derived largely from refining and marketing. Unlike our major competitors, we do not have the tax-sheltered profits from oil production as an offset against both higher crude oil costs and higher taxes. For these majors, owning the bulk of their own production, higher crude oil prices add greatly to their profits; and these profits are further enhanced in value by the tax shelter of the depletion allowance.

Accordingly, in considering matters of tax equity in the context of equality of sacrifice, it seems to us fundamental that the taxes recommended take full account of the tremendous disparity which exists in the consequences of a so-called windfall profits tax as between integrated major companies and crude-deficient independent refiners and marketers.

As this Committee is well aware, it is the independent refining and marketing segment of the industry, representing perhaps 20% of the petroleum product market, which has provided the true competitive vigor of the industry—an influence far greater than the market share of the independents would indicate. The economies, efficiencies, and innovations developed by the independents to survive against their major competitors have resulted over the years in lower prices and higher quality of products and service to the public. A tax system which would shift competitive advantages still further in favor of the integrated crude-rich majors would diminish competition and strengthen forces already leading to monopolistic conditions in this industry.

We are certain that it is not the intention of this Committee to destroy the ability of this substantial segment of the petroleum industry to use its considerable expertise, know-how and capital resources for the further discovery and development of oil and gas. It follows that appropriate relief or exemption provisions must be built into any windfall profits legislation to preserve intact the refining and marketing profits upon which these independent companies must rely not ony for expansion of production and refining facilities but even for their continued existence.

To that end we would earnestly recommend that this Committee seriously consider a program of tax modification embodying all or a substantial part of the following concepts:

(1) Percentage Depletion Should Be Substantially Modified

The percentage depletion allowance on foreign production should be discontinued. It should be retained for domestic production but should be modified so that the allowance will decrease as prices move up and increase as prices decline. For example, the allowance might be reduced to 15% for $10 oil and increased to 30% if the price fell to $5. The precise mechanics of such a formula and the relationship between rate and price would need to be worked out; but, in general, the concept should be to reduce depletion for higher priced oil and increase it for lower priced oil, so that the dollar value of the allowance remains a constant, regardless of wide swings in the price of oil. This would encourage production as prices fall and would prevent unjust enrichment by the producers by reason of the percentage depletion allowance as prices rise.

(2) Foreign Tax Credits On Oil and Gas Income Should Be Eliminated

Domestic exploration can be stimulated and substantial equity restored by eliminating the foreign tax credits allowable in respect of the production of oil and gas in the OPEC countries.

Presently, these countries impose confiscatory capital exactions which are erroneously identified as "income taxes." These foreign income taxes are then used to offset United States income taxes on the repatriated foreign oil and gas

profits and to shelter other foreign income which for one reason or another has escaped high foreign taxation.

While the foreign tax credit as applied to manufacturing and processing operations serves an admirable purpos ein encouraging foreign exports by United States manufacturers and others in foreign trade, the same cannot be said for the oil and gas producers who are not paying income taxes to the OPEC countries, but are in reality paying for crude oil which has been, in effect, expropriated by the foreign government. Such costs should be treated as ordinary tax deductible business expenses and not as creditable foreign taxes.

It should be emphasized that the foregoing proposal does not advocate doing away with the principle of foreign tax credits except in the areas of oil and gas production in the OPEC countries. For this reason, such proposal should not seriously disrupt other foreign investment activity and would greatly assist the restoration of equity in the taxation of the major oil companies.

(3) *Full Deductibility of Exploration and Development Costs Plus Investment Tax Credits Should Be Permitted*

To restore the cash flows denied to the producing companies by (1) and (2) above, the implementation of a program of fast write-offs of exploration and development expenditures should be permitted. Presently only intangible drilling costs are eligible to be deducted in full at the time of expenditure. The allowance of a full deduction for all exploration, production and development costs, including bonuses, geological and geophysical expenses, equipment and all leasehold costs, would provide great additional incentive and would go a long way toward generating the huge sums of new capital that will be required for exploratory and drilling ventures.

Such a system is presently used in Canada, but is restricted to domestic operations and to corporations principally engaged in oil and gas activities. Since any solution to our energy problems will necessarily require importing large quantities of foreign oil and gas, it would not seem wise to limit this option only to domestic exploration and development.

However, it would be equally unwise to encourage foreign production in countries that are unfriendly to the United States or which would not permit such oil to be shipped to the United States. To avoid this it might be desirable for the Secretary of the Treasury to have the authority to designate certain eligible foreign areas where such expenditures could be made and still enjoy the tax deduction.

Also, as great amounts of capital will be required, the deduction should not be limited to oil companies, as it is in Canada, but should be available as well to any taxpayer who wishes to risk his capital in such activities.

Coal, oil shale and other energy resources

A similar program of full deductibility for exploratory, development and start up costs might also be helpful in the development of our coal, oil shale and other domestic energy sources. Whether such deductions should be permitted in the foreign area might depend upon the availability of such alternative energy sources for domestic United States consumption.

(4) *Earned Depletion As A Substitute For Percentage Depletion*

In the event that percentage depletion is forbidden or drastically reduced, the incentive to invest in oil, gas and other energy-related resource properties might also be greatly encouraged by the concept of "earned depletion."

Under this concept a tax deductible depletion allowance would be "earned" by the investment of funds in "eligible expenditures" which might be defined to include the cost of acquiring resources properties, exploration and development expenses. Interest related thereto, and such other items of cost that might be reasonably related to such activities. The term "resource properties" might include oil and gas, other hydrocarbons like coal or oil shale, and such other minerals as it might be desirable to include.

The foregoing concept has been enacted into the Canadian law and will be fully in effect in 1977. The earned depletion allowance in Canada is 33⅓% of "eligible expenditures" which are deductible from the gross profits from domestic resources properties. They are not deductible, however, until all exploration and development costs have been fully recovered.

The deduction for earned depletion might be applied to all domestic resource properties but only to those foreign properties designated by the Treasury to encourage investment only in desirable foreign areas.

The foregoing modifications of the industry tax incentives would reduce drastically and immediately a significant portion of the profits now being generated by the major oil companies from questionable tax shelters and would eliminate the necessity for a tax on the overall profits of the industry.

The rapid write-off aspects of the recommended program would also greatly assist those companies like Asland which will require huge capital expenditures over the next few years if they are to continue in this business. In effect, the rapid write-offs will constitute a loan of tax revenues by the Government to the taxpayers making such expenditures. These costs will reduce taxable income only one time; and, as income is generated from such investments in the future, these deductions will not be available. Accordingly, the taxes deferred today will be repaid in the future. In effect, the oil companies and the Government will be making joint capital investments in precisely the kind of properties (namely, oil and gas wells) which offer the greatest potential for quickly relieving the acute energy shortage.

The approach which we recommend will, we believe, result in the channeling of increasing proportions of the industry's available investment funds into the development of our domestic resources. This program would thus contribute importantly to the attainment of the necessary degree of national self-sufficiency in energy supplies upon which the future security and prosperity of our country vitally depend.

We are most appreciative of this opportunity to present our views on this important matter.

PREPARED STATEMENT OF T. H. RODGERS, PRESIDENT OF SANTA FE NATURAL RESOURCES, INC.

Mr. Chairman and Members of the Committee: My name is T. H. Rodgers. I am President of Santa Fe Natural Resources, Incorporated, a wholly owned subsidiary of Santa Fe Industries, Inc. Santa Fe Natural Resources is the parent company of our petroleum and mineral subsidiaries.[1] The two major subsidiaries of Resources are Chanslor-Western Oil and Development Company, operating principally in California, and Oil Development of Texas, operating principally in Texas.

I thought it would be of interest to the Committee to see how the proposed Emergency Windfall Profits Tax Act of 1974 would affect a relatively small company dependent upon internally generated cash for investment in those areas which are critical to the solution of our current energy crisis. I recognize the current situation as a crisis and I applaud the Administration's proposed positive long range action program to alleviate a situation in which we find ourselves at the mercy of foreign governments whose attitudes are not always friendly and whose stability makes the continued flow of needed oil doubtful. With our vast natural resources and the traditional response we have always made to great challenges, the United States should be independent so far as her energy needs are concerned.

It is with the stop-gap short range proposal now before the Committee that I find fault. I feel that the proposed bill is deficient in several respects:

(1) It is not, in fact, a tax on profits. It levies an excise tax based upon the selling price of crude (gross receipts) and takes no cognizance of escalating capital and operating costs over the sixty-month life of the proposed tax. Clearly, deeper wells, stripper wells and other marginal production sources made economic only because of the present price level are more costly to drill and produce and the increment in selling price does not necessarily reflect an identical increment in profit.

(2) It recognizes and carefully delineates a problem, looks to the oil industry for huge additional investment to solve the problem, and then removes from that industry an estimated three billion dollars in the first year of operation of the tax. That amount is paid into the Treasury and is completely removed from the current investment so desperately required.

(3) It is much too narrow in its scope, looking only to the oil and gas segment of the energy industries, doing nothing to promote research and development of alternative sources of energy.

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[1] Chanslor-Western Oil and Development Company, Oil Development Company of Texas, Oil Development Company of Utah, Coline Oil Corporation and The Cherokee & Pittsburg Coal and Mining Company.

I shall deal with my company's specific economic factors, but first I believe that certain broad comments are required to put the problem in proper perspective. At the outset, it should be recognized and emphasized that, even with the tax incentives of the deduction of intangible drilling costs, percentage depletion, and where applicable, the foreign tax credit, the petroleum industry does not present a particularly attractive investment opportunity. It must be remembered that unlike manufacturing industries where investment in plant and equipment can be recovered by way of depreciation and where replacement facilities are readily available, the significant capital asset of an oil company or any mineral company is a wasting natural deposit, and painful history tells us that there is no guarantee that an exhausted petroleum deposit can be replaced by a new reserve. Add to this risk factor the fact that between 1947 and 1966, the average rate of return on investment was 12.7% for all manufacturing and only 12.5% for the petroleum industry,[2] and it is apparent that the domestic oil industry—far from prospering unduly because of tax advantages—may be of doubtful viability in ordinary times without such incentives.

At the risk of burdening you with more statistical material, I would like to refer to a few specific data which I find to be illustrative of our present problems. The increase in energy consumption in the United States in recent years has been enormous and, from all indications, such increase will continue. Our total consumption increased by 50 percent in the 1960's, and studies indicate that between 1970 and 1985 our energy needs will approximately double.[3] It has been estimated that by 1980 our total annual energy consumption will exceed a staggering 100 quadrillion BTU's.[4] In view of this need and irrespective of the cause or severity of a short-term energy crisis as Secretary Shultz testified on Monday the long range problem of a sufficient domestic energy supply can no longer be ignored. A windfall profits tax or any other tax levied on the oil industry which would adversely affect efforts to find and develop new sources and supplies of energy would work to the detriment of the country.

The United States has traditionally relied on domestic sources, principally oil, gas, and coal, to satisfy most of our energy needs. Other potential sources, such as shale oil, geothermal power, coal gasification and liquefaction, nuclear energy, and solar power must be developed. These potential sources will provide little comfort in the near future, however, and oil and gas are expected to remain as our chief sources of energy for many years. It is estimated that by 1980 only 9% of our energy consumption will be supplied by nuclear power, and almost 70 percent will be provided by oil and gas.[5] In 1965, the United States supplied 78 percent of its petroleum consumption, but by 1980, it is estimated that this figure will be reduced to 53 percent.[6] The United States consumes 32 percent of the petroleum products produced in the world,[7] yet has only about 6 percent of the world's known reserves.[8] What more dramatic facts can be stated to establish the crying need for domestic exploration and for the development in the United States of alternative energy sources.

There can be no question of the need for additional oil and gas exploration and development. But the cost of such an undertaking will be enormous. The Energy Economics Division of the Chase Manhattan Bank estimates that between 1970 and 1985 the total needs of the free world petroleum industry will amount to some $1,350 billion,[9] and estimates that about half of this amount must come from profits. Yet even with the greatly increased earnings being reported for 1973, the industry would certainly be hard pressed to meet the level of investment required. According to this Chase Manhattan study, the oil industry would have to triple its 1960's average rate of return on net assets of 11.6%[10] in order to achieve a

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[2] Data prepared by the First National City Bank of New York, cited in Hearings on General Tax Reform Before the House Committee on Ways and Means, 93rd Congress, 1st Session, pt. 5, p. 2289 (1973), hereinagter [1973 general tax reform hearings].

[3] Guide to National Petroleum Council Report on United States Energy Outlook, Figure 3, as reproduced in *1973 General Tax Reform Hearings*, pt. 9, at 1272.

[4] National Petroleum Council, United States Energy Outlook, and initial appraisal, 1971–1985 [Washington, July 1971] Volume One, p. 13.

[5] *Id.*

[6] *Id.* at 31.

[7] Bureau of Mines, International Petroleum Annual, 1970, pp. 12–13.

[8] Oil and Gas Journal, December 1972, cited in *1973 General Tax Reform* hearings, pt. 5 at 1877.

[9] Data prepared by the Energy Economics Division, Chase Manhattan Bank, cited in "Oils, Metals in 1974," *Sunday Star Ledger*, Newark, N.J., January 27, 1974.

[10] Average rate of return on net assets for the years 1960 through 1969 computed from data prepared by the Petroleum Department, First National City Bank.

cash flow sufficient to serve its indicated financial needs.[11] As an alternative to increased earnings, the industry would have to borrow more than six times as much as it did during the sixties. As the study points out, either of these possibilities is unrealistic.[12]

There may be as many as 430 billion barrels of oil and 1500 trillion cubic feet of natural gas in the United States waiting to be discovered according to estimates of the National Petroleum Council.[13] New exploration efforts to find these potential reserves are required to compensate by the discovery of new reserves for the growing gap between production and demand. In spite of this acute need, exploration efforts have been declining over recent years. We have been satisfying our domestic demand by increasing the rate of withdrawal of oil and gas from existing proven reserves in the United States and by importing ever increasing amounts of foreign oil. The hazards of reliance on foreign sources have been amply demonstrated by recent events.

The amount of exploratory drilling, which is so vital to the search for new oil and gas reserves, has been declining at a disturbing rate. There has been a 42 percent decline in wildcat drilling between 1956 and 1972, and development drilling declined by 52 percent over that same period.[14] Rising costs and high risk are largely responsible for this decline. Over the past several years, it has been the experience of the oil industry that only one out of ten new-field wildcat exploratory wells find producible hydrocarbons.[15] Moreover, only about one out of every sixty of these wildcats finds a significant field containing more than one million barrels of oil.[16] Yet, in spite of this decline in drilling, total costs have remained relatively constant because of the increased unit costs of exploration and development.

While these facets of the petroleum industry exemplify the problem faced by our nation, I would like to bring them down to my own group of relatively small companies and show you our picture.

We are an affiliated group of energy companies with current production of 46,000 barrels of crude oil per day in the continental United States and with 370 million tons of low sulfur strippable coal in the San Juan basin of New Mexico in the preliminary stages of development. We have other mineral holdings in New Mexico and Arizona which include uranium bearing lands.

We are classified in the petroleum industry as an independent producer. As yet, we have no participation in refining or marketing, but we are very interested in establishing refinery capacity should our crude oil be free from mandatory allocation or sale and the cash flow from the business warrant the investment. It has been our practice to rely on internally generated cash flow rather than borrowing or selling participations as the source of funds for investment in exploration and development. The profit from operations together with the deduction of intangible drilling costs, percentage depletion and depreciation have been the historical sources of cash flow for our company's capital programs.

We are dedicated to the development of our resources and we are vitally interested in tax legislation that will permit the necessary large cash flows required in high risk ventures.

We have been producing oil and gas in the United States since 1910 and although we are a small independent producer we have made substantial capital investments to develop production. Between 1964 and 1974 we spent 70 million dollars for secondary recovery operations in California and Texas using the modern recovery techniques of steam, fire and water floods. As a result, we increased our daily production from 16,000 barrels per day in 1964 to 46,000 barrels per day in 1974 and we took our proved reserve position from a total of 43 million barrels in 1964 to a high of 155 million barrels in 1971. Following the pattern in the industry, these reserves declined to 142 million barrels in 1974. Again, this was not done on borrowed capital or by sales of participations, but from cash flows internally generated as we increased daily production.

In 1969, we could see the end coming for secondary recovery investments and we began a program of exploratory drilling, again confining our search to the

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[11] Chase Manhattan Bank, Capital Investments in the World Petroleum Industry, 1969, pp. 3–4.

[12] *Id.*

[13] National Petroleum Council estimate reprinted in *American Petroleum Institute Tax Policy*, at p. 11.

[14] Figures are based on data prepared by the Independent Petroleum Association of America, Oil and Gas Journal, and American Association of Petroleum Geologists reproduced in *1973 Hearings on General Tax Reform*, pt. 5, at 1894, as discussed at 1890.

[15] Figures based on data prepared by the American Association of Petroleum Geologists, as reported in *American Petroleum Institute, Tax Policy*, at 33.

[16] *1973 General Tax Reform Hearings*, at 1849, as discussed at 1890.

continental United States. Again we funded the program from internally generated cash, and between 1969 and 1974, 4 years, we spent a total of 21.7 million dollars for leasehold expense and exploratory wells. We found new reserves amounting to 8.2 million barrels, which will be produced over the coming years. Some of the production is in Southwest Colorado, some in Northeast Montana, some in Western Wyoming, and some in New Mexico and Texas.

In all, we drilled 42 wildcat wells of which 9 were discoveries, for a discovery ratio of 20%—about twice the national average. As a result of the 9 discoveries, we drilled 43 development wells of which 37 were successful.

We now hold 871,000 acres of land under lease in 11 Western states on which we propose to do further exploration for oil and gas using a greatly expanded program.

Last year, 1973, we spent 5 million dollars for exploration. This sum was all the available capital we had after taking care of normal reinvestments in our presently owned properties. Unfortunately, however, we found that the 5 million dollar level of annual investment is not enough to replace proved reserves which are now declining as a result of our large daily production rates.

This year, as a result of the increased price we are receiving for our crude, we are budgeting 24 million dollars for exploratory wells, a five-fold increase in effort on our part and we are planning 124 million dollars over the next four years. If the present price of crude holds up, and if we can avoid excess profits taxation by reinvesting in exploration for oil and gas or in developing, converting or refining other energy sources such as coal, uranium and geothermal energy. If the funds are available, we plan to invest more capital in exploration and development of oil and gas, and we would consider investing in the development of other agency sources.

We are planning to increase the scope of our effort by evaluation of drilling opportunities offshore United States and Alaska.

With regard to our coal holdings, we are investigating strip mining and the subsequent use of coal as boiler fuel or for gasification purposes. We find the capital requirements to be enormous and even present cash flows would require borrowed capital.

To sum up, our increased exploratory drilling program will only be possible due to recent increases in the price of domestic crude oil which are producing earnings sufficient to fund the effort, and we urge the Committee to consider favorably a legislative and tax environment which will continue to promote investment in these high risk energy ventures. We believe that our expanded exploratory budget is directly responsive to the nation's need to discover new energy sources.

Applying the tax which has been proposed by the Administration, we would be required to pay over to the Treasury approximately $20,000,000 per year. We would rather invest these funds in the exploration for oil and gas than pay them over to the Federal Government. We urge this Committee to permit us to plow back any so-called "windfall" into areas designated by the Committee as qualified investment. There has been no showing that a federal agency is better qualified to direct exploration or other capital activities than is private enterprise. When that showing can be made, and only then, will such proposals as an "Energy Development Bank," funded by the three billion dollar per annum tax receipts as an alternative to private enterprise deserve this Committee's serious attention.

The only possible justification for a tax imposed only on oil producers is to insure that its purpose and direct effect fosters exploration and development of this country's natural resources. I therefore urge that any investment in areas deemed qualified be treated as a credit against the "windfall" tax.

Further, I urge that any definition of qualified investment be broad enough to include expenditure for research in the gasification and liquefaction of coal; its extraction for use as fuel; research and development of shale oil and nuclear power; the exploration and development of geothermal energy; and for increase in refining capacity.

Finally, the Committee should recognize a substantial time lag not only between the extraction of crude and its sale but also the substantial time lag between the appropriation of funds and their actual investment. From my experience, it may take us as much as three years to commit an additional $20,000,000 to qualified investment. I would suggest that any legislation require that such funds be earmarked and spent over a period of not less than three years. If not so committed, the unexpended funds would be subject to the Windfall Tax.

I thank you, Mr. Chairman, and Members of the Committee, for the opportunity to present my views and for your courtesy to me today.

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