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DOMESTIC OIL AND GAS— TAX PROPOSALS TO INCREASE PRODUCTION

HEARING

BEFORE THE

SUBCOMMITTEE ON TAXATION

OF THE

COMMITTEE ON FINANCE
UNITED STATES SENATE

ONE HUNDRED THIRD CONGRESS

SECOND SESSION

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DOMESTIC OIL AND GAS—TAX PROPOSALS TO INCREASE PRODUCTION

MONDAY, MARCH 14, 1994

U.S. SENATE,
SUBCOMMITTEE ON TAXATION,
COMMITTEE ON FINANCE,
Washington, DC.

The meeting was convened, pursuant to notice, at 2:37 p.m. in Room SD–215, Dirksen Senate Office Building, Hon. David L. Boren, (Chairman of the Subcommittee) presiding.

Also present: Senators Breaux and Conrad.

[Press Release No. H–16, March 10, 1994]

FINANCE SUBCOMMITTEE SETS HEARING ON U.S. OIL AND GAS INDUSTRY

WASHINGTON, DC.—Senator David L. Boren (D-OK), Chairman of the Committee on Finance Subcommittee on Taxation, announced today that the Subcommittee will hold a hearing on the state of the domestic oil and gas industry and tax proposals to increase domestic production.

The hearing is scheduled for *2:30 P.M. on Monday, March 14, 1994,* and will be held in room SD–215 of the Dirksen Senate Office Building.

"Congress and the Administration need to take action to prevent the continuing deterioration of the domestic oil and natural gas producing industry," Senator Boren said in announcing the hearing. "The continuing collapse of the domestic industry is a threat to our national and economic security. This hearing will discuss possible solutions, and will hopefully call the crisis to the attention of the American people as well as policy makers. All Americans, consumers as well as producers, will be hurt if we continue to waste our scarce national energy resources through the premature plugging of oil and gas wells."

OPENING STATEMENT OF HON. DAVID L. BOREN, A U.S. SENATOR FROM OKLAHOMA, CHAIRMAN OF THE SUBCOMMITTEE

Senator BOREN. We will go ahead and proceed. We appreciate the attendance of so many witnesses today. Let me say, there are many others who expressed a desire to testify, and statements will be received from you in the record. And, if you wish to have an opportunity to do that, please talk to staff after the hearing.

Let me say, also, that Senator Baucus had intended to be here with us today. He has been very much involved in the planning of these hearings. He recently joined others of our colleagues in signing a letter to the President about the crisis in the domestic energy industry, and he regrets very much that he cannot come. He is very ill today, and that is the reason he could not be with us. I will insert into the record his full statement at this point.

[The prepared statement of Senator Baucus appears in the appendix.]

Senator BOREN. The Subcommittee on Taxation is meeting today to discuss the alarming deterioration of a vital American industry, the domestic oil and gas industry.

Last week, the Tulsa World reported that the price for "Oklahoma Sweet" crude had declined yet again, reaching $12.50 a barrel. The price is well below the cost of producing that resource in most cases. In fact, crude oil prices have fallen nearly 45 percent in real terms in the last decade. This decline shows no sign of abating.

This situation has sent shock waves throughout our Nation as businesses have been forced to close, thousands of Americans have lost their jobs, and the States have lost large amounts of production in income taxes.

The statistics speak clearly to the crisis which we face. 13,600 Americans have lost their jobs since November because of the extraordinarily low prices. The job loss is in addition to nearly 500,000 jobs that have been lost in the last decade. In addition, my State alone has lost nearly $2 million in gross production taxes.

Precious natural resources, as well as jobs are at stake. Low prices inevitably result in lost natural resources. 453,000 marginal wells are operated in the United States today, contributing about 14 percent of total domestic production and accounting for 60,000 jobs.

The average marginal well produces only 2.2 barrels per day, and many rely on enhanced oil recovery techniques, artificial lift, or other expensive recovery methods.

Most are, therefore, unprofitable to produce at current prices and may be plugged and abandoned. It is estimated that nearly 50,000 wells will be abandoned in 1994 if oil prices stay at the $14 a barrel level; certainly more resources will be lost if the price remains at $12.50 a barrel.

Many people do not understand that once these wells are plugged, the remaining resource cannot be recovered unless a completely new well is drilled. This is an expense that no rational person would incur for a well that produces an average of less than three barrels a day.

Unfortunately, most simply believe that resuming production is as simple as turning off and on the water tap and that you simply wait until these wells become economic again. It cannot happen that way; the resource is lost forever.

We must change the economics of marginal production because we simply cannot afford to waste these resources on which we have already paid the environmental price. We have already paid the cost, both economic and environmental, to drill these wells. What a tragedy it would be if this production is lost forever.

Domestic production is declining precipitously. U.S. oil production averaged only 6.8 million barrels per day in 1993, our Nation's lowest oil production level since 1958. It is almost certain that the 1994 production levels will be lower.

This is particularly disturbing in light of the fact that we now import 49.5 percent of all U.S. oil consumption. We have never

been so dependent on foreign oil, even during the oil shortages during the 1970's.

Thus, our efforts to safeguard and to increase domestic oil and gas resources relate to national security interests, as well as domestic economic interests.

The production figures show a decline of some 25 percent in our domestic level of production over the last 4–5 years. This is a very steep decline, and we are obviously not adding to our reserves in a net sense.

We must also encourage drilling for new sources of natural gas. Our country increasingly relies upon this source of energy, but we are not finding new natural gas as quickly as we are using existing reserves.

It is estimated that 500–600 rigs need to be drilling every day to meet current natural gas consumption needs. However, the most recent data reveals that only 405 natural gas rigs are currently drilling. So, again, we are suffering a net reduction of reserves.

This hearing is only part of the effort being made to bring the crisis to the attention of the American people and policymakers. I realize that many sectors of the economy have reaped economic benefits from the very low oil and gas profits, at least in the short run.

Certainly, no one wants to impede economic growth, but the rest of the country must realize the high price that our domestic oil and gas industry is paying for the temporary luxury of cheap energy.

It is in the best interests of the entire Nation that our domestic industry survives and that we obtain the maximum value from our current investment in the resources extracted through marginal and stripper wells.

Along with approximately 120 other members of Congress, including over one-third of the membership of the United States Senate, including seven members of the Finance Committee, including, as I mentioned, Senator Baucus and Senator Breaux, who is here with us today, we have joined together to request a meeting with President Clinton to search for solutions to this problem. It is highly unusual, I think, for that many members of Congress, almost 120, to request a personal meeting with the President. That letter was sent last week.

We have identified several possible solutions, including a tax credit for marginal production and new production that would phase out as the prices for oil and gas increased.

Other solutions might require legislative action, such as expensing geological and geophysical costs, or perhaps some solution could be accomplished through regulatory changes. Many of these changes would improve the economics of domestic production without raising the price of oil and natural gas to the American consumer.

Again, I talk about only the short range impact on the consumer because we all know that, as we destroy the domestic industry, we make ourselves more open to the possibility of steeply increased prices in the future and unstable and unpredictable prices in the future. Such instability makes it very, very difficult for the rest of the economy to plan and to make investment decisions.

Today, I look forward to discussing with my colleagues and the witnesses the problems facing our domestic oil and gas industry. The information that we bring forward today can serve as the basis for an intelligent and informed discussion of solutions.

We will hear from State officials who can discuss the effects of various State proposals aimed at increasing domestic production. We will focus on marginal production, which is increasingly uneconomic, as prices continue to plummet.

We will also discuss other issues that concern all oil and gas companies, majors and independents alike, and ways to increase the drilling of new gas wells to keep up with demand. In addition, we have some fine written testimony that has been offered by those who cannot be here today.

For example, Governor Evan Bibbe of Indiana, a State not typically considered as an oil and gas State, discusses the economic importance of marginal production in the testimony he has submitted on behalf of the Interstate Oil and Gas Compact Commission.

So, we want to welcome all of our witnesses, and we look forward to hearing your comments and your suggestions. We must respond to this crisis promptly and effectively because, without strong action, we remain at great risk of the premature and permanent loss of vital production of a precious natural resource. The contribution which you are making to these hearings is important in terms of informing the rest of the Congress of these problems.

I am very glad that Senator Breaux is here with me today. He has been a real leader in this effort. He has attended our meetings and participated in all the meetings preliminary to this hearing, and also preliminary to the anticipated meeting with the President on this subject.

Senator Breaux, we would welcome your comments at this time.

OPENING STATEMENT OF HON. JOHN BREAUX, A U.S. SENATOR FROM LOUISIANA

Senator BREAUX. Thank you very much, Mr. Chairman. I am delighted to join you in this effort that you have been a real leader in.

I think the reason why nations get into a crisis situation is that they never see one coming until it is already here, and then it is generally too late to do anything about it.

That is true, whether it is a health care crisis, a national defense crisis, or an energy crisis. Then we must try to desperately respond to the crisis after we are in the middle of it, and it is too late.

This truth, I think, applies today, because today we see cheap oil prices at the gas pump. There is a plentiful supply of oil and gas in America. There are no long lines at service stations anywhere in this country. There has never been a shortage, in the last several years of any of the things that we need in terms of energy. So, most people in America today do not think there is a problem.

All of us in this room and the Chairman of this subcommittee understand that we are on the brink of a national crisis in America with regard to energy.

This is why I think it is so important that, today, we take the time to assess exactly where we are. Where we are going. And fi-

nally, and hopefully come up with some suggestions as to what needs to be done in order to prevent a real serious energy crisis.

I am very disturbed by the fact that today, from your own figures, Mr. White, we are importing approximately 45 percent of our oil needs in the country right now.

And, I think if we all thought about it, if we were importing half of all of the food we eat in America, there would be long lines around the White House and long lines circling this building that we are in this afternoon threatening those of us in Congress with our very lives unless we did something about it.

The American public would never accept it if this country imported 50 percent of the food that we consume because everybody understands that, clearly, food is part of our National security.

Well, just as food is part of our National security, certainly energy is also. Without energy, we will not produce food, without energy, we will not be able to defend ourselves. And, without energy we will not be able to have an economy.

But it seems that there is a disconnect between the American public in general when it comes to energy; as long as it is cheap and as long as there are no lines, they think there is no problem. In fact, just the opposite is true.

So, today will be the beginning of an opportunity to talk about what the problem is and to talk about some realistic and honest recommendations that we can bring to the President and that Congress can act upon. I think this is the beginning of a process.

It is so very important, that we take the time to act in a rational fashion as opposed to waiting until we get into a crisis and act out of desperation and make the wrong decisions.

Thank you, Mr. Chairman.

Senator BOREN. Thank you very much, Senator Breaux.

We are pleased to have as our first witness today Deputy Secretary of Energy William H. White. Bill White serves as the Chief Operating Officer of the Department of Energy and directly coordinates the efforts of the six energy program areas, including Fossil Energy programs, and the Energy Efficiency and Renewable Energy Program.

Before he was appointed to the Department of Energy, Deputy Secretary White was a partner with the law firm of Susman & Godfrey in Houston, and he served as a Professor at the University of Texas School of Law. In spite of that, he brings great ability to his current post. [Laughter.]

He has come today to discuss with us the state of the oil and gas industry and to identify areas toward which efforts to increase production should be directed.

And, Secretary White, we are very appreciative of your willingness to come and be part of these hearings today. We welcome you to the committee.

STATEMENT OF HON. WILLIAM H. WHITE, DEPUTY SECRETARY OF ENERGY, DEPARTMENT OF ENERGY, WASHINGTON, DC

Secretary WHITE. I appreciate the opportunity. I am one of a large number of people in this room that, on listening to your comments and the comments of Senator Breaux, are so appreciative, not just this year, but throughout the years that you all have sat

in this body, that you have brought the attention to these issues that it has gotten.

This is not the first year in which we have heard some people ignore the long-term consequences of low energy prices, and the two of you do exemplify that foresighted planning process which is part and parcel of good government, as opposed to government that just reacts to the crisis.

This administration does recognize the strategic importance of this critical industry. As you pointed out, our economy is vitally dependent on it. It is not simply dependent on it for economic growth among the industries that consume energy, but the energy industries themselves represent about 5.5 percent of our GDP. That is a very large percentage of our total economic activity in this country.

Historically, I am proud to say, Americans have been at the very lead in these industries, in the technology of these industries. When it came to developing gas and oil fields at home or abroad, the people who knew how to do it and knew how to do it best were Americans.

But we will only keep that capacity so long as there is a vital domestic energy industry. If that industry were, in fact, to move off-shore, then after awhile you would see the leaders not being Americans, but the people who are closer to that industry geographically.

So, it not only is an issue involving our energy security, but really the type of jobs we want our young people to have. This is a high-tech industry that has high-wage jobs, and, unless we preserve an industry in which we have had a traditional comparative advantage, then we really will be looking to flipping hamburgers for a living, or something. This is an industry that we must preserve.

I want to concentrate my abbreviated remarks, if I could, Mr. Chairman, on five areas. And I will just address each of them briefly, not doing any of them total justice, but just giving you a sense of what we think the priorities might be.

Those five areas are: natural gas, marginal production, off-shore gas and oil production, refining industry, and then the Strategic Petroleum Reserve, because I think on this energy policy we ought to take a look at how it all fits together to figure out where we want to be.

In the Domestic Gas and Oil Initiative that was released last December—which, admittedly, was incomplete and left a lot to do, but we wanted to get some things going quickly, quickly enough for the fiscal year 1995 budget submission—we focused on some of the long-run trends: how could we reduce producing costs by increasing the use of advanced technologies; how can we decrease regulation, including cost-ineffective regulation by the Department of Interior and EPA?

And we also focused on opening up markets for natural gas because, boy, if we could expand the markets as we have been expanding them for gas in electrical power generation, what a support for price in the industry that would be. We continue to do that.

But the fact is, those are long-run solutions and we have a short-run problem. So, we think it is critical that we not just rest on our laurels and say we have done something, but take a look at what can be delivered this year with you to revitalize this industry.

First, gas. Natural gas usage, we project, could very well increase by almost a third by the year 2010, gas use and demand, through electrical power generation. But, as you see here on the chart to the left, we are at a point where the huge gas bubble just is not there anymore.

Now, that does not mean that we are going to have shortages during the winter. The industry itself, in the pipeline system, through a voluntary effort, through the development of storage and information capacity, has assured us it has a lot more reliable supply than it did 20 years ago in the days of price controls.

But, I will tell you what, unless we are interested in getting completions up, we are going to have a situation in which utilities will perceive that we are constrained by supply, and we need to do something to address that in the long-run and in the short-run.

I will show you this one other chart that is right here to my left. Twenty-five percent of our gas comes from the off-shore. In the last 2 years, we have complete data. In 1991 and 1992 we have not been replacing the reserves that we have used from off-shore.

The next, marginal production. You made the point very clearly and I have depicted on the chart to the right here just how many States have marginal production.

There are a lot of abandonments going on, and I cannot make the point any better than the Chairman did that, once abandoned, the production of these wells is lost forever. Plus a lot of them are unplugged because people do not have the money to plug these wells, and they are an environmental hazard when these wells remain unplugged. So, we have to address the issue of marginal production.

That is even more important, I might mention, at a time when, inevitably, Prudhoe Bay is depleting this decade. So we have the double whammy of Prudhoe being lost, or much of it being lost in this decade at the same time the marginal production was lost representing 14 percent of our domestic production. It would be a bad situation.

There are a number of proposals for the outer Continental Shelf that I am prepared to address during questions you have. I know Senator Breaux has a proposal on the deep water, as does Senator Johnston, and we are developing one in consultation with him within this administration.

I will mention one thing on refining and Strategic Petroleum Reserve, if I could have the permission of the Chair.

Senator BOREN. Please go ahead. And we will put your full statement in the record.

Secretary WHITE. Thank you, Mr. Chairman.

Senator BOREN. But feel free to go ahead and complete on the essential points. Please take your time and do that.

[The prepared statement of Deputy Secretary White appears in the appendix.]

Secretary WHITE. So, if I could, the refinery business in this country, because of legitimate environmental demands—although

some of the environmental demands may not be cost-effective, but we have a desire to clean up our air and clean up our water—is going to have to incur, during this decade of the 1990's, an investment which exceeds the total book value of the refining business. That constrains refining capacity.

So, if we increase significantly during this decade the demand for gasoline, as Senator Breaux has so eloquently pointed out in other fora, we are going to have to meet some of that demand through imports. That imported oil quite often is produced from refineries that have worse environmental problems than our own do.

Finally, I will point out something on the Strategic Petroleum Reserve. This is a reserve that was established, and I am glad we did establish it, to reduce our vulnerability to oil supply disruption. But it has cost the American taxpayer, in direct costs and in the interest on the money we have had to borrow, basically, to build that Strategic Petroleum Reserve over $50 billion.

That $50 billion has not been calculated into the market price of imported oil. This is a point. We need the Strategic Petroleum Reserve. We are at a standpoint in our ability to fill the Strategic Petroleum Reserve, despite a Congressional mandate to try to fill it up to a billion barrels, and I just wanted to point that out.

When it comes to tax, Mr. Chairman, we are considering a number of different issues that I can respond to questions about. I simply ought to make this point, though.

When I had a chance to read the budget of the United States the last time, the short version of the budget, the 200-page job that was put out the day of the State of the Union address, I was struck by the two figures in there for fiscal year 1993.

One, is that the total fiscal year 1993 receipts on the personal income tax were $509 billion, and that the total interest on the public debt, most of which had been incurred in the 1980–1992 period, was $292 billion, or some 58 cents of every dollar paid in personal income tax receipts.

Senator BOREN. Right.

Secretary WHITE. This body and the administration, I think, are to be commended. People have different approaches, but people took some political choices and we have been bringing that deficit down. It is important, because all of those deferred taxes that are represented by the deficit hit this industry just like they hit every other industry.

The more that we accumulate or increase deficits and borrow that money and then have to pay those taxes in the future hurts all industries, and I know that the leaders in this industry appreciate that.

So, whenever we talk about tax policy throughout the administration, we are also trying to look at what will be the impact of a particular proposal on the overall fiscal condition of the U.S. Government.

Senator BOREN. Right. Well, thank you very much, Secretary White. Let-me say that I, for one, am pleased that you are at the Department of Energy, and I am pleased to hear the sensitivity that the department is demonstrating at this point in time to the situation we face.

We know that you are not in a position today for us to press you on specific policy initiatives that might be recommended by the administration, but the fact that the situation is under consideration is reassuring to us.

I know that the IPAA and other State oil and gas associations have asked the administration to conduct a national security investigation, under Section 232 of the Trade Expansion Act, to determine whether or not the level of crude oil imports threatens our National security.

It is my understanding that the Secretary sent a letter to the Commerce Secretary expressing support for this petition. I wonder if that is correct, and if you could shed any light on the Energy Department's position on this petition.

Secretary WHITE. That is correct. She acted promptly, right after it was filed. We have dealt, also, informally with the folks at Commerce and we want them to act expeditiously. We think their analysis should take into account some of the trends, including the five trends that I have just mentioned here in the testimony today.

I cannot pre-judge that process. It would be improper if someone had a conclusion before they actually did the analysis called for, but we would view that as a very serious matter and we want to work with our colleagues at the Commerce Department to see how we can push that along.

Senator BOREN. What about the projections of the department, have you made any projections in terms of your own assumptions about how long prices will stay at this kind of depressed level? Are we talking about, in the view of the department, something that is very temporary or are we talking about something that could possibly last a year or longer?

Secretary WHITE. We have done planning scenarios or projections based upon a whole variety of price cases. Though, as you mentioned, as a lawyer and law professor I had a fair amount to do with the energy business for my clients and as an investor and operator/working interest owner for a number of years, what I learned from that is that projection of prices, really, past a matter of several months is notoriously unreliable.

I will say this, however. It does appear to me that we could be headed as a country into the worst of two possible worlds. In many ways, we look like we did in 1973, which is, our real oil prices are the same as they were right before the embargo now, and our worldwide consumption has recovered from mid-1970's lows to where it now surpasses where we were in 1973 with the swing supply provided by the Persian Gulf. So, that is a dangerous situation.

In contrast, in 1986, however, when Saudi Arabia opened up the spigots, we did not have nearly as much world excess capacity as we had in 1986. So, there could very well be a scenario by which you had oil prices which were depressed, so long as there is some selling pressure within the Gulf from the existing producers in the Iraq overhang, but that we get to a point in the mid-1990's in which that excess capacity dries up and all it takes is several million barrels a day to be taken out of world production, and that is a $10 price increase right there.

So, to summarize, I do not think we have an official position, as a government, concerning what the price would be, but there are

some indicators that there would be continued weakness in oil prices.

And, in a longer run—that is, throughout this decade—unfortunately, once we have become somewhat more vulnerable to a price spike in imported oil, there could be a sharp price spike.

Senator BOREN. So we are getting ourselves, potentially, at least, in a situation where we have prolonged low prices, at least prolonged for a long enough period of time that we significantly impair the domestic industries. We have already seen we are not fully keeping up with additions to our reserves on a net basis now.

Secretary WHITE. Yes.

Senator BOREN. Then the possibility of a real spike up of prices and the inability of the domestic industry to respond to that situation.

Secretary WHITE. I think that is certainly true with respect to oil, and I think that is a—I do not want to be misquoted—plausible scenario, although we are not predicting exactly that.

Senator BOREN. Right. Right.

On marginal wells, has the department been tracking the impact of current prices on marginal wells; has the department come up with any possible projections on what the current pricing level might do to the number of marginal wells in the country?

Secretary WHITE. We are getting very close to being able to make that projection. We spent a lot of time in the last several months building a model based, in part, on looking at the actual cost of marginal well production in the principal states in which there are marginal well, and then figuring out what that cost is for wells producing at various levels of barrels per day, and at various depths.

I will tell you that, currently—and this is just sort of a quick and dirty number here—that it appears as though something like at $13–14 per barrel of oil, that wells under four barrels a day will not be recovering their costs.

And, if you look, for example, in Oklahoma, average daily production per well for marginal wells is 2.8 barrels; Louisiana, 1.13 barrels; Texas, 2.88 barrels; going up to Ohio, which has a number of marginal wells, .62 barrels. So, there are a lot of wells that are under water right now.

Senator BOREN. Right.

One of the things we have been looking at is the Federal lands policies as they might impact maintaining current production, and also new production. Is the department considering the effects of our current public lands policies on production levels?

Secretary WHITE. Yes. Principally, off-shore in the Western and Central Gulf of Mexico, I might add, there have been cases of royalty relief. For example, there has been some royalty relief on-shore in California. We need to do a better job of that.

And the proposals that are being developed within in our department, the Department of Interior, by Senator Breaux, by Senator Johnston, all reflect this basis reality. If we are able to generate production on a prospect that otherwise would not be drilled——

Senator BOREN. Right.

Secretary WHITE.—that not only is revenue neutral, it is revenue positive.

Senator BOREN. Absolutely.

Secretary WHITE. And we need to devise rules, and, frankly, need to make sure that our colleagues in government at the OMB and CBO know and are able to refine what wells can be—we are doing it as a rifle shot. Not a shot gun shot on royalty relief, but we are targeting those tracts that otherwise would not be drilled.

Senator BOREN. Or production that otherwise would not be maintained.

Secretary WHITE. Exactly.

Senator BOREN. We ought to be able to make that case very clearly. When you have a well that has become uneconomic, clearly, you have a revenue loss by maintaining a royalty payment at a certain level.

Secretary WHITE. Yes.

Senator BOREN. Is this something that can be done administratively without legislation; can royalty charges be pegged to economic performance and changed administratively without legislation? I may be hitting you with something that you do not know off the top of your head.

Secretary WHITE. No. We talked about that quite a bit. That is a very good question. Yes, current law allows there to be a procedure for royalty relief. Interestingly enough, the number of petitions they have gotten at the Department of Interior is not that much, including from people who have called me and I have said, "Hey, have you applied for royalty relief at the department?"

Apparently, if we do it on a case-by-case basis without having some broad categories the delays are too great and the staffing is too thin at the Department of Interior just to get through it. So we are going to have to come up with some broader categories and principles if we are going to avoid the red tape and get it done.

Senator BOREN. Right. So that you do not have to do a very detailed, lengthy analysis well by well.

Secretary WHITE. Yes.

Senator BOREN. But that is something that possibly could be done administratively.

Secretary WHITE. Well, the Department of Interior would really like legislative authority if they get off the well by well.

Senator BOREN. Yes. I see.

Senator Breaux?

Senator BREAUX. Thank you very much, Mr. Chairman. Thank you, Bill, for your testimony.

What would you say to some critics who may say that Boren and Breaux do not know what they are talking about, that we have got cheap gas and cheap oil in a plentiful supply, and why worry if we can import all we need at a cheap price. So there is no problem, according to the critics. What is the response to that?

Secretary WHITE. Well, first, on the cheapness of the price, Senator, as you know, probably the greatest challenge our country faces right now, thank goodness, is not the old Cold War competition with Russia and that we would have an actual exchange of military force, but the competition is for jobs and technologies in the international market, as the two of you have shown so well.

And the fact of the matter is that our energy prices are much lower than those of our competitors. We consume a lot more energy per dollar of output than our competitors consume, and that is a

disadvantage caused by low prices. What we have got going in our favor, and have historically had going in our favor, is our production base. We need to keep that production base.

I understand that this administration cannot, because of macroeconomic effects—and there are benefits of low prices, there is no question about it. As the Chairman says, there is no doubt that many industries benefit from those low prices.

But, if we create a situation in which we have low prices now and do not have the domestic productive capability to satisfy the demands when the prices are high, we will see a large percentage of our National wealth in GDP being transferred abroad. That very phenomenon happened in the 1970–1980 time period.

The Brookings Institution did a study. There was both a former high-ranking member of the administration in the last administration, and in the Carter Administration who did a study that was published near the end of last year. It is called "Oil Security." This is a point they made. And let me, if I could, with your permission, quote, because I think it is critical.

"In 1970, when oil was cheap and its consumption growing rapidly, primary energy fuels contributed 2 percent of the value of world production, with oil 1.3 percent of that total.

"In 1980, when the world price of oil peaked, primary fuels constituted 9.4 percent and oil 6.7 percent of world GNP." This caused inflation, unemployment, foregone production and the economic slow-down of the 1970's.

And this is not an oil and gas publication, this is the Brookings Institution. And, of course, what happened in our country reflected that.

Senator BREAUX. How would you describe the situation that the United States is in today with regard to energy security? Is it an uncertain situation? A potentially dangerous situation? Or, in fact, a dangerous situation?

Secretary WHITE. Today, I think it is uncertain. The longer that we have lower oil prices and the greater percentage of imports we have, so long as we continue the trend of having a reduced gap between worldwide production and consumption, then it becomes more and more dangerous.

So, right now we are in an uncertain mode. We can make decisions on conservation, on production, which could avoid a crisis if we made them. But, as we get to the end of the decade, we become more and more dependent on Persian Gulf crude and vulnerable to a sharp price increase. And that is what the people in the Brookings study concluded as well, by the way.

Senator BREAUX. I know that you may not be prepared to give a definitive up or down recommendation on some of the things that Senator Boren and I, and others have recommended, but can you give some general discussion?

I think Senator Boren has probably joined with me on all of the following, and has cosponsored my legislation to allow for the immediate expensing of geological and geophysical expenses.

I have also offered legislation for a deep water tax credit for production in deep water that is not occurring now. Senator Johnston is working on royalty relief. Maybe the two can be combined in some way.

I also offered an import fee—which I would say really would be an environmental equalization fee—on imported gasoline. The fee is intended to offset those expenses that our domestic refineries have to pay because of the Clean Air Act and other environmental laws that importers do not have to pay. I also support the proposed marginal well production incentives.

Are these concepts and ideas that we should be pursuing in the Congress, or are we beating a dead horse? We think there are some good ideas out there, but we would like to have some sense of encouragement, if you will, or a signal that we are moving in the right direction, because this session of the Congress is drawing to a close and we have got a lot of other things that need to be done before we finish.

I would like these ideas to be part of any energy package, and I would like to get some general comments on these concepts, if you can.

Secretary WHITE. All right. I will take them one by one. First, on the off-shore, that produces 25 percent of our gas. Now, you know, with the subsalt finds in oil, that could be a big source of new oil.

We do support reform of some type that would decrease the off-shore costs in some manner and we are going through and analyzing and will work together with this committee, as well as Senator Johnston's committee and the various staffs in coming up with something that makes sense.

The only unknown there is something that I have learned about a little too much in the last eight or 9 months that I have been in town, and that is that sometimes these rules on scoring do not make any economic sense and we just need to have something that makes sense.

If we can do that, we ought to be able to do something to change because G&G, the Domestic Gas and Oil Initiative that was an administration initiative, not just the Department of Energy, said that Treasury should report by May of this year on the expensing of G&G.

Well, obviously, we did not know how long oil and gas prices would remain low and we are accelerating that. People have worked each of the last two weekends on that and we want to be able to come up with an administration answer sometime soon, but I cannot give you the answer today.

Senator BREAUX. Is there a consensus that if we do something on G&G expenses, that it would have to be legislative as opposed to administrative?

Secretary WHITE. That is the sense that I get from the Department of Treasury.

Senator BREAUX. But, the decision has not been made as to whether the administration would recommend that?

Secretary WHITE. Yes. What will its impact be on new completions, what will its impact be on revenue; those are the things that we are trying to get the numbers on so we can talk about specifics rather than, it sort of sounds like a good idea.

Marginal production. Again, the lowness of prices have outstripped our own internal time schedule. We got a report to the National Petroleum Council and they were to report back to, really,

the United States by June on alternatives preserving marginal production. That timetable, as you point out, does not quite fit the track that Congress needs to be on, so we are accelerating that.

I have sort of a quick and dirty report on that, which I gave you, that it looks like if you get below about four barrels it is uneconomical. But we, in the administration, are talking through these proposals and should, within a matter of weeks, be able to give you a read on that particular proposal.

The same, I think, can be said concerning your proposal about the environmental equalization fee that looks at foreign refined product. This is something that we began our analysis on about two weeks after the meeting that we had, and we will have a deputy's meeting this week on that and some other issues. So, I cannot give you a definitive word on that.

Senator BREAUX. Is there a consensus on that point? The point being, our refineries have greater environmental costs associated with their production than some of the foreign competitors, whose product we are importing into our market. Is there any disagreement on that point?

Secretary WHITE. I have not heard any disagreement on that. The disagreement that I have heard, from the standpoint of analyzing things, is that the National Petroleum Council really did not believe that there was a substantial increase in imported refined product during this decade.

We, in the Energy Information agency and the people that it relies on, both in-house and outside, projected a significant increase in the importation of refined product.

Much of that has to do with the difference in projection concerning demand, and we are just trying to get the numbers right on that. When you have a big segment of the industry itself saying, well, we really do not think there is going to be any significant increase in imports or refined product, it is a little hard to deal with.

Senator BREAUX. There is no question of the number of domestic refineries that we have lost and the capacity to refine that we have lost, though, is there?

Secretary WHITE. No. A lot of independent refineries went under.

Senator BREAUX. The numbers we have, is that between 1980 and 1990 roughly 100 refineries have been shut down.

Secretary WHITE. I think that is right.

Senator BREAUX. Thank you, Mr. Chairman.

Senator BOREN. Thank you very much.

And, again, thank you, Mr. Secretary, for being with us today. We appreciate very much your interest in this subject and we look forward to working with you and the department in a constructive way, especially as we evaluate the results of this hearing.

Secretary WHITE. And, Mr. Chairman, I noticed in my prepared statement, which I understand can be submitted for the record, that there was a misstatement on the first page. With your permission, I am going to substitute a new first page of that statement. There were some critical words omitted that I will substitute later today.

Senator BOREN. That will be fine. We will receive your full and corrected statement for the record. Thank you, again.

Our next panel consists of Cody L. Graves, Corporation Commission of the State of Oklahoma, and the three members of the Texas Railroad Commission. We welcome all of you. The three members of the commission should sit together. I do not know if one of you is going to speak for the others, or the others can feel free to join in as well.

Let me, just for the sake of our audience, give a little more introduction to those that will be testifying.

Cody Graves has served on the Oklahoma Corporation Commission since August 20th of 1991. He is the youngest person ever to serve on the Commission and is currently serving as Vice Chairman. He is also Chairman of the Legal Committee of the Interstate Oil and Gas Compact Commission.

And, of course, I take special pride in his work because, for nearly 9 years, he was a member of my own staff here in the Senate, serving as my Legislative Director, as well as my legal counsel, so it is with pride that I have watched his outstanding work as a public servant and as an elected official in my home State.

All three Texas Railroad Commissioners have come to testify today about the innovative program which has been adopted in their State to encourage domestic production.

James E. Nugent is the Chairman of the Commission, serving his third term. He is well-known to all of the members of this committee. We welcome you, Mr. Chairman, today. He has had a distinguished career in public service. He served for 18 years in the Texas House of Representatives.

We have also with us, Commission Mary Scott Nabers, who was appointed to the Railroad Commission in 1993 to replace our former colleague, Bob Kruger. Before joining the Commission, she was the first woman to be appointed for a full term to the Texas Employment Commission.

Barry Williamson is one of the youngest Commissioners ever elected to the Texas Railroad Commission. He has also been a Federal public servant, working for the Department of Energy previously as the Director of the Office of Policy, Planning and Analysis in the late 1980's.

So, we welcome our friends from Texas here today as well. I say that as a member of the Sons of the Republic of Texas, since you can only qualify for that position by having had your family in Texas before the time of independence.

My family, in fact, went to Texas with Stephen Austin, so they went all the way back. My great-great grandfather was Land Commissioner of the Republic of Texas during the period of the republic before becoming an elected county official in Enis, so the family has been there a long time.

Then, of course, we are very proud of the fact that our family then realized the dream and hope of every Texan, and that is, they were able to migrate to Oklahoma. So, we really do welcome the members of the Texas Railroad Commission here.

I see I have been joined by my colleague from North Dakota, Senator Conrad. We are very glad to have you with us today as well.

Senator CONRAD. Mr. Chairman, you know, the true dream of every Texan, as I understand it, is that they start by moving to Oklahoma and then they wind up in North Dakota.

Senator BOREN. Well, the record will be amended to demonstrate that they have ambitions to live in both of our States.

Let me begin, first, by asking Mr. Graves to make opening comments, and then we will turn to Chairman Nugent and invite the other Commissioners, Mr. Chairman, to join in with you as they desire and as you have planned.

Mr. Graves.

STATEMENT OF CODY L. GRAVES, COMMISSIONER, OKLAHOMA CORPORATION COMMISSION, OKLAHOMA CITY, OK

Mr. GRAVES. Thank you, Mr. Chairman. It is a distinct pleasure to be able to sit on this side of the table and to present comments to your committee.

Since we are going on the record, I would just like the record to reflect that it takes three Railroad Commissioners to do what one Corporation Commissioner can do.

As you mentioned, I am here today in my capacity as Vice Chairman of the Oklahoma Corporation Commission, an elected three-member panel that regulates oil and gas exploration and production, and as Chairman of the Legal Committee of the Interstate Oil and Gas Compact.

I urge you and your committee to listen carefully to the comments that will be made today by individuals like Harold Hamm, Mike Cantrell, and George Alcorn.

To paraphrase a former boss of mine, "we, as elected officials and their staff, cannot fully appreciate the impact our decisions have on business and industry because we are not in that business on a daily basis, dealing with changing conditions and circumstances."

I think it is incumbent on all of us as public officials to listen closely to those in industry so that we can better understand what are the real problems.

Mr. Chairman, as you well know from your years of involvement with and concern for our domestic energy industry, perhaps the greatest problem facing us is the lack of an adequate, sustained price signal. Rapid price fluctuations dictated by foreign producers motivated more by political rather than economic reasons have wreaked havoc on our domestic industry.

As prices rose dramatically in the late 1970's and early 1980's, consumers became suspicious of the industry. As prices fell precipitously during the middle 1980's and again recently, capital markets have become very wary of the domestic industry.

A variable import fee would, in my opinion, go a long way towards providing the price stability the capital markets need to begin reinvesting in America's energy industries. However, political reality being what it is, it appears unlikely that we will be able to wean consumers from the narcotic that is cheap energy.

Given that unfortunate scenario, as public policy makers we must then consider what we can do to reduce the tax and regulatory burdens on our domestic producers.

In these tight fiscal times it would appear counter intuitive to talk about reducing government revenues. However, the reality of

the situation is that if we do not take steps now to stop the hemorrhaging in our domestic oil and gas industry, the long-term cost to our economy will dwarf any short-term reduction in tax revenues.

Consider, if you will, the economic impact of stripper oil wells. The IOGCC has recently completed a study that shows that in 1992, over 16,000 marginal wells were abandoned, with the resulting impact on our Nation's economy: a reduced economic output of over $400 million, an earnings reduction directly to the industry of $55 million, and a loss of 2,300 jobs.

Now, these calculations are based upon a weighted average well head price of over $17 per barrel. In today's markets, the losses are even more significant.

The IOGCC report concludes that every dollar of stripper oil production creates an additional 51 cents of economic activity throughout the economy and that 9.1 jobs are dependent on every $1 million of stripper oil produced.

When we consider Dr. Mankin's testimony that over 60 percent of all the oil that has been discovered in Oklahoma is still in the ground, representing millions of dollars in economic activity and thousands of jobs, we must come to the conclusion that we cannot allow the premature abandonment of oil and gas wells to continue. When the price of crude oil falls to a level that approaches the actual cost of production, we must intervene and we must do so quickly.

I urge this committee to ask the producers who are here today to describe their current situations. The fact that they are here today is testimony to their abilities as businessmen and women.

Operating costs outside of the control of producers, like taxes, royalties, fees, insurance, and other regulatory and administrative costs have crippled this industry.

In Oklahoma today, posted prices range from $10.90 per barrel for sour crude, to $12.75 per barrel for sweet crude. In constant dollars, these prices are less than $8 per barrel in 1983 dollars.

These prices represent a 73 percent decline in real dollar revenue from the 1983 price of $30 per barrel. There is not an industry in this country, with the possible exception of agriculture, that has had to face this type of economic pressure.

If we do not act now to stop the premature abandonment of marginal wells, we will foreclose forever our ability to produce significant amounts of the abundant domestic reserves of crude oil and natural gas that underlie our Nation.

Now, Mr. Chairman, in Oklahoma we have over 32,000 producing leases. Eighty percent of those produce less than 10 barrels per day, and I have got some graph displays that talk about the average production on a lease in Oklahoma. Twenty-five million barrels of oil were produced from these marginal leases that may have anywhere from 2–10 wells producing less than 10 barrels a day.

Every well that we are forced to plug in Oklahoma means that we will be forced to import that much more foreign oil on foreign flag tankers through the ports and harbors in the United States and run the increasing risk of another Valdez type accident.

Producing States have learned the hard lesson that a lack of comprehensive Federal energy policy means the systematic dismantling of an important part of our local economies.

In Oklahoma, we have seen an average decline of eight million barrels per year in total production that has resulted entirely, in my opinion, from a lack of adequate price signal.

We are not running out of oil, but, rather, because of the increasing and environmental regulatory costs and decreasing prices, it becomes less and less economic to produce the marginal leases.

Our ability to develop proven reserves of natural gas has also declined dramatically during the same time period. As an example, in 1982 in Oklahoma we drilled and completed over 240 wells below 15,000 feet total depth. In 1992, we drilled and completed 12 wells to that depth. We know the reserves are there, we cannot reach them. We just cannot afford to generate the revenues necessary.

Mr. Chairman, as hard as it is to admit that Texans do anything well, I must commend to you the actions of my colleagues on the Texas Railroad Commission. Last year, they proposed to their Legislature and had enacted a sweeping series of production incentives. Theirs is a story we should all listen to.

In Oklahoma, the Commission on Natural Gas Policy, a bipartisan public/private sector panel chaired by State Senator Kevin Easley, has proposed similar legislation to encourage additional production in Oklahoma.

Simply by doing nothing the State of Oklahoma will lose at least $10 million in gross production taxes and countless millions in lost income, payroll and sales taxes during the next 12 months. A proposal as simple——

Senator BOREN. Let me stop you there. That is due to the presumed reduction in production?

Mr. GRAVES. If we look at the production decline over the last 10 years which involved various price signals, we can expect, on average, to lose nine million barrels of production.

And, at current prices, the revenue loss is not quite as great, but, at an average price of $15 per barrel which is not even adequate to develop reserves, we will lose at least $10 million. And that is if we do nothing. The resulting abandonment and plugging of those wells will create additional job loss and additional revenue loss throughout the economy.

We are going to propose something as simple as exempting incremental production increases from the gross production tax, and it is our projection that it will stimulate millions of dollars in economic activity and increase overall tax revenues to the State.

I have provided in the testimony a summary of various economic programs that were prepared for the Energy Council seminar this past winter that shows what producing States are doing.

It is interesting to note that the most aggressive producing region in North America is the Province of Alberta, in Canada. They have very extensive incentives. You can ask Mr. Hamm about the resulting activity in Canada as it relates to the ability of producing in North Dakota in the Willston Field. There is a dramatic increase in activity in Canada directly because of their economic incentives.

State action, however, Mr. Chairman, is not enough. We must have corresponding action at a Federal level to reduce the cost of production. I urge you to ask Mr. Cantrell, Mr. Hamm, and Mr.

Murfin what impact the recent changes in the Alternative Minimum Tax had on their business.

Ask them what they would be able to accomplish if full relief from the AMT were granted, and then multiply that by the thousands of other producers and imagine the economic activity that it would create.

Mr. Chairman, as a Nation we failed to respond to the wake-up call of the mid-1980's. Some would say as a result we were drawn into an armed conflict over the supply of cheap oil.

I truly hope that our Nation's energy policy is more developed than simply placing 500,000 of our young people in the Middle East. We cannot and must not underestimate the national security implications of maintaining a viable domestic energy industry.

Thank you, Mr. Chairman, for your leadership on this issue. We stand ready to help.

Senator BOREN. Thank you very much. We appreciate your testimony. I think it demonstrates very well the dimensions of the problem that we face.

[The prepared statement of Mr. Graves appears in the appendix.]

Senator BOREN. Let me turn, first, to the entire panel before we go to questioning.

Chairman Nugent, again, we want to welcome you. We compliment the efforts that the Commission has made and that have been made in Texas in terms of innovative programs to try to spur new production. We would be happy to hear from you, and any way in which you want to involve your colleagues in the discussion.

STATEMENT OF JAMES E. NUGENT, CHAIRMAN AND COMMISSIONER, TEXAS RAILROAD COMMISSION, AUSTIN, TX

Mr. NUGENT. Chairman Boren, Senator Breaux, Senator Conrad, we thought your committee and this subject merited the joint appearance of the three Texas Railroad Commissioners. We think it is that important. We have taken the time that you have so kindly given us and tried to divide it equally between us so that each one of us will present a portion of what we are doing in Texas.

Senator BOREN. That is fine.

Mr. NUGENT. I will lead off.

As you know, the Railroad Commission has been in existence for over 100 years. Our greatest responsibility for much of that time has been regulating the production of oil and gas in Texas. Today, the three of us directly regulate 25 percent of the energy produced in this Nation. We believe these deliberations are extremely important to Texas and the Nation.

The demise of our domestic oil and gas industry threatens the Nation's economic stability and security. We are losing the global competition for new oil and gas exploration, and development as major integrated companies are driven overseas by higher regulatory and environmental compliance costs. We seem to be bent on discouraging rather than encouraging the industry.

We have come to Washington to share with you some State incentives we implemented that has stimulated new drilling and production in Texas. These are examples of ways to help the industry get back onto its feet and for this country to maintain a viable domestic industry and prevent waste of our resources.

Texas' first Tax Incentive Plan was approved in 1989 to address enhanced oil recovery. The legislation provided for a 50 percent severance tax exemption on all oil produced from new secondary and tertiary recovery projects. The tax break lasts for 10 years, and companies must show an increase in production before tax exemption is granted.

In 1991, a new program was passed to extend a 50 percent tax break to incremental production from the expansion of existing enhanced recovery projects. Again, operators must prove they have actually upped production from these old fields before the tax exemption kicks in.

Both programs resulted in increased production from old fields that might not otherwise have ever been recovered. Naysayers said Texas would lose more in severance tax revenue than it would ever bring in through additional production. They were wrong.

This past year we went to the legislation and got the law renewed for four more years. When the legislators saw the numbers, they were happy to do it. To date, 743 enhanced oil recovery projects have been approved, which we expect will produce over 945 million additional barrels of oil. The well head value of that additional oil should exceed $14 billion at $15 a barrel.

The total positive economic impact back to the State is estimated at $41 billion. We estimate that $76 million will be paid to local governments and school districts through ad valorem tax increases during the life of these projects. There will also be additional sales taxes realized by the State.

Consider that the Strategic Petroleum Reserve now contains some 600 million barrels of oil purchased by the taxpayers at an average of $32 a barrel. Deputy Secretary of Energy, Mr. White, said it cost this government $50 billion in place as it is now. Our incentive is adding a recoverable quantity of oil one and one-half times greater than the entire Strategic Petroleum Reserve at virtually no cost to our taxpayers.

Commissioner Nabers, my colleague, will now tell you about two other tax incentive programs which are working well in Texas and which we also commend to you.

Senator BOREN. Thank you very much.

[The prepared statement of Mr. Nugent appears in the appendix.]

Senator BOREN. Commissioner Nabers.

STATEMENT OF MARY SCOTT NABERS, COMMISSIONER, TEXAS RAILROAD COMMISSION, AUSTIN, TX

Ms. NABERS. Thank you, Senators.

Knowing that the longer a well is inactive the less likely it is to ever return to beneficial production, we developed an incentive to encourage operators of our 80,000 stripper wells to return them to production.

We made it possible for an operator to revive a well that has been inactive for at least 3 years and get a 10-year, 100 percent severance tax exemption for the oil and gas production.

In the first 6 months of this program over 1,000 wells have been brought back to life, and that is more than three times the number for all of last year. Even though the State may lose some severance

tax revenue, these wells are expected to produce more than $126 million of oil and gas revenue at the well head value, and the sales tax back to the State alone is valued at $7.3 million.

And, as that positive economic impact ripples through the State, the total economic value in Texas will exceed $360 million. Not only does the State get the revenue, we also achieve the ultimate in conservation since production is usually is lost forever once wells are abandoned.

Another new incentive program encourages the drilling of new wells. Producers are able to get a $10,000 severance tax credit for every new field discovery well drilled in 1994 if at least 521 new fields are found State wide, and the Railroad Commission in Texas is coordinating the State wide count.

The tax credit would jump to $25,000 if 721 new fields are discovered. And, if the new field discoveries reach 842, each producer will receive the original $25,000 tax credit, plus an additional $25,000 tax credit for every well drilled in the field during the next 10 years, no matter who drills it.

Simply put, that means that the discovery of a reservoir that could accommodate 100 wells in 10 years would yield $2.5 million in tax credits for the discoverer. The credits are fully negotiable and may be sold or transferred to others.

Each new field discovered represents an average economic stimulus of $15 million to the State. These incentives are just the beginning and we feel that Federal action is critical. Job losses have already occurred. We now depend on foreign countries for our energy. We are losing infrastructure, service companies, and industry expertise. So we are here to urge you, especially this committee, to provide the leadership that is so desperately needed to protect and to preserve the Nation's energy producers.

Senator BOREN. Thank you very much.

Mr. Williamson.

STATEMENT OF BARRY A. WILLIAMSON, COMMISSIONER, TEXAS RAILROAD COMMISSION, AUSTIN, TX

Mr. WILLIAMSON. Mr. Chairman, Senators Breaux and Conrad, I, too, want to join my other Commissioners and the Commissioner from Oklahoma in saying thank you for letting us come here today to talk to you.

I also want, Mr. Chairman, to especially commend Beth Garrett, who was here earlier, on her work organizing this hearing and putting it together. She did a very good job, and I appreciate it.

As you know, domestic production in the United States is mainly and primarily marginal. Seventy percent of the oil wells and 45 percent of the gas wells in Texas are stripper wells, producing less than 10 barrels a day, or 60 MCF a day.

A small drop in price, increase in cost, or an extra regulatory burden here or there can easily remove the profitability of these wells. Since 1980, in Texas, over 61,000 wells have been plugged.

However, a little assistance from the government, like a tax incentive, can go a long way. When we began designing these incentives, we wanted to find ways to assist our biggest industry in the State of Texas at the lowest possible cost to the State. We had two goals in mind.

One goal, was to increase marginal production or maintain marginal production, and the other goal was to find new fields. Two questions kept popping up. How much would it cost; could the State afford it? Would the cost outweigh the benefits? Is there a way that we could design these incentives to lower that cost, or even break even?

Getting more wells pumping in Texas means a lot. When we manage our resources efficiently we build our economy. We create jobs, we keep our taxes low, and we reinvest in our industrial base.

Have these incentives that we have put together been a success? You bet they have. You have heard from my colleagues. We are bringing abandoned wells back into production, we are making existing wells more efficient, and we are creating jobs in the oil patch.

One thing we hoped, but we did not fully expect, is the most important thing: our State Treasury is making money on the deal. Texas has been the Nation's laboratory. We have taken the theory and put it into practice. In a relatively short period of time we have proven that the oil and gas industry will respond to these kinds of incentives.

Chairman Boren, we appreciate your help and your leadership, along with Senator Breaux and Senator Conrad. We know you are developing ways the Federal Government can join us as a partner. We need that. We need Federal assistance and we want to help you develop your plan.

We appreciate the opportunity to come before you today.

Senator BOREN. Well, thank you very much. The testimony of all of you has been extremely helpful because, as you know, we must deal here with a world in which we have static revenue estimates. We have a hard time convincing those in the administration, as well as our colleagues to take action based upon what we anticipate would be positive economic consequences.

And the fact that you can show that a program is working, not only in increasing the availability of a resource prolonging the life of some wells and encouraging more drilling, but also, obviously, is a very positive impact, even back to the revenue stream itself for State and local government, is very, very convincing.

I have just a couple of questions, and then I want to turn to Senator Conrad, and Senator Breaux, if he returns.

Let me ask you, Mr. Graves, first. I was astounded by that figure that we have had a real price decline of 73 percent since 1983.

In many ways, I think we are in a situation that is even more desperate in terms of what it is doing to undermine the domestic industry than we even faced in the mid—to late 1980's when there was a realization of the rest of the country that we were in a crisis. The situation now is just as bad, if not worse, and yet most people in the country do not seem to know that it is going on.

I know we have to be politically realistic in terms of what we try to do here. What do you think that this political reality means for our efforts? Obviously, there are others in other parts of the country that are not complaining about cheap energy prices right now.

But, so long as they do not think about what Secretary White said, that destroying the industry now may cause a real spike up of prices later on, they are thinking only short term, they like the

fact that their costs of production are lower right now, for example, or that, as consumers, they are getting a lower price.

Can we realistically, do you think, hope to pass any kind of import fee or any other kind of solution that would have an immediate impact on the price to the consumer, or do you think that we need to rely instead on production incentives to improve economics and the revenue flow to producers to keep them operating, finding new oil and preserving old wells?

What do you think that political reality would dictate at this time as the most promising way for us to proceed as we make suggestions when we meet with the President?

Let me say, my colleague from North Dakota also was another co-signer of a letter to the President and one that will be an active participant in that meeting when it occurs.

I was told by Mr. McClarty yesterday that the President definitely will receive us, it is only a question, given the Summit and other things that are going on, as to whether we will be able to do that immediately before or right after the Easter recess. But we do anticipate a favorable response from the President inviting us to this meeting.

What are your thoughts, given what we might like to do, but also given the political realities that we face?

Mr. GRAVES. Well, I think so much that the political reality is often a reflection of perceptions. And so much of the discussion around the domestic energy industry has focused on what the perception of that industry is really like and not, rather, what it really is like.

I think you have to focus the discussion into terms that people can understand. I am not sure that we will ever be able to convince people of the value, unfortunately, that our domestic industry has in the economy and the significant national security implications that are there. For whatever reason, those arguments have fallen on deaf ears.

I think, principally, it is an economic reason. People enjoy buying gas for 89 cents a gallon. I was in the grocery store over the weekend and a gallon of distilled water at the Albertson's in Oklahoma City costs 99 cents a gallon. At the corner, you can buy a gallon of unleaded gasoline for 89 cents. And I will leave it to you to figure out which is the more complex chemical process.

But the fact is, economics being what they are, people are less inclined to support a measure that directly affects their pocketbook.

I think Senator Breaux has an interesting proposal, and that is one of an environmental assessment, a tanker fee of some sort. I think we need to explain to people that the environmental damages are perhaps greater the more we come to rely on foreign imports and tankers and things like that, and not on domestic production.

Perhaps that is one way to focus the efforts of different groups and have them become a little more involved. But, unfortunately, it comes down to economics and it is never easy to explain to people that a large portion of the Desert Storm tag ought to be assessed to energy security. If you factor that into the price of crude oil that we import, then the cost goes way up.

Senator BOREN. Well, I understand. So, while we may be able to do some of these things, we are principally going to have to look,

in your opinion, at ways of increasing revenue flow to producers without having an immediate impact.

Mr. GRAVES. Yes, sir. Or reducing costs.

Senator BOREN. Reducing costs.

Mr. GRAVES. And perhaps that is what we can do best. And I think it is important that Congress understands that the States have recognized that they have a role that they must play.

And, with the lead that Texas is taking and the attempt of the IOGCC to inform other jurisdictions of their success, we are attempting, through several States, to implement these sorts of production incentives on the State level.

As I said, it is somewhat counter intuitive to talk about lowering State revenues during these difficult fiscal times for all States, but it is one that I think yields positive results. We have to take the lead on the State level, and then hopefully we can come to Washington and give you positive, real world examples of the economics benefits that flow from those incentives.

Senator BOREN. Right. Right.

Let me ask our colleagues from the Texas Commission, what you would say, based upon your own experience in terms of the incentives that you put in place in Texas, would be the most positive items that would be helpful to have adopted at the Federal level. Would it be a tax credit to stimulate both new production as well as maintain current production for marginal wells; what do you think would be most helpful, based upon the Texas experience?

Mr. NUGENT. Chairman Boren, I think you are going to have to show that whatever you do benefits the rest of society as well as the industry. I think if you could get a rapid write-off of the front-end cost—lease, geophysical, development—or if you could get an accelerated depreciation and then require the benefits of that to be put back into drilling and development where our society would get the additional reserves and that type of activity, that might be saleable in light of the fact that we went through what you are going through with the Texas Legislature back in the late 1980's.

Senator BOREN. Right.

Mr. NUGENT. We listened to the experts, the consultants, and the college professors and it did not sell. But, when we got the bill in place and we got the actual economic facts to back it up, it is easy to go back and get additional programs, and that is reflected by our continued accelerated activity in Texas.

Senator BOREN. Right.

Do others want to add anything to that, or are you pretty well in agreement with that?

Ms. NABERS. Yes.

Senator BOREN. Do you have, in a study form that could be supplied to us, your experience? You cited the numbers in terms of economic impact, of revenue gain, as a result of these incentives.

Is this in a form that could be supplied to us and that we might then be able—we have to convince our revenue estimators, as I mentioned, that they need to look at something more than just a static approach.

All too often they say to us, well, a lot of what you are saying is theory. Here, it seems to me, we have some very strong empirical data that should give them the ability to look at revenue estimat-

ing on a less static basis, particularly looking at the Texas experience.

Ms. NABERS. Senator, we do have that available and would be glad to supply it to you.

Senator BOREN. I would appreciate that very much. I think that would be helpful to us.

[The data appears in the appendix.]

Senator BOREN. We all have those frustrations. Everyone here has tried to get revenue estimates that were really sensible from the real world impact and we have not always been able to do that.

Mr. GRAVES. Mr. Chairman.

Senator BOREN. Yes.

Mr. GRAVES. Two points that I think will make a big difference for marginal production. That is, an attempt to repeal the Net Income Limitation——

Senator BOREN. Right.

Mr. GRAVES [continuing]. And its ability to restrict the percentage depletion deduction, and additional relief through the AMT.

Senator BOREN. Right.

Mr. GRAVES. And I encourage you to ask the producers who will follow what impact has really occurred in their businesses as a result of the changes that went through just 2 years ago, and what it has been able to do in terms of freeing up cash internally because that is where you will see a significant impact, I think, particularly when you look at percentage depletion and its application.

Senator BOREN. Right. I think you have raised an important point. We have to keep in mind that if we do not modify the AMT with any kind of relief that we are providing tax credits of any kind, that we really do not do much good if the AMT is going to take it all away with the other hand.

Senator Breaux?

Senator BREAUX. Thank you Mr. Chairman.

I want to follow up the point the Chairman was making. I would really like to send the Texas experience to the Joint Committee on Taxation so they can see what you all did, and I want to ask you some questions about it.

When you were figuring out how much these tax incentives and tax credits would cost, how did you go about figuring it out?

Did you hire outside consultants and say, to them: "if we gave the industry this amount of credits, how much is a State going to receive in increased production?" How did you go about making those estimates?

Did you have to go to the legislature and say: "We need you to pass the following bills? We think it is going to cost you $100 to pass the package, but we think we are going to generate $300 in increased revenues." How did you go about determining how much your tax incentives would ultimately end up generating for the State of Texas?

Mr. NUGENT. Well, when we first went to the Legislature on the secondary recovery project, it was a new project, it was a new idea. We utilized our own staff. We did our own calculations and they admittedly were conservative.

That same crew put in my speech today that the Strategic Petroleum Reserve cost this Nation $19 billion, and Deputy Secretary

White said it cost $50 billion. So, we need to get one of these Federal planners down there to look at our figures and present them to you in the right light.

Senator BREAUX. Well, that is a real important question. This is what Chairman Boren was talking about. I have a bill to provide a deep-water production tax credit, for instance, a five dollar a barrel tax credit. I believe it will generate a lot more than five dollars a barrel in increased production because the production is not occurring off-shore.

It has almost been an impossible thing to get the folks here in Washington to understand that some of these tax incentives end up producing results that greatly outweigh the cost of the incentive. That is why the incentive is being put into place in the first place.

Is it clear that on every one of the things that you recommended which were a reduction in taxes to the State of Texas that the end result was an increase in revenues to the State of Texas because of more production?

Mr. NUGENT. Let me give you one example in detail and we will be glad, as a Commission, to furnish you the breakdown of the rest of it on bringing the old wells that have been out of production for 3 years or more back on production and no severance tax for that production.

You have an ad valorem tax based on the production rate. As the production comes up, the ad valorem tax to the city, the county, and the school district kicks in and they collect money.

The products from that oil going through the refinery, through the pipelines, and the rest of it generate economic activity, all the way to the sales pump where you collect, in Texas, 20 cents a gallon from the sale of gasoline.

So you have got all of those incremental programs that are impacted directly by the result of what you do, and we were able to sell those ideas. Now we can back them up with empirical facts showing that it does occur.

Senator BREAUX. You all testified, each one of those tax proposals cost something. The basic question is that on every one of the incentives adopted you stated more revenues for the State of Texas were produced—did you lose money on it or did you make money?

Mr. WILLIAMSON. Senator Breaux, I think what we try to do is we try to design the tax incentive in such a way that we did not lose money. We encouraged the industry to go out and find more oil and gas to create more economic activity.

The difficulty that Deputy Secretary White is going to have to deal with when he deals with the Treasury is, they will be able to pinpoint the amount of cost, but the Secretary of Energy will not be able to pinpoint the amount of increased activity.

So what we tried to do was to base the incentive on the increased activity. The Three-Year Inactive Well bill is a perfect example. We excused the severance tax, the tax the State received on any oil and gas that is recovered from a well that has been inactive for 3 years, on the assumption that most wells that have been inactive for 3 years do not come back on line.

I went over and I discussed it with the Comptroller and we looked at the economic numbers, and all three of us together de-

cided it would be in the best interest of the State, and the Legislature agreed.

We had 368 wells that came back on line in 1992 when this incentive went into effect. In September of 1993, we have had 1,063 new wells that have come back on line, three times what went on in 1992.

So, we have made 2:1, 3:1 on our money, not including what the Chairman was talking about with the county tax, the local tax. That goes on regardless, because they did not cut their tax, only the State cut its tax. So we have generated 2–3:1 on sales tax, ad valorem taxes.

Senator BREAUX. Is that true for all of the programs that were enacted?

Mr. WILLIAMSON. That is on that particular one.

Senator BREAUX. How about the other ones?

Mr. WILLIAMSON. The enhanced oil recovery is another one. Commissioner Nabers can tell you about that.

Senator BREAUX. How about that one?

Mr. NUGENT. On the enhanced oil recovery you had old reservoirs that were reclining and they had gotten down where they were hubbing the economic level at which they would continue to be operating.

Senator BREAUX. I understand all that. The answer I am looking for from all of you, and I got it partially with Mr. Williamson, is did the State of Texas make more money because of reducing the taxes?

Mr. NUGENT. Yes, they did.

Ms. NABERS. Yes.

Senator BREAUX. That is the important point we have to answer up here. People are going to say, you want to give a $5 a barrel tax credit; are you out of your mind? That is going to cost the Federal Treasury $8 zillion dollars. I want to be able to come back and say with some degree of certainty that, no, you are going to get more production, and more production is going to generate more in tax revenue and the Treasury will make money off of the deal.

Mr. WILLIAMSON. We made two to one on our money.

Senator BREAUX. Two to one on your money.

Ms. NABERS. Senator, what we really did is we forced members inside the industry to do things they would not have done otherwise, so, with every one of these incentives, we generated income for the State of Texas.

Senator BREAUX. What about the argument that they would have done it anyway?

Ms. NABERS. They would not have done it. It was very, very obvious, they would not. Every one of these incentives were based on the proposition that there would be no more activities. Those wells had been inactive for 3 years. They most likely were never coming back and we were going to lose all of the natural resources.

Mr. GRAVES. Senator, one of the things that is hard to quantify in this is the concept that, before they can ever get a credit, producers are going to have to expend substantial sums to get there.

The Section 29 credit was that way, if you will remember, where they had to go out and drill the well, they had to find the prospect

and produce it in commercial quantities before they ever got the credit.

That is the hard part for revenue estimators to understand, that you are talking about spending a bunch of money up front. We are having the same problem in Oklahoma trying to convince revenue estimators that, if we do nothing, the State of Oklahoma will lose at least $10 million in gross production taxes, and that does not even quantify the resulting loss of economic activity.

We are trying to convince them that if you give producers an incentive to go out and spend money and maintain production at existing levels, the State is actually going to make more revenue than they would otherwise have gotten and it will not cost them anything; you give a little bit on the other side, but you have levered so much additional activity.

That is why we are hoping to try and mirror the Texas experience and come back to you with some numbers as to what has resulted so we can give you a little higher comfort level when you work with the Federal authorities about resulting activity.

Senator BREAUX. Well, I think that information has been very helpful and I think what you have done in Texas is a clear-cut example that by spending a little bit up front you have generated a whole lot more on the back side, which is exactly what we are trying to do here on the Federal level.

It is clear that the Tax Code has the power to destroy, but, if it is used properly, it also has the ability to encourage a certain type of activity, and that is what we are trying to do.

Thank you, Mr. Chairman. Thank the panel.

Senator BOREN. Thank you very much.

Senator Conrad?

Senator CONRAD. Thank you, Mr. Chairman. I want to thank you, as well, for having this hearing because I am hearing more and more from my State on this subject. We are the eighth largest oil producer in the country. Most people do not think of North Dakota that way.

They know we produce a lot of wheat, a lot of barley, a lot of sunflowers. Most people do not think of us as a large energy State, but certainly we are. We have seen oil activity drop precipitously from the late 1970's.

Mr. Graves, I wish you would take it a little easier on these revenue estimators. That is what I used to be. I used to be the Tax Commissioner in North Dakota. One of my jobs was to estimate the revenue for the State.

North Dakota is the most difficult State in the Nation for which to project revenue, according to the consultants, because the twin pillars of our economy are energy and agriculture. If you want to project 5 years into the future oil prices and the price of wheat, good luck. That is the reason I had to come to the Senate. [Laughter.]

I wanted to escape that challenge.

Let me just, if I might, go to some basic calculations that might be helpful as we talk to colleagues about the crisis for domestic oil producers. The current price of oil, just for ease of computation's sake, is running about $15 a barrel. It may be something less than

that, actually, as we sit here today. I do not know what the price of oil would be today.

Mr. GRAVES. Twelve dollars.

Senator CONRAD. Twelve dollars. Well, let us take $12. In Texas, could you tell us what the State severance tax is per barrel?

Mr. WILLIAMSON. It is 4.6 percent per barrel of oil, 7.5 percent per Mcf of gas.

Senator CONRAD. 4.6 percent?

Mr. WILLIAMSON. Percent. Right.

Senator CONRAD. So that would be about a 60 cent tax.

In Oklahoma, Mr. Graves, what would——

Mr. GRAVES. The gross production tax is 7.095.

Senator CONRAD. 7.095. So, about 84 cents.

Mr. GRAVES. Yes.

Senator CONRAD. About 84 cents. Obviously, an incentive on the price side overwhelms anything on the tax side. Is that right?

Mr. GRAVES. Yes, sir.

Senator CONRAD. For example, a $5 a barrel oil import fee would overwhelm anything we could do on the tax side with respect to these State levies. Would that be correct?

Mr. WILLIAMSON. That is right. You are dealing with 30–35 percent of the income tax. We only deal with 4.6 percent or 7.5 percent.

Senator CONRAD. What would be the Federal taxes on that $12 barrel of oil?

Mr. GRAVES. You are presuming there is net income on the lease.

Senator CONRAD. Right.

Mr. GRAVES. I suspect they are losing money.

Senator CONRAD. I would suspect they are, too. So there is no——

Mr. GRAVES. There is no gross production tax on the Federal level.

Senator CONRAD. So, in terms of what we could do, do we have an equivalent levy at the Federal level to what you have at the State level.

Mr. GRAVES. You do have a levy on the Federal tax scheme. Because of the Net Income Limitation, you are not allowed to take your percentage depletion deduction if you have zero income on the lease. One hundred percent of no net income is nothing.

Senator CONRAD. Yes.

Mr. GRAVES. If you repeal the Net Income Limitation, you will allow the producers to utilize the percentage depletion allowance that is there. If you remove the percentage depletion from the AMT, you have allowed them a more complete benefit of that percentage depletion allowance which, interestingly enough, helps them more when prices are down. As it stands now, they do not get anything.

Senator CONRAD. Let us talk about that in my simple example terms because when we talk to our colleagues it is going to be terribly important that we can express to them in a phrase what we are talking about. We need to be able to make them understand and picture what it is we are talking about.

On $12 oil, how much difference would the Net Income Limitation changes that you are talking about make, Mr. Graves?

Mr. GRAVES. Off the top of my head, the percentage depletion rate is 18 percent. It is about 18 percent for the depletion rate at a price like that. It would be easier for the producer to achieve that, and I know that Mr. Cantrell, for example, is going to testify a little bit and will run you through the numbers of his company and how the percentage depletion affects him directly and can give you some very specific numbers as to how it impacts an independent producer.

Senator CONRAD. Have you got a sense of what it would do on $12 a barrel oil?

Mr. GRAVES. I could not tell you off the top of my head. I could not run that through. I am not sure.

Senator CONRAD. All right. Any of the people from the Texas Railroad Commission have a sense of what that would mean per barrel?

Mr. NUGENT. I do not.

Senator CONRAD. All right.

Mr. WILLIAMSON. You would have to work it into a particular scenario over a company to know what credits they can move around.

Senator CONRAD. Yes. If we do not have that forthcoming in the succeeding panels, if one of you—Mr. Graves, perhaps—could provide some examples, because I think that would be the best way to get at it. That would be very useful, at least to this member of the panel.

Mr. Chairman, I know you have another panel so I will not take longer here. But I think it would be terribly important to us to have some simple examples that flow right through to a barrel of oil.

Senator BOREN. Right.

Senator CONRAD. It is shocking, really, that we are down to $12 a barrel for oil. I think we really have an obligation to get the country to focus on this because it has enormous consequences for the future.

When we talk about the domestic oil and gas industry people are remembering $30 a barrel for oil. When we were back in the 1970's and we were headed for $100 a barrel, that is one thing. Then we could talk about the big, evil oil companies and, by God, we have got to make sure that there is a windfall profits tax, and all the rest.

Now we are talking about survival of a basic and fundamental industry in this country that has enormous consequences, not only to the economics of this country, but to the security of this country.

And this really cries out for some Federal action. It is not going to be easy to achieve, as Senator Boren says. But I think we have got a clear obligation to educate our colleagues with respect to these questions, so I am very, very pleased this panel has been here because I think you have given excellent testimony.

Senator BOREN. Thank you very much, Senator Conrad. I, of course, could not agree with you more. You have put it very, very well and to the point. I do not believe that most of our colleagues, and I certainly do not believe that the American public at large has any idea of the economic damage that will be done, as well as damage to the national security interests of the country, if we do not

deal with this problem and deal with it in a way that is not just a band-aid, but deal with it in a way that will really do some good.

Senator CONRAD. You know, all you have to do is come to a State like mine and you see where we were in the 1970's with respect to oil production and oil exploration, and you go there today and it is dead.

And I will tell you something. If people could see what it costs to bring that back, I think they would more readily understand. This is a capital intensive business, and once you lose it, it is very difficult to get back.

For example take the case of stripper wells. You do not get them back if they shut down production. The panel has presented some cases where, because of an incentive, you are able to bring some of the wells back into production. But the fact is, the longer a well is shut in, the less chance that it will ever be brought back.

Senator BOREN. Well, thank you very much for your comments. Again, I want to thank the members of the panel for being here and for your excellent testimony. We will look forward to receiving some additional information from you in a form that we can use it in terms of revenue estimates, and also in making our case at the White House when we go down to visit with the President.

I am very hopeful, as I said. Seven members of this committee, bipartisan, have signed a letter to the President and have indicated a strong interest in this subject. I am hopeful that if we can get a serious hearing there that this committee will be able to bring to the full Senate and the full Congress a meaningful proposal. Thank you very much.

Mr. NUGENT. Chairman Boren, Senator Breaux and Senator Conrad, we will be glad to give you that factual, statistical information in prose, in graphic form and any other way we can that we think might help you sell it.

Senator BOREN. Well, thank you very much. We will get our in-house, on-panel revenue estimating expert to help us in the analysis of this information when it comes.

Senator CONRAD. I will tell you, by the time I am done with them they will be so confused over there in Joint Tax.

Senator BOREN. That kind of confusion they need, I think.

Our next panel consists of Mr. George Alcorn. I will introduce the panel to save time, as they come forward.

Mr. Alcorn is testifying on behalf of the Independent Petroleum Association of America, of which he is the Chairman. He is the President of Alcorn Exploration, Incorporated, a private exploration and production company in Houston.

Mike Cantrell is a typical Oklahoma independent producer who relies primarily on marginal production. He is the president of Oklahoma Basic Economy Corporation, an exploration and drilling company in Ada, OK. He is currently chairman of the Oklahoma Energy Resources Board. He has been very active in the leadership of the Oklahoma Independent Petroleum Association.

David Murfin, president of Murfin Drilling Company in Wichita, KS is third generation in a small family business which dates back almost 70 years. He is a director of the Kansas Independent Oil and Gas Association, and he is the National Chairman of the Liaison Committee. I would say to my colleagues, the Liaison Commit-

tee is composed of representatives of the 32 oil and gas associations, principally State associations across the country.

Last, is Dr. Charles Mankin, who is the Director of the Oklahoma Geological Survey, a person that I have known for a number of years, and who has been advising me and providing information that has been very, very helpful to me for many, many years.

His academic and scholarly accomplishments are, indeed, impressive, and perhaps I might indicate how well he is regarded in our State and how well his academic achievements are regarded by citing the fact that he is not only Director of the Geological Survey and a Professor of Geology at the University of Oklahoma, but he has been made an honorary Professor of Geology at Oklahoma State University, which I think must be the first time that that has ever happened in history. So, he is a person with universal respect, obviously, to have achieved that dual distinction.

I think we will just go right down the line. I might ask, obviously, because our time is fleeting and we have another panel as well to hear from, and I hate to ask you to contain yourselves—it would be impossible if it were a panel of Senators before me for me to ask you to contain your remarks—but, if I could appeal to you to do so, then we will do our best to also contain our questions and be to the point so that we can also give full attention to the concluding panel as well, because I know there is some interesting testimony.

I might say some, Senator Conrad, are directly relevant to why things are going better across the Canadian border than they are across the border in North Dakota. So, I want us to be able to push on. Mr. Alcorn, we are very pleased to have you here and we would be happy to hear from you.

STATEMENT OF GEORGE A. ALCORN, PRESIDENT, ALCORN EXPLORATION, INC., HOUSTON, TX, ON BEHALF OF INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA

Mr. ALCORN. Thank you very much, Senator. It is a pleasure to be here. I must tell you how important it is to be in the presence of advocates of this industry; I know that all three of you are.

I will just tell you, when John Breaux is on the camera or leans into the microphone and the subject is the oil and gas industry, you can tell by his response that he is an advocate; you can tell that by Senator Conrad, you can tell it all the time by Senator Boren. This industry appreciates it a lot.

You have asked the oil and gas industry to come together on some of these issues. I will tell you that IPAA is working hard on it, as is Mid Continent and API. There is also a group called the Natural Gas Supply Association that is run by Nick Bush. He is the head of staff. Bob Hauptfuhrer is a real good independent from Dallas, and he's the industry man that runs that thing. They have made good contributions to these issues.

But, I think what is most important and impressive to independents and producers, all around the country, is the way you guys, Congress, are coming together. We appreciate that a lot. I know it is hard to get 100 or so people in this body to be advocates of this industry and it is impressive that you have and it is important to us.

Frankly, I would prefer to be here to talk about the advances independents are making with new 3–D seismic and horizontal drilling technology, or tell you how reliably and well the natural gas industry performed during this severe winter, its first test in a new, deregulated marketplace.

I would rather talk about how independents are moving into a dominant role as larger companies shift more of their investments overseas, or how independents have taken on a leadership role in off-shore and on-shore exploration in drilling to develop the enormous resource that is left in this country. Those are the things that I would like to talk about.

But my message today is much more sober. America's independent oil industry is in trouble; you have heard it all this afternoon. The source of that trouble, frankly, is very clear, it is low prices at the well head. The solution is much more complex.

Adjusted for inflation, today's oil prices are roughly equal to those of 20 years ago. In the same period of time, our costs have skyrocketed brought on by a flood of regulatory requirements that make America undoubtedly the most expensive place on earth to produce oil. Add to low prices and rising costs the natural decline in production from the Nation's older oil fields, and you have a recipe for economic disaster.

Most at risk are marginal oil wells. America operates about 600,000 oil wells that produce 6.8 million barrels a day. Of that number, more than 450,000 are stripper wells. You have heard these numbers several times before. They produce, on the average, 2–3 barrels a day and collectively they account for more than one million barrels a day.

Other high-cost wells, like the heavy oil wells in California and other western States, produce another 700,000 barrels per day. We get another 5 percent or so of domestic production from high-cost wells which produce a lot of water and have to be properly treated and disposed of.

Many, if not most of these marginal wells are, at today's prices, uneconomic. We have heard that again today. Simply stated, you cannot sell the oil for what it costs to produce it.

Hundreds of independent producers, many of them in family-owned businesses, are barely holding on and they cannot do so much longer. Their cash flow is negative. They have already cut their expenses and payrolls to the bone and more than 13,600 oil industry jobs have been lost since November the 1st.

If prices stay where they are today, many of these companies are going out of business. Their oil wells will be plugged and abandoned, their reserves lost forever.

Unless Congress acts, and acts quickly, the IPAA and dozens of other industry associations—just last Friday, we filed a trade petition calling for a national security investigation on the impact of oil imports, and we appreciate your support in that issue. We need to get this administration involved in these issues. Your comrades are really doing a great job of that, and we really appreciate it.

As you know, the industry has been working with members of Congress to develop an action plan to deal with this crisis, while no substitute for improved prices, tax policy changes such as pro-

duction tax credits can help reduce producers' cost and encourage new drilling. That will help.

But, I recognize, as you must, that these measures will not save everybody in the business. However, they will make those who survive the price downturn better able to compete and supply the country with oil and natural gas. Our recommendation for the action plan also includes regulatory reforms, and are spelled out in detail in our written statement.

I just want to remind you that we seem to be becoming more and more dependent, this country does, on foreign oil. And, as you know, I am the Chairman of the Independent Petroleum Association of America and if these imports continue to increase at the rate that they are, we may have to change our name to the Dependent Petroleum Association of America.

Thank you very much.

Senator BOREN. Thank you very much. We hope that name change will not be necessary.

Mr. ALCORN. I hope so, too.

Senator BOREN. We are going to try to do all that we can to prevent that circumstance.

[The prepared statement of Mr. Alcorn appears in the appendix.]

Senator BOREN. Dr. Mankin.

STATEMENT OF DR. CHARLES J. MANKIN, DIRECTOR, OKLAHOMA GEOLOGICAL SURVEY, NORMAN, OK

Dr. MANKIN. Thank you, Mr. Chairman, Senator Conrad. I appreciate the opportunity of testifying today.

I would like to begin with a little bit of history. Four years ago, July 27, 1990, to be specific, I testified before your committee on the domestic petroleum situation. In reviewing my testimony, I found that the issues that were being discussed at that time are the same issues we are discussing today.

The basic differences are: we are consuming more crude oil, we are producing less domestically, and we are, thus, more dependent on foreign sources of supply.

In the intervening 4 years, our cumulative merchandise trade deficit has grown by several hundred billion dollars. We have lost several hundred thousand jobs in the domestic petroleum industry and our economy is in sad shape.

As a matter of historical note, the week following the hearing in 1990, Iraq invaded Kuwait. Without hesitation, we put the lives of 500,000 men and women at risk in the Middle East and spent billions of dollars to protect our cheap oil, yet we seem to be unwilling to take the steps necessary to avoid having to do that very same thing again. Since history has a bad habit of repeating itself, I wonder what the next few weeks may have in store for us.

In the few minutes I have, I wish to make three points. (1) The U.S. is not running out of oil, but we are running out of domestic supply. (2) The structure of the domestic industry is changing from a mix of major integrated oil companies and small operators to largely small operators. (3) If we decide to continue business as usual we will have to greatly expand our Strategic Petroleum Reserve and all of those issues that relate to it.

With respect to the first point, since Colonel Drake drilled his famous well in Titusville, PA, we have produced more than 164 billion barrels of oil in the United States. Since we recover slightly more than a third of the oil in a reservoir, this means that we have more than 400 billion barrels remaining in known fields.

In the past, it was believed that this remaining oil only could be recovered by using sophisticated and expensive chemical flooding and other enhanced oil recovery methods.

However, recent studies in reservoir characterization have shown that, at least for some classes of reservoirs, a substantial amount of that remaining oil can be recovered using current technologies such as targeted in—field drilling, horizontal drilling, and other technologies that have been alluded to earlier that can be applied under economic conditions equivalent to prices in the $20 range. In addition, it must be noted that opportunities for new discoveries in the U.S. are far from over.

One example in Oklahoma: more than 400,000 wells have been drilled in our State since Statehood in the search for petroleum. The conventional wisdom is, with that many wells drilled, there is nothing left to be found.

Let me give you one example. In 1991, a discovery well was drilled in the Arbuckle Group in an area in northwestern Oklahoma known as the "Ames Hole." With subsequent drilling, that area is now expected to produce in excess of 100 million barrels of oil. That is a large field by any measure, and I suggest there are many more like that left to be found if the economic conditions prevail that will allow that to happen.

Running out of oil? I think not. Running out of economic incentives to explore for oil in the United States? Absolutely.

To the second point. The changing character of the domestic industry is important to the future of domestic production. The major oil companies, for a whole variety of obvious reasons, see better economic opportunities overseas. Many of those have been alluded to here earlier today.

The small companies and independents have little choice but to produce in the United States or perish. In 1984, in Oklahoma, major oil companies operated 12 percent of the producing oil leases and produced 40 percent of the petroleum. Today, major oil companies in Oklahoma operate 7 percent of the producing leases and produce less than 20 percent of the petroleum.

Small companies and independents do not have the financial resources to survive for long periods of oil prices that are near or below cost of operation. Once a small business, regardless of whether it is an oil company or a hardware store, goes out of business, it is commonly gone forever.

The Nation spends a great deal of time and financial resources attempting to protect and nurture small businesses. Oklahoma has more than 40,000 small businesses in the form of producing oil leases. Why are these small businesses not worth saving?

The final point. This Nation spent more than $18 billion, as you heard earlier, purchasing 587 million barrels of oil for the Strategic Petroleum Reserve. That turns out to be more than $30 a barrel. I wonder how many producers would like to be getting that price today.

The SPRO is costing us $1 billion in interest and on money spent in support of the program. That supply would last us about 80 days if our imports were disrupted and we attempted to do business as usual.

The most effective strategic petroleum reserve this country has is its 600,000 producing oil wells. They generate revenue, they create jobs, and they pay taxes. The SPRO may create jobs, but it does not generate revenue nor pay taxes.

In summary, the opportunity exists to sustain domestic production of petroleum. The benefits are obvious. Domestic production generates revenue, creates jobs and pays taxes.

Alternatively, if we do nothing to address the plight of the domestic industry, then we had better be prepared to greatly expand the strategic petroleum reserve and make sure that we maintain a strong military because I sincerely believe that the time will come when it will be necessary for us to acquire, by force if necessary, a continuing supply of cheap oil to sustain our economy. The way things are going, that time may be much sooner than any of us would care to imagine.

Thank you.

Senator BOREN. Thank you very much, Dr. Mankin.

[The prepared statement of Dr. Mankin appears in the appendix.]

Senator BOREN. Mr. Cantrell.

STATEMENT OF MIKE CANTRELL, PRESIDENT, OKLAHOMA BASIC ECONOMIC CORPORATION, ADA, OK

Mr. CANTRELL. Yes. Mr. Chairman, Senators Conrad and Breaux, we appreciate your leadership in this industry and the opportunity to be here today.

Basically, I am a small marginal oil producer. I operate 107 stripper oil wells, all within a 25-mile radius of my home in Ada, Oklahoma. Those 107 wells average 3.58 barrels per day, per well. Needless to say, we have a very bare bones operation with low overhead cost, way below the industry average.

I have compiled some figures from my 1993 corporate tax return that shows some pretty startling numbers. At the current price level of around $14, if you assume $14 would be the price instead of the $12 that we have got today, my company would lose $148,000 next year.

This simply means that we will have to shut down about 25 percent of our current production and cut costs even further through layoffs and whatever measures we have left to do. Obviously, we are not going to lose $148,000 next year, we are going to make adjustments through those layoffs and through shutting down of the production.

If the $3 per barrel tax credit currently under consideration by this committee was implemented, our corporation's losses would be cut to $18,000 for next year. That is at a $14 average price. At this level, we could keep most of our production on line and all of our employees working.

Frankly, our company is probably one of the healthier companies operating in Oklahoma. The State's average oil production is somewhere around 2.7 barrels of oil per day. My company is almost a

barrel a day ahead of that average. I was feeling pretty good about that until Mr. White said that anybody producing less than four barrels a day was losing money. So, I have still got some more work to do on increase in the production side.

We rank 98th in oil production out of 4,925 companies that operate in Oklahoma. Over 3,000 of these companies produce less than 20 barrels of oil per day. We, and these other companies are non-integrated companies. That means that we have no way to pass on our cost.

We simply get paid a certain price for our product and we have no way of passing on cost. So, as our price has declined, we lose money. We are not integrated. We do not have a way to pass on the cost through the sale of a final product.

In the past 10 years, we have seen our environmental cost grow at an exponential rate. We now have one person in our office that just does nothing but environmental and regulatory compliance.

At the same time, we have seen our tax incentives available to keep marginal oil and gas wells running severely curtailed. The depletion allowance at this price range today is currently at 19 percent because the marginal treatment of the 15 percent rate goes up. That is down from the 27.5 percent historical level. This is an allowance made to encourage reinvestment in a continually depleting vital asset.

As I see it, for my company, the most critical computation that really affects depletion or the actual depletion rate is the Net Income Limitation computation. On a property by property basis, we are only allowed to use the depletion allowance to the point that it does not exceed 100 percent of the taxable income of the property. For my company specifically, that means that last year's depletion allowance at the beginning of the 19 percent depletion allowance rate——

Senator BOREN. Right. It would be phased up under the——

Mr. CANTRELL. That is right. Once you have considered the Net Income Limitation computation, the actual depletion allowance comes down to 6.6 percent actual. Then, once you compute the 65 percent of all taxable income rule back into effect, our effective depletion rate goes down to 2.6 percent. At the current price level of 14 percent based on the same numbers, same cost this last year projected for next year, it would be 21 percent beginning depletion allowance.

Senator BOREN. Right.

Mr. CANTRELL. After Net Income Limitation, it goes down to 3 percent effective depletion rate. Then, after the 65 percent rule is applied, it goes all the way down to zero. We get no depletion.

So, in effect, the depletion allowance is not preserving marginal well properties, it is quite the opposite. The very properties that need the allowance the most are unable to get it.

Senator BOREN. They are unable to take it.

Mr. CANTRELL. This is really punitive to more marginal properties.

Senator BOREN. That is something that people just absolutely do not understand. I am really glad to have your practical testimony on that point.

Mr. CANTRELL. That is right.

Of course, the thing that is most concerning about this is the loss of infrastructure of our oil and gas asset. As Dr. Mankin stated earlier, over half the oil we have ever produced remains in the ground. It can be taken out only when the price is adequate to provide the technology for extraction.

If we plug these wells, if we plug these thousands of marginal stripper wells, then that is an asset that may be lost forever, so it is important to us that we preserve this vital asset. And your suggestion of three dollars a barrel tax credit would go an awful long way to do that, and I commend you for that.

Thank you very much.

Senator BOREN. Would you state again, how many employees you have?

Mr. CANTRELL. I have eight total employees; five in the field and three in the office.

Senator BOREN. And you think a three dollar tax credit would result in you not having to let how many employees go, and how many wells would not be plugged that otherwise might be shut in or plugged?

Mr. CANTRELL. Twenty-five percent. I calculated about 25 percent of my production, at these current prices, needs to be shut down now that I have not shut down.

Senator BOREN. You could maintain virtually all of it with the——

Mr. CANTRELL. I could maintain all the employees.

Senator BOREN. And virtually all of the production.

Mr. CANTRELL. Yes.

Senator BOREN. Thank you very much.

[The prepared statement of Mr. Cantrell appears in the appendix.]

Senator BOREN. Mr. Murfin.

STATEMENT OF DAVID L. MURFIN, PRESIDENT, MURFIN DRILLING COMPANY, INC., WICHITA, KS, AND CHAIRMAN, LIAISON COMMITTEE OF COOPERATING OIL AND GAS ASSOCIATIONS

Mr. MURFIN. Thank you. First, I would like to express my appreciation to you for having this session in this committee. It is doing a great deal for the industry.

First, I would like to offer my comments based on my personal views as a Kansas independent oil and gas operator. Second, I would like to offer my comments in my capacity as Chairman of the Liaison Committee of Cooperating Oil and Gas Associations.

The Kansas oil and gas business is in a state of crisis. Oil production in Kansas is at a 59-year low. In the past 10 years, Kansas oil field employment has decreased 57 percent; the Kansas rig count is down by 78 percent. Our own rig crews have had one 3 percent raise since they took a 10 percent wage cut in 1986, so they have had virtually no increase since 1986.

In 1992, new oil reserves found in Kansas were only 8 percent of the current annual Kansas production, so we are only replacing 8 percent of what we are producing in Kansas.

Currently, we receive about $11 per barrel for crude, three dollars below the New York mercantile price of about 28 cents a gal-

lon, or, to use the water price, it is about a third of the price of a bottle of drinking water.

Approximately 95 percent of the 45,000 producing oil wells in Kansas are classified stripper, averaging 2.4 barrels of oil a day. A recent article in the Wichita Eagle portrayed the economics of operating the average Kansas well. The bottom line was a loss of $350 per month, on average, per well.

These same wells could also be characterized as Kansas consumers spending over $13,000 annually on Kansas goods, services, labor and utilities. This represents over $500 million annually in Kansas consumption, which we estimate would take almost 30,000 new jobs to replace the loss of the economic base from these marginal wells in Kansas alone.

In our own company, of the 374 oil and gas wells that we operated last summer, to date, we have already shut-in 105 wells, or 28 percent of our wells because they are not economic at today's price. We probably have another 50 that we should be shutting in.

To give you a quick sense of the crisis feeling in the oil field in Kansas, the following are comments from a recent town hall meeting in Hays, KS, with over 300 small producers or small oil field business owners attending. The majority wanted to totally shut-in their production to try and get a message to Washington, but quickly saw their bankers would not let them. Many were upset because the Windfall Profits Tax pulled over $50 billion from the industry.

The crowd was confused because while they were meeting in rural Kansas in a crisis the President was in Russia offering substantial support for the Russian oil industry, but disagreed with the paying of five cents per barrel to a reserve for cleaning up tanker spills when their inland production actually reduces the likelihood of tanker spills.

They point out they are totally dependent on the well head revenue only, primarily from marginal wells, to stay in business. They suggest that future purchases for the strategic petroleum reserves should come from marginal wells at a higher market price, thereby also protecting the strategic reserves available in these marginal wells.

From a Kansas perspective, the preservation of marginal wells should be the primary focus of any relief in the industry. Any relief should not be spread so thin as to not achieve that objective.

If additional resources are available, incentives for new wells should be supported. And perhaps one of the best things that could be done, in addition to tax credits, would be to allow the expensing of all costs associated with the drilling of a new well. This would immediately stimulate drilling activity.

Now, to further discuss the effectiveness of tax increases, I would like to switch hats and make some comments in my capacity as Chairman of the Liaison Committee.

Other than the individual submissions below included in the record, the views I will state have not been specifically endorsed by any of the 25 groups active in Liaison, however, I believe they accurately reflect the sentiment of our industry.

My message is simple. Our biggest problem is one of price. Accordingly, if this committee wants to know about the effectiveness

of tax incentives as a way to address the industry's problems, my answer is that the most effective tax incentives will be those that readily substitute for cash at the well head. I am not a tax experts and I do not know whether credits are the most effective mechanism.

Some people say there may be so many limitations on the use of credits that removing the restrictions on the depletion rule, like Mike was talking about, might be a better answer. One of the primary limitations I am concerned about would be the need for the credits to be fully chargeable against alternative minimum tax, which most small independents pay.

Without this, I am afraid the credits would least help the people who need the relief the most. Others point to the undeniable success of the Section 29 credit in stimulating drilling.

In Michigan, for example, this credit was largely responsible for drilling 4,000 wells and two trillion cubic feet of reserves being added. I do not know what the best answer is, but I do know that in the low-priced environment that faces us today, tax incentives much be substituted for cash at the well head as much as possible.

In conclusion, I have submitted several documents for the record on behalf of individual associations that belong to the Liaison Committee. I encourage you to review these submissions in detail.

But I would note that most have one thing in common, the concern that low oil prices are threatening the ability of this industry to contribute to natural security. I believe this underscores the point I made earlier, the most effective tax incentives will be those that substitute for cash at the well head.

Senator BOREN. Right. We certainly understand that last point that you make and feel very strongly. It is absolutely essential. We have to find a way to make sure that, either because of Net Income Limitations, or the Alternative Minimum Tax, or other mechanisms that we are not frustrated in our efforts, as we have heard here. I was the author of the effort to phase-up the depletion as price went down, but I am not hearing how this has been frustrated because of Net Income Limitation application, even though we were able to get some action on the AMT level with depletion.

So we still have the other problem hitting us, and that is one of the real problems. The Tax Code in this area is so technical, that very often we have this unintended consequence when we think we have done something that is going to be beneficial.

And I can tell you that the revenue estimators, certainly, when they try use the static model and use revenue lost, they anticipate that it is totally effective, even though we are finding that it is not in most cases.

Let me ask just a very quick question, and then I will turn to my colleague.

I need to ask, Mr. Murfin, one technical question not now in your individual capacity, but in your capacity as the Chairman of the Liaison Committee of the State associations.

I noticed that in one of the documents placed in the record there was a statement from the California Independent Petroleum Association urging that, if you had a tax credit, that it not phase out on the basis of the national price average, but that we consider regional price differentials.

Now, we know also that, to some degree, heavy oil, which I suppose is part of this concern, is classified under the same classification as marginal production so it does get some benefits that non-marginal production does not get, and that it might not get otherwise according to levels of production because of the heavy oil make-up.

Does the Liaison Committee have any position on the California proposal, and should we take into consideration, if we set a regional price differential, the fact that there is, arguably, at least some advantage for heavy oil because it is treated as marginal production? Any thoughts on how we should react to the California situation?

I do not want to put you on the spot, but it is important because our California colleagues are obviously very concerned about this matter and we want to be fair.

Mr. MURFIN. Well, it is easy in my position as Liaison Chairman. Liaison does not take positions, per se. So, therefore, we do not have a position on that at all. Our purpose is primarily to facilitate the gathering and the processing of information. So, I guess my answer is, I do not know.

Senator BOREN. Do you think there is some merit, and should we at least look at this California situation carefully?

Mr. MURFIN. Their point, I believe, is that they receive a substantially lower price for their crude.

Senator BOREN. Yes.

Mr. MURFIN. Therefore, what they are saying, I think, does need to be considered, in my personal view.

Senator BOREN. Dr. Mankin, would you agree with that?

Dr. MANKIN. Yes. I think you would have to look at it because there are a lot of other factors in addition to the heavy crude and the ability to refine that crude in the area and other issues.

Senator BOREN. Right.

Dr. MANKIN. So they probably do deserve at least a careful examination.

Senator BOREN. But there is some significant regional price differential here that we would need to look at.

Dr. MANKIN. That is correct.

Senator BOREN. Particularly as it regards California.

Dr. MANKIN. That is correct.

Senator BOREN. Let me ask each of you, and just very quickly because I want to turn right to my colleagues. We have heard about Net Income Limitation being repealed, we have heard the idea of, perhaps, a three dollar per barrel tax credit, again, if we can find a way to let that substitute for cash, in essence, because it may not be practical to immediately impact price because of the political realities involved with substitute.

If you could pick one or two things, and let me ask you, just maybe in a one-minute response each, what would you put at the top of the list that you think would be most immediately helpful in terms of preserving the life of current marginal wells and production and then in terms of encouraging new production?

Mr. ALCORN. On the existing wells, I think it is clearly the tax credit. I think that is going to go a long way in keeping those guys, producers, going. And, for the new wells, again, it is a tax credit

that would be an incentive to get people to do things that they normally would not do, or would not otherwise do. So we have got the issue of keeping those wells from being prematurely plugged and trying to get new wells drilled.

Senator BOREN. As long as we make sure they do not fall under Net Income Limitation and Alternative Minimum Tax.

Mr. ALCORN. Right. Right. You have got to get all that technical tax stuff worked out.

Senator BOREN. Right.

Dr. Mankin?

Dr. MANKIN. Well, I would certainly agree with that. I would just urge you to consider the fact that domestic production does not play on a level playing field with respect to production throughout the rest of the world. Regulatory and environmental costs could be used as a leverage to support the tax credits.

Senator BOREN. Right. Right.

Mr. Cantrell, do you agree with that?

Mr. CANTRELL. Yes. Senator, my impression—and I am not a tax accountant by any stretch of the imagination—is that, effective 1/1/93 you eliminated percentage depletion and intangible drilling as tax preference items for the non-passive investor.

Senator BOREN. We did. Yes.

Mr. CANTRELL. So for the person in 100 percent in the industry, that eliminates the Alternative Minimum Tax from those items, if I am not mistaken.

Senator BOREN. Right. Right.

Mr. CANTRELL. So, that being the case, the three dollar tax credit is by far the most helpful. Repealing Net Income Limitation would be right under that because the more marginal the production, the less beneficial the depletion allowance is because of that Net Income Limitation.

Senator BOREN. Right. Right.

Mr. Murfin, do you agree with that?

Mr. MURFIN. I would agree, I think, provided there is no limitation on the investment credit.

Senator BOREN. Thank you very much.

Mr. MURFIN. But tanker fees would be the other thing I would suggest.

Senator BOREN. The other thing. Right.

Senator Breaux?

Senator BREAUX. Thank you, Mr. Chairman. Thank the panel, again, for being with us and for your valuable insight and suggestions.

Can somebody tell me if there is a simple explanation, and let me have the benefit of it, as to why crude prices are so low, and yet I guess natural gas prices have looked better than they have. Is it the law of supply and demand; what is the reason? They used to track each other fairly closely and it seems that now natural gas prices are doing substantially better than crude prices.

Mr. ALCORN. They certainly have stayed up this winter. I have often said that independent oil producers and gas producers are kind of like farmers, and it is true, that we grow BTU's. But I had forgotten that we were so dependent on the weather, and I think,

really, this extraordinarily cold weather has helped the gas price stay up.

But I want to remind you, there are a lot of gas and price gurus around the country, and Cambridge is one of them, one of the best and one of the things that they tell me is, if oil was selling for $20 or $21 a barrel, which most people predicted last year at this time it would be, then gas would be selling for $2.60 or $2.70. Just normally, that is what it would be doing. So gas prices have been affected substantially by these low oil prices, also.

Dr. MANKIN. Yes. I would certainly echo that remark. The issue is that natural gas does serve a different market in the sense, particularly, during the winter heating season as opposed to crude oil.

But one has to remember that the increased use of transportation fuel is producing a very large quantity of fuel oil and residuals, and for those kinds of industries that have fuel switching capability, that puts a lid on the price of natural gas. I agree that the price of natural gas would be higher today if the price of crude oil were $20 a barrel.

Mr. CANTRELL. I would just like to respond, quickly, by asking a question. Could it be a very effective market strategy for Saudi Arabia, who has a 100-year supply at current production levels, to dump cheap oil on the market and decimate the domestic industry and then wait four, 5 years and then reap the benefit for the next 96 years?

Senator BREAUX. Yes. What is our response to some who may say: that, look, Boren, you and Conrad are off the right path in this area because we already provided Alternative Minimum Tax relief in 1992, and here you are back at the table in the next Congress asking for additional relief when we had accepted the recommendation of IPAA and others in the business that we really needed this AMT relief. We gave you the AMT relief, and now you are back at the table again?

Mr. ALCORN. Well, we did that. And everybody that I know if, this body, this town, and everybody in the oil and gas industry has predicted prices would be at least $20 or $21 a barrel. So, when we got that relief last time, nobody predicted this. This is something unusual.

Senator BREAUX. As we were doing that, the price of crude was running at about, what, about $20 some?

Mr. ALCORN. Yes. $20, $21. This price fall has really been terrible.

Senator BREAUX. The State of Texas, through their Railroad Commission, outlined a number of what I thought were positive steps that they took on the State level. Is it possible for other States to do the same thing, or is it not the political wherewithal maybe in Oklahoma, or Louisiana?

Dr. MANKIN. Oklahoma is considering a series of similar kinds of incentives. They cannot be identical because the nature in which business is conducted in Oklahoma versus Texas, but they are very similar in nature. Commissioner Graves talked about relief on gross production tax for incremental production over base value on a lease by lease basis. We think that has an excellent chance of passing.

We are also looking at tax incentives for deep drilling, a relief for gross production taxes. We have to remember that the gross production tax, though, is a percent of the price, and if the price drops, the incentive gets less at a time when the need for incentive is greater.

So, while we are going to do these things, that is about all the State of Oklahoma can do, and that is to forgive the tax that we are now levying to try to support State government. It has to go beyond that. The Federal Government has an important role to play, too.

Senator BREAUX. I know the IPAA is advocating new marginal well credits. Some of the small strippers tell me that tax relief is not really what is needed because of the fact that they do not have any income to pay any taxes on or to get relief from. They are sort of past that point, and that maybe another approach is what is needed. Any comments on that, George?

Mr. ALCORN. Well, again, how do you cope with these low prices? Tax incentives are one. There are proposals to require that the SPRO purchase their crude oil from stripper wells in this country; that is something that might be helpful. There are other kinds of incentives that are being considered that would be specially directed at stripper oil producers.

Senator BREAUX. Well, I think you all have made some very valuable suggestions and contributions. I mean, we are all in this together. We are going to have to all work together to get out of it, and you have our commitment to do that.

Thank you, Mr. Chairman.

Senator BOREN. Thank you very much.

Senator Conrad?

Senator CONRAD. Can any of you tell me what the projections are for oil prices in the next year; what are your forecasting services telling you?

Dr. MANKIN. The information that we are getting, and this is based a lot on personal view, is that I think the world price of oil is going to remain about where it is.

Senator CONRAD. And do they attribute that to forces in the Middle East that have driven the prices to this level, that is, Iraq coming back on Iran?

Dr. MANKIN. No. Right now, the prices are low without Iraq coming back on. If Iraq were to come back on line, it would make it even worse. I think the fact is, we have an oversupply of oil in the world market that we have a lot of producers trying to maintain production. You have the North Sea that has refused to reduce their production, the Middle East has indicated their desire to maintain their share of the market, and they have got the leverage to do so.

So, in my judgment, it is a game of chicken and we are the victim. The process is that, until the North Sea agrees to reduce its production, the Middle East is not going to reduce theirs and the net effect is that the price is low, and, in my judgment, it is going to remain low.

Senator CONRAD. If you had a choice between the things that have been mentioned today, what would you see as the single most efficient way of delivering assistance to the industry?

Mr. MURFIN. Without question, it would be the three dollar a barrel tax credit.

Senator CONRAD. If we were to call that a variable oil import fee and structure it as such, what would be your reaction to that?

Mr. MURFIN. That would be better. It would be better if it is doable.

Senator CONRAD. Let me ask. In previous times, we have had the industry somewhat divided on this question, I might say. I can remember when Senator Bentsen, Senator Boren, and others, including me were involved in an attempt to get a variable oil import fee. I think it was about the high-water mark around here. We surprised a lot of people. John, you were here. It was the first year we were in the Senate; I think it was 1987. We got about 44 votes, as I recall.

Senator BREAUX. Would the Senator yield just for a comment?

Senator CONRAD. Yes.

Senator BREAUX. API is not here.

Dr. MANKIN. That is right.

Senator BOREN. They will be represented on the next panel, and you will probably find some divisiveness. But I do think there is a high degree of unity on a lot of these other proposals, and they have been working together to come together on these proposals.

Mr. ALCORN. Senator, you asked about price forecasts. I have got one for you. Its my Heidi view, on March the 25th, the OPECers are going to have a meeting. My prediction is, they will cut production and that cut will sweep all the way around the world. There will be a slight decrease in production by many producing nations that currently are over-producing.

The price of oil will jump $5 a barrel in this country and a lot of these problems we are talking about today, will get relief, and we can go on to the business of trying to develop the enormous oil and gas resource we have in this country. Wish me luck on that, will you? [Laughter.]

Senator CONRAD. Is this wishful thinking on your part?

Mr. ALCORN. Yes, it is Heidi. Remember Heidi?

Senator CONRAD. Yes. Christmas. I remember Heidi.

Mr. ALCORN. Right. There you go. We've got to have some hope.

Senator CONRAD. Is this the program that we are united on?

Mr. ALCORN. I think you could find unanimous support.

Senator CONRAD. All right. Thank you, Mr. Chairman.

Senator BOREN. Thank you very much. Thank you very much, all members of the panel. We really appreciate your taking time.

Let me ask our last panel to come forward, and let me thank the concluding panel for their patience. I am sorry that we are now at such a late period to hear this panel, because I think that they have testimony well worth hearing.

I want to be sure that one piece of testimony is heard by Senator Conrad, perhaps, before he has to leave. I will try to begin in a way that will allow that to happen.

Mr. Hamm is going to talk some about what is happening on the two sides of the border. Are you going to include that in your testimony?

Mr. Hamm. Yes.

Senator BOREN. Because I think that is particularly of interest, given the situation in North Dakota.

Let me introduce our panel as they are being seated. Victor Beghini is testifying today on behalf of the American Petroleum Institute. He has been President of Marathon Oil Company since 1987. He is also Vice Chairman of the Marathon Group of USX Corporation. He is on the Board of Trustees of the USX Foundation and a real leader in the industry. He has been very helpful in the advice that he has given to policy makers for a long time.

Harold Hamm has been President and CEO of Continental Resources, Incorporated, which is the 15th largest oil and gas producer in my home State of Oklahoma. He served as President of the Wildcatter's Club of Oklahoma since 1989, and is also on the Board of the Oklahoma Independent Petroleum Association. I think he is a very innovative thinker among independent producers and operators.

Robert H. Campbell is testifying today on behalf of the Independent Refiners Coalition. I think it is very important that we hear the perspective of this group as well. He is Chairman and CEO of Sun Company, Incorporated. He has served in several advisory capacities with the Federal Government, including service as a member of the Department of Energy's Alternative Fuels Council and EPA's Clean Air Advisory Committee.

We appreciate all of you being with us today, and appreciate your patience in waiting on us to get to this panel which, while last, is by no means least in terms of our interest.

I wonder if I might just ask if Mr. Hamm might begin, simply because I do not know if Senator Conrad is going to be able to stay through all of the testimony and I want him to hear one matter that involves directly the North Dakota/Canadian differential.

And I might ask all of you if you could summarize your statements for us. We will put the full statements into the record so that we might stay within the time as much as possible. So, if we can, we will just sort of go in reverse here.

Mr. Hamm, if you would begin. We are glad to have you.

STATEMENT OF HAROLD G. HAMM, PRESIDENT AND CEO, CONTINENTAL RESOURCES, INC., ENID, OK

Mr. HAMM. Yes. Thank you, Chairman Boren and members of the Subcommittee on Taxation.

Continental is a mid-sized independent exploration and production company. We are based in Enid, OK. We employ about 500 people. We operate 800 oil and gas wells. We operate in Oklahoma, Texas, Montana, and North Dakota. Our average well production at Continental is 5.7 barrels of oil per day, and 40.7 MCF per day.

Continental is basically focused on exploration, which most recently discovered an oil productive ancient meteorite crater underlying the Sooner Trend Fields of northwestern Oklahoma, known as the "Ames Hole."

The United States must prepare itself for a natural gas shortage of a major proportion in the next 3 years. The United States' demand for gas is growing by 3.5 percent annually, while supply reserves of gas are declining by 2 percent annually. The gas bubble is gone.

This winter's cold weather has proven that our supply is nip and tuck with demand right now. While we may be able to fill gas storage in the coming summer months, the ability of the industry to do so in subsequent years is more uncertain.

Unlike the OPEC oil embargo-caused oil shortage in the 1970's, the coming supply shortage of natural gas will be real, not political, and will take time, capital, and knowledgeable professionals to correct.

We should not wait until we are short in supply and in national crisis to address this imminent problem. Unlike the regulation induced natural gas shortage of the 1970's, this recovery will take 5–7 years, assuming adequate financing, capital and personnel resources.

Through the past 10 years of economic ruin, the oil and gas infrastructure is severely damaged. The United States domestic exploration production industry has shrunk from 800,000 down to approximately 353,000 skilled employees.

Employment losses far less than these in the automotive industry resulted in governmental intervention. We are all familiar with the bail-out of Chrysler.

Today, the industry is still shrinking in capital and skilled workers as a result of unrestrained OPEC production, and we are still pleading for capital. The industry is not asking for a bail-out, but, rather, only relief from lingering archaic and punitive governmental barriers from the same legislative mentality that gave us the Vietnam War.

While those barriers were directed at major oil companies, they have blocked the pass of independent exploration and production companies. Policy changes in this governmental policy must occur, and you, gentlemen, are the only bright spot on the horizon for EMP companies like mine.

Political policy rules our industry. The recent relief from AMT that you talked about earlier has allowed my company's exploration budget to be expanded three—fold. This increase had a net effect of adding about 100 full-time jobs.

The second part of my mission today is to describe for you the shape of the change to the EMP industry, because it is, in fact, changed. I witnessed a lot of the hardship over the past several years, as 50 percent of Oklahoma's oil and gas operators were merged, sold, consolidated, or just simply ceased to exist. My drilling company laid off about 80 percent of its employees, and 80 percent of its rigs.

I have observed all of the conventional sources of capital dry up and go away as certain provisions of the Tax Act of 1986 sealed the fate of the last of the investors from the private sector. I have seen the transition made by the major oil companies as they sold off their properties and have moved and have focused overseas. At present, approximately 80 percent of Oklahoma's oil and gas is produced by independent oil companies and 20 percent by major oil companies.

I have seen reduction in the service sector by about 75 percent. I witnessed most oil and gas operators recently grapple with the decision of whether to plug out uneconomic leases due to the low oil price, or to continue to produce for negative dollars. This indus-

try has been driven over the past years to the brink of collapse, which negatively impacts on national energy security.

So what, you may ask, is left? The United States energy production industry, our industry, is the most efficient in the world. During 1992, we produced 8.8 million barrels of oil per day, or 13 percent of the world's supply, while we only had 3.2 percent of the world's oil reserves.

We produce 49 BCF a day, or 25 percent of the world's total natural gas production, while we only have 3.4 percent of the world's natural gas reserves. We are a very efficient and lean industry that is starved for capital.

The program that I have submitted for your acceptance is designed as a long-term, synergetic performance plan to recapitalize this segment of the industry at no significant cost or loss of revenue to the Treasury. If the industry does not perform and produce, it costs the Treasury nothing. Certain provisions are included which will prime the pump or pertain only to funds spent on exploration of oil and gas.

We have two technology triggers that are involved in this plan, and these will set off activity and provide stimulus for research, development and education through increased usage in certain high-tech areas.

The first, is horizontal drilling. This is what you asked about earlier. In 1991, the Canadian Government granted a tax and royalty holiday for the first 75,000 barrels of oil produced from a horizontally drilled well.

Tax incentives spurred the usage of this new technology and took its use from experimental to widespread, thereby creating an employment boom in Saskatchewan and Manitoba. For 1994, Canada is projecting a 20.6 percent increase in exploration budgets compared to 4.1 percent in the U.S.

The Williston Basin producing province extends across the United States/Canada border, with about two-thirds of it in the United States. Last year, of the 240 horizontal wells drilled in the Williston Basin, 230 of them were drilled on the Canadian side alone. As a result, 5 percent——

Senator BOREN. Two hundred and thirty in Canada and 10 in the United States?

Mr. HAMM. What is that?

Senator BOREN. Two hundred and thirty in Canada and 10 in the United States?

Mr. HAMM. That is right.

And, as a result, 5 percent of the wells in Saskatchewan are horizontal and now account for 23 percent of its oil production.

Senator Conrad, you asked about the price of oil. Much of the oil produced in North Dakota is sour oil and brings only about nine dollars per barrel up there, compared to $12 elsewhere. So it is tougher than you think up there.

Senator CONRAD. Yes. I am just looking at an example, Mr. Chairman, from North Dakota. We have oil, right now, selling for $6.90 a barrel, sour crude. They are losing $122 a month at that particular well.

Mr. HAMM. That is correct. It can happen.

Senator CONRAD. That is a perfect example of what is happening, and it is a disaster.

Mr. HAMM. Also, your operating costs up there are high, due to a lot of water and due to the climate up there.

Senator CONRAD. It has got nothing to do with the weather.

Senator BOREN. They exempt the first 75,000 barrels of new production from a horizontal well.

Mr. HAMM. That is correct, from the first 75,000 barrels. They have used that to stimulate that portion of the industry, and it has worked. It has really taken off up there. They virtually have a drilling boom going on in Canada of large proportion.

I will conclude, due to the time.

Senator BOREN. Do you want to just complete the rest of the proposal?

Mr. HAMM. Yes. The second technology trigger would apply to non-conventional sources, such as tight gas and coalbed methanes. Basically, I feel like we need that gas. We are going to need it in the future. We see the alliance of supply and demand converging, as such, and we need it. The trigger for the Section 29 credit in the past has worked. As a result, there have been a lot of reserves found and a huge resource base created. I think that at least 50 percent of that credit ought to be restored.

The third thing, percentage depletion allowance, we have heard the net effect. I think Mike pretty well laid it out. There is very little help that that gives us today. I think the full restoration of percentage depletion allowance ought to be put back into effect. For 43 years it took care of us, and we rode out the highs and lows of pricing as a result of it.

Senator BOREN. Right.

Mr. HAMM. But, without it, it is a tough deal. When OPEC goes to maneuvering, as they are right now, it is hard to live through it.

Senator BOREN. Thank you very much. These are very interesting points. And, as you say, these are largely examples that would require no cost to the government unless they worked and stimulated the economic activity that you are talking about.

Mr. HAMM. That is correct.

Senator BOREN. Thank you very much.

[The prepared statement of Mr. Hamm appears in the appendix.]

Senator BOREN. Mr. Campbell.

STATEMENT OF ROBERT H. CAMPBELL, CHAIRMAN, PRESIDENT AND CEO, SUN COMPANY, INC., PHILADELPHIA, PA, ON BEHALF OF INDEPENDENT REFINERS COALITION

Mr. CAMPBELL. Mr. Chairman, Senator Breaux, and Senator Conrad, let me also begin by thanking you for the opportunity to appear before you today to discuss an issue that I think is of vital national significance. I intend my message to you this afternoon to be simple, clear and consist of six points.

Point number one. When people think of the energy industry, they inevitably focus on the large, internationally integrated corporations and the large number of independent producers that produce much of this country's crude oil. The third, and often overlooked piece of the energy picture is the independent refiner, and

I appear here today on behalf of the Independent Refiners Coalition, of which Sun Company is a member.

Independent refiners are U.S. manufacturing companies who purchase crude oil on the world market and refine it into value added products. There are 70 independent refining companies. They operate 140 refineries. We employ 200,000 people at excellent wages in 34 States, and we produce 40 percent of the United States' refined petroleum products.

We are, if I may say so myself, I think, a very important part of the U.S. economy and the U.S. energy picture. I must also hasten to add that the U.S. refining industry is a world-class industry.

Over the years, we have made the investments to employ the latest in technology and we have automated our plants so that, in a final analysis, we can compete successfully on an international scale. We are part of an industry that is the envy of much of the rest of the world.

Point number two. A number of years ago, the United States decided to become the world leader in improving our environment. That decision—which, incidentally, my company wholeheartedly supports—is a decision which is having and will continue to have a monumental impact on our manufacturing base. The U.S. industry most impacted by this decision and the laws and regulations that result from it is the U.S. refining industry.

And, as Secretary White said earlier this afternoon, an NPC study showed that, over the next 6 years, the U.S. refining industry must invest $37 billion to comply with the legislative and regulatory initiatives. Thirty-seven billion dollars is a substantial figure when you figure that the 1990 book value of the entire industry was $31 billion.

Point number three. This investment burden is being placed on an industry that is in difficult straits financially. During the 1980's, the U.S. refining industry decreased from 314 to 184 refineries, a 42 percent drop. A 20 percent drop in refining capacity.

In 1992, a Wright Killen & Company study indicated that in the next 3–5 years an additional 37 refineries, comprising 1.5 million barrels of capacity, would also fail. A year and a half after that prediction, 25 of the 37 refineries have already been shut down.

Point number four. In July of 1993, the National Defense Council Foundation issued a report stating that current U.S. refining capacity levels were inadequate to simultaneously service normal domestic needs and reasonably foreseeable military requisites. The inescapable conclusion is that the continued loss of the U.S. refining industry is rapidly becoming a national security issue.

Point number five: the solution. We need immediate corrective action to avoid the shut-down of significant additional refining capacity. The National Petroleum Council concluded that foreign refiners are operating under environmental laws that are 5–20 years behind the United States.

They further concluded that, over the next decade, foreign refineries, as a result of not having to make the same environmental expenditures as U.S. refiners, will have a 7–13 cent a gallon advantage; not because they are smarter, not because they are better equipped or more productive, simply because they can simultaneously manufacture and pollute, by our standards.

To put this 7–13 cent a gallon advantage in proper perspective, let me point out to you that last year the refining and marketing piece of our company, the Sun Oil Company, had a pretty decent year, from a financial performance perspective. Our profitability last year amounted to an average of 1.5 cents a gallon on every gallon we sold. For the foreign manufacturer to be presented a 7–13 cent a gallon advantage is impossible to overcome.

To correct this situation, the Independent Refiners Coalition recommends a seven cent a gallon national security fee on imported gasoline that increases a penny a gallon a year, to a total of 13 cents a gallon. Over the next 5 years, this could raise as much as $1.9 billion, which could help offset the independent producer tax credit currently being considered.

This import fee could eventually be reduced or eliminated for those foreign manufacturers who invest in pollution abatement equipment required of U.S. manufacturers.

And, finally, point number six: why you should approve and support this proposal. The passage of the Clean Air Act and other environmental laws by the U.S. Congress has significantly raised the cost of manufacturing energy products in the United States.

To raise the cost of U.S. goods and simultaneously permit foreign manufacturers to undercut the market and, thereby, shut down our industry is unfair and unconscionable. If this were to happen, you would export our industry, export the jobs, export pollution, and create a national security issue of the first magnitude.

The proposal that I am making today to prevent this from occurring has the support of not only the independent refinery business leaders, it has the support of union leaders and environmentalists.

If you agree and support the imposition of this fee, you will return the playing field to a level condition. You will raise a substantial amount of money to accomplish whatever worthwhile needs you want, and preserve a vital industry that is world-class in condition and the envy of much of the world.

Again, I thank you for the invitation.

Senator BOREN. Thank you very much for some very thought-provoking testimony and some very good, constructive suggestions.

[The prepared statement of Mr. Campbell appears in the appendix.]

Senator BOREN. Mr. Beghini, again, we apologize that we are running so late. We appreciate you being with us, and we appreciate the good counsel and a lot of very useful and helpful information that you have given to members of this committee in the past, and we welcome you to the committee.

STATEMENT OF VICTOR G. BEGHINI, PRESIDENT, MARATHON OIL COMPANY, HOUSTON, TX, ON BEHALF OF AMERICAN PETROLEUM INSTITUTE

Mr. BEGHINI. Thank you very much, Senator. Again, Mr. Chairman, we appreciate the opportunity to testify before you, and Senator Breaux, and Senator Conrad in this regard.

My name is Victor Beghini. I am President of Marathon Oil Company. We are an independent producer, and we are also an independent refiner. We just happen to do them both under the same name.

I make that point not being facetious, but we need to recognize that the refinery does not know who owns it, its business decisions are made on the basis of its economics; the well does not know who owns it, its business decisions are made on the basis of economics.

And, I think if this country is going to move forward, we have to recognize that we do not have independents and we do not have majors, we have people in this energy industry and we are all affected in the same way.

On a positive note, this country produces 82 percent of our total energy requirements. It has been blessed with energy that has been both bountiful and cheap in economic terms.

We now have an industry in a very fragile condition. With low prices and increasingly restrictive government policies added to a mature producing profile, we are faced with the question that suggests, do we or do we not want a viable oil and gas industry in the domestic United States?

We are here to propose steps to improve the current state of this industry. And I suggest that the government actions we are proposing will permit the U.S. oil and gas industry to provide the Nation's vital energy requirements in a far more cost-effective way than several existing government programs, programs which place misguided constraints on our domestic upstream activities, thereby squandering our potential to contribute to sustaining the competitiveness of our Nation.

Three of these policies are particularly onerous. First, the United States is a mature producing area by world standards, and restrictive governmental land access policies have reduced new drilling opportunities. As a result, new field Wildcats in this country fell by nearly half between 1990 and 1992, to around 1,500 wells per year.

Second, intrusive and costly regulatory policies have increased expenses. Let me give you a few examples. The EPA has proposed underground injection control regulations that could cost the industry as much as $1 billion.

The ethanol ETBE mandate has a cost on the order of $350 million annually, equivalent to over $100 per barrel for each barrel of reduced imports.

The Department of Interior has a proposal to quantify natural resource damage, relying on contingent valuation methodology for which no reliable data exists.

Such policies as these add little or nothing to environmental quality, provide no economic rational, and have little scientific basis.

Third, tax policies are biased in a manner which does not allow appropriate treatment for risk-oriented EMP activities, thereby inhibiting rather than encouraging such activity.

All of these programs move to one consequence, and that is that capital availability is strangled as internal funds are reduced and potential external funds find more attractive uses. The end result: a smaller and less competitive domestic oil and gas industry.

It has been stated here previous to my testimony, that we are the envy of the world in technical leadership in this industry. Advances in E and P technology have recovered millions of barrels of oil and billions of cubic feet of natural gas from existing fields.

We have improved our geophysical technology, we have advanced our drilling technology to new levels of preciseness, and we have initiated multiple processes to increase recovery. But today's price environment, combined with escalating production costs, put many fields in jeopardy of never being able to utilize these advanced technologies.

Since 1986, with the precipitous fall in crude oil and natural gas prices, government policy toward this industry can only be characterized as one of neglect. That neglect is reflected in reduced exploration and production, and increasing imports, and in the hundreds of thousands of industry jobs that have been lost. It has been a de facto decision to adopt a consuming, not a producing Nation model.

We urge you to turn from that consuming Nation model. Toward that end we have developed a modest tax incentive proposal in the form of a credit for existing marginal production and new production effective only when crude prices fall below a target price. We support the adoption of this investment, but that modest step alone will not solve the problem.

We recommend, as it has been mentioned prior to my testimony, that you look at the expensing of G&G, that you look at Alternative Minimum Tax relief, and that you look at enhancing oil recovery and deep water incentives to encourage cost-efficient ways of achieving increased domestic oil and gas activity.

In addition, we recommend the following actions: remove restraints on leasing of all government lands, particularly off-shore and frontier areas; eliminate existing prohibitions against the export of domestic crude oil production; require that any new regulatory proposals are subject to thorough risk assessment, cost benefit analysis, and peer science review; and urge the administration to favorably respond to the list of regulatory issues that is included in our written testimony.

Our industry is ready and able to respond to these actions. The actions taken in Texas demonstrate the ability of this industry to do that. We can produce and transport crude oil and natural gas in a manner consistent with the highest environmental standards in the world, and we can manufacture an array of products that dominate the available alternatives in terms of both economic and environmental performance.

I thank you very much for having the opportunity to testify, and I will be happy to answer any questions that you or Senator Breaux might have.

Senator BOREN. Thank you very much.

[The prepared statement of Mr. Beghini appears in the appendix.]

Senator BOREN. I am going to reverse the order and let my colleagues, who have been patiently hearing me ask the questions, go first this time. And I think Senator Conrad, who is in the other room, is going to return; he had some questions as well.

Senator Breaux, why do you not proceed with your questions, first?

Senator BREAUX. Well, thank you very much. I would like to thank these gentlemen as well.

I think, Victor, some of the numbers that you have put together are really interesting. I think we go through cycles in this country

when various industries are on the down side. For example, the automobile industry has gone through a terrible time and is on the upswing now. I think things are getting better for them.

But what you pointed out, was that what has happened in the oil and gas industry is that employment in this business has fallen by nearly 470,000 since March of 1982. That is a huge number. But, in relation, Mr. Chairman, to the automobile industry, this decline has been about 2.5 times the size of the decline in the U.S. automobile industry when it was at its peak back in 1979.

That was something that was in the headlines almost nightly: the automobile business is going under; the Japanese are taking over; the imports are now flooding our markets; our workers are gone. But we have lost 2.5 times more than what the automobile industry has lost, and yet that message has still not been received by the American public.

What we are recommending with regard to stripper wells, marginal production wells, is a tax credit proposal that would exist for marginal wells, but be effective only when crude oil prices fall below a target price. That rings bells for those of us who have agriculture in our State, because that is exactly what agriculture has.

The farm programs in this country have a target price for every crop that has a program. And, when that crop price fails to meet the target price, the farmer gets a deficiency payment. If the crop price meets the target price because of the marketplace, well, then there is no program at all and there is no deficiency payment.

As Americans, we need to be concerned about the state of the energy industry. The automobile industry and the farm programs that we have are very similar with what we are recommending in this area.

Mr. Campbell, with regard to the small refineries, I think the numbers are really frightening. In the 1980's, the number of U.S. refineries dropped from 314 to 184, a 42 percent decrease, and imports of gasoline in the 1980's more than doubled, from 140 to 366 MBD. What is that, MBD?

Mr. CAMPBELL. Thousands of barrels per day.

Senator BREAUX. Thousands of barrels per day.

Mr. CAMPBELL. Yes.

Senator BREAUX. You know, I pointed out, Mr. Chairman, in one meeting, that one of the most important things to the national security of a country is their refining capacity. The first things that hit when countries go to war are that countries refineries. If refineries are knocked out first, then the country can be more easily taken over because they do not have a national defense anymore.

What are your projections about the future as far as refineries are concerned?

Mr. CAMPBELL. Well, Wright Killen & Company made a study in 1992 where they thought an additional 37 were subject to being shut down. They said it would happen in the next 3–5 years. My point was, a year and a half after they made a prediction, 25 of the 37 have been shut down. So, the beat goes on.

The margins for the refiner out there have been horrible. Of course, the capital demands and the environmental demands continue and we face some dates certain as far as large expenditures

are concerned, so the projection is, both internally and on a foreign basis, that additional refining capacity will be shut down.

Senator BREAUX. And I understand that it is your recommendation that we adopt some sort of an environmental fee. The calculation on how much that fee would be is based on a formula which takes into consideration the cost of the environmental rules and regulations that domestic refineries have to comply with as opposed to foreign refineries.

Mr. CAMPBELL. That is correct. It was part of a National Petroleum Council study that they took on for over two and a half years, and it was a very thoughtful study. They came back and they said, right now, in 1995, they think that the U.S. refining industry is disadvantaged to the extent of seven cents a gallon, and they projected that that disadvantage would grow from 7–13 cents a gallon by the year 2000.

Senator BREAUX. So, it is very clear that the environmental laws that are in place in the United States are encouraging foreign imports of refined products, e.g., gasoline.

Mr. CAMPBELL. What is happening, is the regulations that are in place are absolutely increasing the cost of manufacture in this country and it is the imported gasoline or barrel of gasoline, the marginal barrel, which then sets the price throughout the marketplace, so what we have seen is the margin continue to collapse.

The import of product peaked at about 1988 at 400,000 barrels a day and it has been declining since. As we have talked to people they say, well, wait a minute. There is no problem here, the imports are going down. You are not dealing with a real problem. But we are. The reason imports are going down is because margin, the profitability in this country, has been dropping dramatically and refiners have been going out of business.

Interestingly enough, one of the very large exporters to the United States recently published their profitability figures at something like 380 some percent in 1993, versus the previous year. So we truly——

Senator BREAUX. Let me ask this question. I think you have answered that very difficult question very clearly. But can a foreign refinery refine their product and not comply with any of the Clean Air provisions and export that gasoline into the United States?

Mr. CAMPBELL. Well, if you look at the foreign refiner versus the domestic refiner, there are three separate categories. First of all, the foreign refiner does not have to install the emissions limitations, the pieces of equipment, and the processes which restrict emissions, both to the water, the soil, and to the air, so that is one advantage.

The second advantage for the foreign refiner is they do not have to comply with the EPA antidumping provision. What that means is, as a domestic refiner we cannot produce clean gasoline for Philadelphia and dirty gasoline for Jacksonville, Florida. We have to maintain and we have to improve the entire pool. They do not have to do that, they can cherry pick. So, consequently, that gives them two very, very significant advantages.

The third piece of the puzzle is that they have been required or are being required to comply to the same kinds of reformulated gasoline rules or improvements, and that has been attacked by at

least one country; that is why we have been having so many discussions with regard to Venezuela.

But, prior to at least their asking for an exception to that, at least the thought was that they would at least have to comply with the same quality of gasoline as the rest of the domestic refiners. But there are three separate pieces of the puzzle and they do not have to comply with the other two.

Senator BREAUX. Well, let me ask this. Can a domestic refinery close today and move overseas, build the same refinery, and not comply with any of those rules and export over here?

Mr. CAMPBELL. Well, it is very difficult for a domestic refinery to close out their refinery because you generally would have to remediate back to where you found it. More often that not, what you find is you end up shutting down units and turning it closer and closer into a terminal.

In the case of our own company, we shut down the fuels production half of our Tulsa refinery, so those units are now shut down rather than to have to spend $150 million in that refinery, which we never would have been able to recover.

So what you see is the continual dropping down or capacity leaving the system and being converted more and more into a terminal. To the degree that the company is internationally integrated and wants to construct a refinery overseas, they are certainly able to do that.

Senator BREAUX. Mr. Beghini, let me ask you a question. Are there resources that are out there in the United States today that are not being produced because of the price?

Mr. BEGHINI. Oh, absolutely. There are deep water resources that I believe are not being produced because of the price. If you look at the deep water you will find out that there are probably 6–7 times as many deep water discoveries as there are projects on board. There are many enhanced recovery projects; if you use it in a Texas sense, even secondary recovery projects that are probably not working right now because of price.

There is a lot of deep drilling that you heard in prior testimony that is not being done because of price. This is not a country that has run out of hydrocarbons. We have got immense resources of natural gas. It takes capital to drill them, and we are a very capital-starved industry.

Senator BREAUX. So we are sitting on resources that could be produced today if the price justified the investment.

Mr. BEGHINI. That is right. I truly believe that what we are asking for today—we have heard Mr. White talk about PAYGO. But the fact is, the President has put $13 billion in the budget, as I understand it, for retraining. This is a retraining investment. By its very nature, an investment is something that you spend today and reap the reward of tomorrow. If there was ever a time when this industry needs an investment, it is now.

Senator BREAUX. I think it is an investment for the U.S. Treasury, Mr. Chairman.

Senator BOREN. I am sure.

Senator BREAUX. I think the Texas story is so clear. Texas passed tax incentives that cost a little bit and generated 3:1 revenues, I think, 2–3 times the revenues that it cost them by making

these incentives available on marginal wells and wells that would not have been completed had it not been for those incentives.

If the State can do it with the limited taxing powers they have, I would think that the Congress should be certainly wise enough to use the Tax Code to encourage investment for the national security of the United States, and probably generate revenues for the Treasury in doing so.

Senator BOREN. Right.

Senator BREAUX. Let me thank all the members of the panel. You were all very helpful.

Senator BOREN. Thank you very much, Senator Breaux.

If someone will tell Senator Conrad. I really appreciate the testimony that has been given, let me say. I am sure that to some degree the panels that have testified wonder if they have been preaching to the choir, since the three Senators that have been here today have been largely sympathetic to the points that have been made. But the information which has been developed today will be shared with all 100 Senators and with other policy makers, and I think it is extremely important.

Plus, it increases the resolve of those that have heard the testimony to try to see to it that something intelligent is done and makes sense for the country, not just for the industry. And I do not think what we have heard today is narrow or provincial in the least. I think it has application to the broad national interests of the United States.

I was just thinking, on hearing Mr. Campbell's testimony, for example, that it should not be just the domestic refinery industry that is interested in what you have to say, it ought to be environmental groups broadly as well.

There should be great concern in the environmental community that we are simply moving and shifting where the refining of these products takes place in the world into areas where there is simply not going to be much compliance.

Just as has been said by Mr. Beghini, a well does not know whether it is owned by a major or an independent. If it is not economic, if it as a 2–3 barrel well, it is not economic, it does not know who owns it. It simply does not make sense to continue to operate it.

The same is true here. It seems to me that there should be some pattern of incentives put in place. Perhaps off-shore refiners could eventually be excepted from this additional cost if they could show that they had met the domestic environmental requirements, for example.

There are all sorts of things here that seem to me that we need to be searching for, and I would urge that the environmental community be challenged to become involved in this issue, as well as just the domestic refining community because it is a very clear interest.

Senator Conrad?

Senator CONRAD. Thank you, Mr. Chairman. I will be brief, given the lateness of the hour. I appreciate very much your giving me this opportunity.

First of all, I want to make the observation that the suggestion from this afternoon's hearing with the best prospect of ultimate

success, frankly, is this notion of an environmental levy. We are going to have to reach out to some other constituency groups if we are going to have any chance around here and that proposal would bring other groups on board. This is my observation. I wish that were not the case. I wish this press row here were lined with cameras and reporters talking about this issue.

It is amazing. It is just like America is asleep with respect to what is happening. This is a very real problem confronting our economy. It is not immediate. It is not the kind of thing that people see today, but we know that they will see it if steps are not taken. And the faster the steps are taken, the less onerous the problem will be. It is a matter of when we act, because we simply must at some point.

So I wanted to make that observation. I really think this notion of an environmental levy, number one, has a strong objective rationale attached to it. Number two, I think an environmental levy would broaden the base of people who are interested in this issue. Number three, revenue generated could be used for another purpose which would add to the potential coalition.

I would not say at this point what the revenue might be used for, but, obviously, we have health care reform and we have other issues that are critically important before us that require revenue. So it seems to me that is a very constructive suggestion.

One remaining question I want to ask is about the projection on gas prices. The observation was made by the gentleman at the end of the table. I am sorry, I did not catch your name.

Senator BOREN. Mr. Hamm.

Senator CONRAD. Mr. Hamm. That we are looking at a crisis in gas within the next 3 years. Could you tell us—I am sorry if I missed it while I had to be out visiting with another group—what is your anticipation in the next 3 years of what might happen to gas prices?

Mr. HAMM. Well, I agree with the earlier panel. If crude oil was not where it is now, natural gas price would be about $2.60 or $2.70, I believe, at the present. It has been softened a great deal. Everybody that could switch to an alternative fuel from gas this winter did it.

My concern is that the convergence of supply and demand is coming together at about 5 percent. Basically, if you can see this graph, I do not know, but the production lines——

Senator CONRAD. Yes, I can see it.

Mr. HAMM.—used to have a swing up and down in the summer and winter months, and now it is just pretty well getting flat out here toward the end. That is what is happening, we are about producing flat out.

In Oklahoma, we have seen the wells that were capable of producing more than a million per day and capable of being pro-rated go from about 2,000 down to about 800 at present. People are not able to drill them anymore, and we have not drilled them. We have not replaced those reserves, due to pricing, and due to a lot of things, the infrastructure decline of this industry, also.

Senator CONRAD. Mr. Beghini, what would your observation be on that?

Mr. BEGHINI. Well, I agree with Mr. Hamm. Basically, we are at the end of the sausage. We had a bubble, it went to a sausage, the sausage is now over. When you look at price and you look at gas' main competitor, it is number six oil. About 5 months ago, number six, which was always above natural gas in terms of price per million BTU at the burner tip, flipped. Number six is now below the price of natural gas.

So, obviously, natural gas is becoming the more dominant fuel. I look at natural gas being tied, not to crude oil, but to number six. And, as you see more and more refiners go to cokers and pull down number six, then the remaining number six price will go up, and I think that will impact natural gas in a more leveraged manner.

Senator CONRAD. What would you anticipate, if you had to throw a dart today?

Mr. BEGHINI. If I had to throw a dart today, 3 years from now I would be smart enough not to be testifying at this hearing, probably. [Laughter.]

Mr. BEGHINI. I would be out buying futures, is what I would be doing. But, I truly believe that natural gas, although we may see some spikes in the intervening 3 years, has a chance to get in the $3 area.

I do not think we are going to see measurable major increases in natural gas in the long term because I truly believe that we have become much more efficient at storage and distribution. I think rule 636 did a long way to mitigate a lot of fears as we went through this winter.

Senator CONRAD. Absolutely. I also think the industry, which does not get many bouquets anywhere, deserves enormous credit. When you think of the winter we have just been through, under the first year under a whole new regimen, it is remarkable. I did not hear any great hue and outcry. We had some spot problems, but things went remarkably well. I think the industry deserves enormous credit, because I know there was a lot of pressure.

Mr. Chairman, I will not go further because I know we have gone substantially beyond what was anticipated. I just think this has been an excellent, excellent hearing today and I appreciate your calling these witnesses.

Senator BOREN. Well, thank you very much, Senator Conrad. I appreciate your participation.

As I indicated earlier, Senator Baucus had planned to be here. I know that Senator Dole and Senator Wallop had also planned to be here. Senator Baucus, as I indicated, really has been struck down by the flu.

Let me ask just one last question. This is a rather technical question. And, again, I want to thank Mr. Beghini, and also the API for a lot of suggestions in the regulatory area.

We focused more strictly on those areas of changes of tax policy that might have an immediate impact on revenue flow and not so much on regulatory changes. We tended to look at things that might require legislative changes here, but the regulatory changes are also very important for us to consider.

You mentioned the concern with this Natural Resources Damage Assessments, which are regulations under consideration by the Department of the Interior and NOAA. As I understand it, these regu-

lations would pose liability for injuries to natural resources caused by discharges of hazardous substances or petroleum. And you fear that the regulations could include damage for emotional loss of persons who do not use these resources. That is a statement that I noted.

It is hard for me to imagine what sort of damages Interior and NOAA are talking about here, which I guess is a good reason to be alarmed when you cannot understand what they might mean in terms of regulatory proposals.

We always tend to think, oh, it must have some common sense meaning that we are not immediately grasping, only to find that usually when the regulations are posed we do find they had no common sense meaning whatsoever. We have been down that road many times.

Could you tell me what could happen under this?

Mr. BEGHINI. Yes. Basically, if you were to have a small spill, for example, along a creek that two million people happen to decide to walk by that summer, they would contact you and say, if you had walked along that creek twice, and, in your sole judgment the esthetics of that walk were not what they used to be, what do you think it would be worth to have those esthetics be returned? And you might say, well, I guess it would be worth $50.

Senator BOREN. So there could be all sorts of class action suits brought.

Mr. BEGHINI. So they could turn around and say, we have two million people walk by this spot. If we get a number that revolves around $50, you did $100 million worth of damage.

Senator BOREN. I see.

Mr. BEGHINI. That, basically, is what contingent valuation is about. It is a very, very far reaching and a very onerous thing, and it applies to everyone.

Senator BOREN. Well, on that alarming note, I think it is very important that we take a look at that and that we weigh on that kind of an open-ended, vague possibility.

Again, I want to thank all of you who have been here and have taken time to stay with us. There has been considerable interest in these hearings. Let me say also, as I indicated in the beginning, I did speak with Mr. McClarty at the White House yesterday and our letter has been received. Approximately 120 members of Congress have signed. The support is very bipartisan and comes from both Houses.

Let me say, spread throughout the geographic areas of the country. It is not a letter that just came from members of Texas, Oklahoma, or Louisiana, it came from all across the country, including from a number of members who are not necessarily from States where there is a large amount of oil and gas production, but indicating that there is beginning to be a broader understanding of the potential economic and national security impact of the crisis that we are passing through.

I was very encouraged. I think this is the largest number of signatures that I have seen on a letter requesting a meeting with the President in some time, and perhaps ever since I have been here. We have been told the meeting will take place, it is just a question

now of setting a date convenient on the President's schedule and the members' schedules.

So, the testimony that we have heard today will be very, very helpful to us as we approach that meeting and we make our case to the President. I am very hopeful that what is now a silent crisis will become more recognized and more understood by the rest of the country because all Americans have a stake in finding the right solution to it.

So, I thank all of you again for being with us today and for the testimony you have given. The full testimony of each one of you will be received in the record as if presented, and I apologize that we have had to abbreviate some of the testimony today. Thank you very much for being here.

We will stand in recess.

[Whereupon, at 5:49 p.m., the hearing was adjourned.]

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APPENDIX

ADDITIONAL MATERIAL SUBMITTED

PREPARED STATEMENT OF GEORGE A. ALCORN

Mr. Chairman and members of the committee: I am George Alcorn, chairman of Alcorn Exploration of Houston, Texas and chairman of the Independent Petroleum Association of America. I appear today on behalf of the Independent Petroleum Association of America.

I am here today to report on the state of the domestic oil and natural gas producing industry and to urge prompt congressional action to help this industry survive. Domestic independent oil and gas producers are facing what could very well turn out to be their most difficult challenge. Since mid-October, 1993, oil prices have fallen by more than 25 percent, and the industry has lost another 13,600 jobs in the last four months alone. Hundreds of thousands of U.S. oil wells are on the brink of economic ruin. The very existence of the oil industry in many states is threatened with extinction.

The domestic oil and natural gas industry entered this current economic downturn without the internal financial wherewithal to sustain operations on the basis of "boom time" cash reserves, as had been the case in past. Rather than the bust and boom cycle of the past, this time the oil price crash comes after nearly seven years of relatively low prices for both oil and gas. The years which followed the 1986 price collapse have cost this industry more than 450,000 jobs, have seen the drilling rig count set new lows year after year and settle in at levels barely half that of the average drilling rate of the previous twenty years. We have seen domestic oil production drop by nearly two million barrels per day. During that same time, natural gas prices fell to their lowest levels since the 1970s, and natural gas reserve replacement fell significantly below historic trends. The industry, with notable exceptions, has not been drilling and replacing the reserves it is producing. Consolidation, acquisition and mergers have become a primary means for independents to acquire new reserves and to survive the lean times. Many of the multinational oil corporations are shifting a larger share of the exploration and production budgets overseas.

Now, on top of the dismal statistics of the late 1980s and early 1990s comes the current oil price crisis.

There is a dire need for urgent congressional action if the U.S. is to maintain the existing level of domestic natural gas and oil production, especially from economically marginal wells. There is, likewise, a need to encourage investment in new drilling in this country. Without changes in U.S. energy, environmental and tax policy, I am gravely concerned that our nation will grow, on an accelerated basis, ever more dependent on imported crude oil as more domestic wells are plugged and abandoned, their resources lost forever, and as investment in new exploration and development in the U.S. is further reduced.

NATIONAL SECURITY. Our domestic natural gas and oil wells are a national security asset. Every barrel of oil and every cubic foot of natural gas produced in the United States creates wealth, jobs and tax revenues at every level of government. Unfortunately, our nation is at risk of losing a substantial share of its ability to domestically produce the country's primary sources of energy—oil and natural gas, which account for about 65 percent of total energy consumption in the United States.

On Friday, March 11, 1994 the IPAA and dozens of companies and other industry organizations filed a petition under Section 232 of the Trade Expansion Act, requesting that the Clinton Administration immediately begin an investigation to determine the impact of crude oil and petroleum product imports on the national security of the United States. That law gives the president the authority to adjust im-

ports, and we have asked the president to seriously consider that option. At the very least, we expect the president to come up with a comprehensive plan to preserve this vital industry which plays such an important role in maintaining the national security of the world's greatest superpower.

IMPORT DEPENDENCE CLIMBS. Consumption of natural gas and crude oil in the United States, by all official estimates, will continue to rise well into the future. Last year, our demand for crude oil was almost 18 million barrels per day, and 49.6% of this demand was supplied by foreign oil imports. That's a new record, exceeding the 42% of demand in 1977, the previous peak year for oil imports.

We have substantial domestic natural gas and oil resources that, if developed, can significantly reduce future foreign oil imports. However, these resources will not be discovered and developed so long as this country sits idly by while every other nation with energy resource potential provides inducements for oil and natural gas investments. On a worldwide basis, the U.S. energy tax policy is simply not competitive, and needs to be changed.

Regulatory policies in the United States are also crippling new investments and driving up the cost of doing business in the United States. There is a greater risk here in the United States of having one's energy investment "confiscated" by the government—especially if it is on public lands offshore—than in any other part of the world.

Independent producers, who currently produce about 64 percent of domestic natural gas and about 40 percent of domestic oil, are eager for economic conditions which would allow us to increase domestic supplies of natural gas and oil. This will not happen unless our government takes action on several fronts.

MARGINAL WELLS. The nation operated slightly more than 875,000 oil and natural gas wells in 1992, according to *World Oil*. Just under 600,000 of those wells are oil wells, and of that total, nearly 78 percent of the nation's oil wells are stripper wells, with an average production per well in 1991 of 2.2 barrels per day. Most of these wells are now uneconomic, operating at a loss.

These marginal wells—defined in the tax code as those wells that daily produce less than 15 barrels of oil (or the natural gas equivalent) or which produce heavy oil—are essential to our domestic energy supply. They provide approximately 20 percent of domestic oil production in the lower 48 states. These high-cost marginal wells collectively produce more oil than we import from Saudi Arabia.

Although many of these wells are uneconomic, producers have continued to operate them in hopes of higher prices in the future. But economic reality is beginning to set in, and many of these producing properties are being shut in, plugged and abandoned before the mineral deposit has been fully recovered. Stripper oil wells, which represent over 15% of domestic proved reserves, have been abandoned at a rate of over 17,000 wells per year for each of the past 10 years. That abandonment rate could double or triple this year. Once these wells are abandoned their production and proved reserves are permanently lost, and our foreign energy dependency grows.

If we are to maintain this production, Congress must enact measures that improve the economics of investment in marginal wells. The world marketplace is not going to do it for us. Indeed, OPEC nations probably would relish seeing this segment of our domestic energy supplies wiped out. It will help improve economic clout and help restore their dominance of world oil markets. OPEC will be the beneficiary of the status quo, and make no mistake about it.

To the contrary, as the attached map clearly shows, the greatest beneficiaries of tax policy changes affecting marginal wells will be states not traditionally viewed as "oil producing states." There are more than 460,000 domestic stripper oil wells in the country. Oklahoma, well known as an oil producing state, has over 73,000 of these wells. But the remaining 390,000 producing stripper wells exist in 27 other states, including New York (3,453 stripper wells), California (25,312 stripper wells), Illinois (34,319 stripper wells) and Kentucky (19,000 stripper wells).

DOMESTIC DRILLING. Just as we must preserve the productive capacity of existing wells, the nation must also encourage investment in drilling for new wells. In 1992, drilling for domestic natural gas and crude oil hit the lowest level since records were kept beginning in the 1940s, and 1993 was only slightly better. It is not inconceivable that a new record low for drilling could be set this year.

NATURAL GAS DRILLING. Tax policy changes to encourage new drilling are needed and will create jobs in all geographic regions of the country. The industry needs to increase drilling levels, especially for natural gas, to meet growing demand. Over half of the natural gas we used this year came from wells drilled in the last five years or less. If we are to use more natural gas, a primary objective of recent energy reforms and the announced energy policy of the Clinton Administration, then

the country needs to drill new gas wells. The IPAA believes that a production based credit is the best way to achieve new gas drilling. It has a record of proven success.

Equally important, the production-based credit will give a signal to domestic producers that their industry's contributions are viewed as necessary to achieve the administration's goals of greater economic growth and energy security. It will also signal that the health of the domestic oil and gas industry is important to this Congress and the Clinton Administration.

A NEW WAY OF THINKING. The U.S. oil and natural gas industry is undergoing a revolutionary change, a change that requires a new way of thinking. This new way of thinking must reflect the new economic realities that are shaping the independent oil and gas industry in America today. It calls for a new relationship between the government and the private sector. It is not a wild guess on my part to say that most independent producers loath to ask for more government involvement in their industry. There is a perception that government involvement has meant higher taxes, restricted access to public lands, and greater, more costly, and often unnecessary regulation.

Yet, we recognize that governments are very much involved in this industry worldwide. In fact, nationally own oil companies control 87.2 percent of total world oil reserves, two-thirds of which are in the Middle East. These 20 nation/companies produce nearly 6 of every ten barrels of oil. Those same governments want a greater share of the world oil market, and the way they will get it is by driving marginal production out of the marketplace. Time is on their side. Meanwhile, here at home, it is becoming increasingly clear that the marginal barrel in this so-called "free world market" is the high-cost U.S. production. That is the oil that is being forced out of the marketplace. And this trend will continue unless our government, too, gets involved.

TECHNOLOGY AND RESOURCE POTENTIAL. We have an advantage here in America. As Fortune Magazine recently observed: "American oil men are on the cutting edge of developing technologies that drive down the expense of finding and producing oil." That's true. Recent technological innovations that have revolutionized exploration, drilling and production processes also have greatly expanded our knowledge of America's vast potential for domestic supplies of natural gas and oil. There is an abundant natural gas and oil resource base in the United States, but to unlock that potential requires our nation to re-think the old ways, to seize change and the opportunity it brings.

According to geologists and petroleum engineers who participated in a recent IPAA oil and gas resource survey, America has abundant potential resources. Their resource estimates (including proved reserves) indicate that the United States has total potential supplies of 204 billion barrels of oil and 1,295 trillion cubic feet (TCF) of natural gas—a resource/production ratio of 62 years for oil and 68 years for natural gas. Nearly half of the resources lie in new exploratory development, and half in existing fields.

But these American resources—the reserves of the future—will by and large be found and developed in small increments. It is the nature of our geology in the United States that we have vast amount of reserves held in these small increments or jack rabbit fields, as we call them in the business. Although certain trends (particularly the deep, unexplored portions of several major basins) contain potential for the discovery of giant gas fields, new fields will be generally less than 100 billion cubic feet (BCF) of gas. Often they are as small as 10 BCF of gas or less. Development of reserves in existing fields or geological trends likewise will be in small increments, with additions of 1 to 2 BCF of gas for each well drilled. To keep drilling costs down in the search for these smaller reserves, independents are turning increasingly to new seismic and computerized technologies. Ironically, under the tax code a producer would probably be better off economically using the dry hole method of searching for these new resources.

Before the recent price collapse, independent producers were aggressively going after this resource base, scoring impressive successes using new geological concepts, innovative drilling techniques and computerized seismic technology. In the process, these entrepreneurs are creating jobs and new economic wealth—and discovering new oil and natural gas resources—in some 40 major production areas in 20 states.

The IPAA's resource base study entitled, *The Promise of Oil and Gas in America,* natural gas and oil plays/trends with significant discoveries or developments since 1986 were analyzed. Our survey resulted in 56 cases of significant discoveries or developments in 16 states, providing just a sample of significant events, not necessarily the largest reserve additions during the period. This sample does form a good cross-section of how productive E&P activity is undertaken. Some important themes are evident:

- New reservoirs were often found with new technology—mostly improved seismic and 3D seismic data, and better drilling and completion technology.
- However, the most important development is improved geological concepts. In many cases, old seismic tests "condemned" a large area or a trend; improved vision, based on better gas-finding ideas was necessary to successfully find and develop reserves. Pay zones with anomalous responses may have been bypassed, but can now be recognized. Wells without reservoir rock may represent local anomalies rather than regional truths.
- Drilling technology was also critical to the success of many projects. This includes proper fracturing techniques, mud systems, economical drilling, and better logging and evaluation methods.
- Reservoir characterization was critical to most infill drilling projects. A solid understanding of the hydrocarbon reservoir is replacing "blind" spacing reduction in improving field recoveries.
- Major hindrances to development in urban areas, besides high costs and low prices, include difficulties with log evaluation, and wetlands/environmental regulations.

THE FRONTIER WILDCARDS. In addition, the report highlights the fact that the United States has an immense hydrocarbon frontier consisting of basins which have not produced gas or oil yet; areas of producing basins which have not been adequately tested; deeper parts of producing basins, or downdip of known production; and unrecognized or "unconventional" reservoirs.

Overall, some fifty basins or portions of basins in 38 states are judged by the IPAA Task Force to have possibly significant potential for future reserve addition. This is not meant to be exhaustive nor predictive, but does indicate the scope of potential activity. In addition, one should take into consideration the "stumble factor." It has been said that more oil or gas was found on wrong geology than right geology. Major new plays have often resulted from chance encounters on the way to a dry deep objective.

Our resource base report shows that we can meet our country's need for natural gas for many years to come, through intelligent and efficient exploration and development. But these needs can only be met through drilling. To convert the resource into reserves and production on the time scale needed by the American economy will require a significant increase of industry effort and increased coordination between various segments of the industry including the service industry. It will require the ability to form sufficient capital to mobilize the rigs and create these jobs. And it will require a partnership with government to make the resource base accessible.

THE ROLE OF THE INDEPENDENT. Independents are ideally suited to find and develop the resource base in the United States. There has been a fundamental change in the domestic industry. It used to be that independents were the primary "wildcatters" in the business, drilling over 85 percent of the exploratory wells. Although they have always been the principle natural gas producers, producing over 60 percent of the natural gas and 40 percent of the oil, they used to make the deals, find the natural gas and oil and then sell the proven property to a major company to develop using the capital to invest in the next new wildcat. Today, not only are the independents finding the resource but they are also the main purchasers of the proven properties for the first time in our history. This trend will continue with more properties (some estimate in the neighborhood of $10 to $15 billion worth) are transferred into the hands of independents who are skilled at recovering reserves in the ground at the lowest cost.

INDEPENDENTS OFFSHORE. To further underscore the fundamental change in the domestic industry, is the role now being played by the independent in production offshore the United States. I don't need to remind you that over 27 percent of our supply of natural gas is produced offshore. The independents have won 51.5% of the 3,551 offshore federal leases issued from 1988 through March 1993. In addition, independents have drilled 85.1% of all wells on tracts leased since 1988, recorded 120 of 129 discoveries and installed 48 of 52 offshore structures. Of the 70 recently leased tracts with production, independents operate 66. Even in this more difficult and expensive environment, the independent is the key domestic player.

Independent producers have smaller staffs, lower overhead costs, and can act aggressively and move quickly to capitalize on new opportunities and adjust to meet these new challenges. The successful independent has developed his own niche, becoming the world's leading expert in a certain geological trend or technology. They use these advantages to reduce finding costs and increase success rates. Our industry provides high-tech jobs which are generally better paying than other industry's on the whole. And when I talk about our industry being a high tech industry, I'm

not kidding, the domestic industry uses more computers than any other industry in the United States.

The Twenty-First Century holds great promise for a renaissance in the entrepreneurial spirit that founded America's natural gas and oil industry near Titusville, Pennsylvania in 1859. To fulfill that promise, the private sector, the government and the American public must change the way they look at the industry and recognize the expanding and, indeed, dominant role that independent producers have particularly in the natural gas industry's present and future in this country.

THE ROLE OF THE AMERICAN GOVERNMENT. I have just laid out the case that it will be independents who lead the domestic natural gas and oil industry into the future. But, if there is to be a domestic industry, American leaders must decide that it is a priority and then act on that priority. While there is great promise, the domestic industry today is facing perhaps its greatest threat yet. This is a very serious situation, and I believe the very survival of the oil industry in many states is at risk; the domestic oil and natural gas industry will survive, but it could be greatly reduced in size and capability. As a nation, we cannot afford to lose this fight.

As I mentioned earlier, the IPAA is leading a united front of domestic producers from 33 states in asking the Department of Commerce to conduct an investigation under section 232 of the Trade Expansion Act, to again determine that imports pose a threat to the national security of the country and to require the President to act to adjust imports. We urge the administration to act expeditiously on the petition and conclude its investigation as rapidly as possible.

We have also begun a comprehensive public education program focusing on the public schools, the capital markets, the national media and on shoring up our grassroots in the oil patch. A number of state associations have shown the way, with the Oklahoma Independent Petroleum Association leading the pack, with their own state program. For the last two years, the IPAA has sponsored a Wildcatter's Week in Washington, erecting a drilling rig in front of the Capital and the Washington Monument and putting together displays highlighting the role of domestic production. We are starting a national environmental stewardship program where independent producers will be highlighted, focusing public attention on all the good we do. We know that public leaders must have public support for an initiative of the scope we believe is necessary to prevent the collapse of the domestic industry.

We are also grateful for the tremendous leadership that members of this Committee have shown, organizing a bipartisan coalition of concerned members of Congress, and getting more than a hundred of your colleagues to join in urging the President to meet with you to discuss policy options to address the crisis in the domestic industry. The IPAA supports that effort and is proud to participate to the fullest extent.

Let me summarize the IPAA recommendations.

- Price is everything. Imports need to be adjusted directly through a floor price and import fee for oil or indirectly by increasing domestic production through tax incentives. The primary goal should be to maintain our vital existing marginal production as well as to encourage new drilling. The IPAA believes that a domestic production credit for oil and gas triggered by the fall in oil or gas prices should be enacted that focuses the greatest help on the high-risk, high cost wells. Additional percentage depletion relief would also be of great assistance to the independents. In addition, allowing for expensing of all geological and geophysical expenses would encourage the new high tech methods of exploration and production and adjusting the enhanced oil recovery credit to assist in advanced oil recovery would also help greatly. In addition, to assist marginal wells, IPAA joins the National Stripper Well Association in recommending that the Department of Energy establish an emergency program to purchase stripper well production for the strategic petroleum reserve. We need your help in this.
- Reform regulation and improve compliance technologies. Increasingly stringent environmental compliance requirements are severely limiting industry's ability to meet the nation's demands for oil and gas. The cost of complying with government regulations are simply going through the roof. Relieving those burdens on the domestic industry doesn't take a big legislative program. It takes common sense. More cost-effective methods for adequately protecting the environment while permitting E&P are required. This can be done by establishing regularity requirements that are scientifically based on the site-specific risks; making the costs of compliance commensurate with the risks posed; and developing lower cost compliance technologies and practices.
- Access to technology and access to the resource base is important to independents because that is our future. Projects like the Petroleum Technology Transfer Council—a joint effort between IPAA, all the state and regional producer orga-

nizations, the service industry, and other resource organizations in and out of government to provide access to the latest information about technology through workshops and computerized data resource stations—need support from the private sector and the Department of Energy to become a reality.

- Access to the resource base is critical. The U.S. has a tremendous "promise of oil and gas." Approximately 17% of our oil supply and 33% of our natural gas supply is found on federal lands. However, we can only realize that resource if we have the capital and if the government allows us access through reasonable leasing policies. The federal government owns a total of 724 million acres of land in the United States, 31% of all American land area. A substantial portion of the nation's recoverable reserves and potential petroleum resources underlie the public lands. *In 1983,* over 167 million acres of federal and Indian lands, *23%* of the total, were covered by oil and gas leases issued under the supervision of the Department of the Interior. The amount of acreage under lease has dropped drastically to only about 66 million acres in *1990,* just *9%* of all federal and Indian lands. As I shared with you earlier Independents are increasingly becoming the dominant player on federal lands as well in the U.S. Last year we formed the Public Lands Coordinating Committee with RMOGA, IPAMS, AAPL and others to better advocate our shared positions on these issues. This coordination has been particularly important in the last six months as we are facing a large number of new legislative and regulatory policy initiatives by the Department of Interior that adversely affect natural gas and oil exploration, production and transportation on federal lands. These initiatives include the notice of proposed rule-making on the OPA '90 which appears to require proof of financial responsibility of $150 million (up from $35 million) for operators of "offshore facilities." We are hopeful that on this issue at least we can work through our problems in cooperation with the Administration and Congress, although we believe that legislative changes may be necessary.

THE PRIVATE SECTOR. I have spent some time sharing with you my view of the need for a partnership by our government with our industry. We still need to convince others to move away from initiatives that would still damage us. What I would like to talk about now is the new way of thinking about each other that exists now in the private sector of the natural gas side of the industry. This is so important to independents because, as I said earlier, we produce over 64 percent of the natural gas produced in this country. With FERC Order 636 in place, it has allowed the natural gas industry to build bridges like never before. Most of the players in the natural gas industry have finally realized how much we need each other if we are going to realize the promise that natural gas hold for America's future. With the formation of the Natural Gas Council, the leaders of the natural gas business meet regularly to discuss—to communicate—about problems both real and perceived to growing the market for natural gas. We talk about helping each other on exploration, production, transportation and marketing issues. We are working together to improve reliability through emergency planning and improved information and technology. We are teaming together to meet regulatory (including environmental) challenges. I submit that the new way of thinking about us as a team is permanent and, while not universal in the industry, is moving in that direction. There is a new relationship and understanding between the local gas distribution companies and the producers about problems producers are facing in forming capital and how we need to work on them together.

As I said earlier, independents are looking beyond the old way of doing things and are embracing a **new way of thinking.** A new way of thinking about our American resource base, about the use of new tools and technology, about encouraging a partnership with our government and other parts of the private sector. We don't believe the American oil industry is lost, but we do face a struggle if we are to preserve anywhere near its present size and ability. If we are to realize the great promise of the future, we must fight to hold on to the resource base we now have, as well as encouraging new drilling in order to preserve the industry's infrastructure during this period of extraordinarily low prices. We need your help to do that.

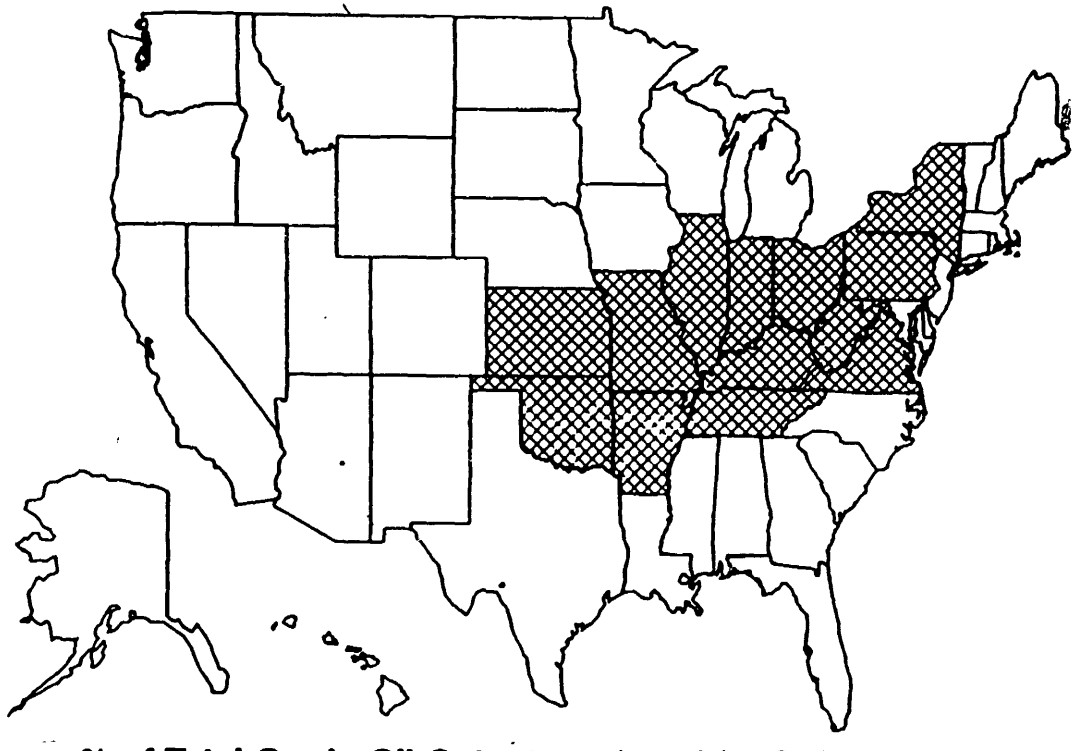
THE INDEPENDENT PRODUCER AGENDA TO REVIVE THE DOMESTIC NATURAL GAS AND OIL INDUSTRY

Independent producers urge President Bill Clinton and the 103rd Congress to build upon the Energy Policy Act of 1992 to decrease America's dangerous and costly reliance on imported oil and petroleum products and to rebuild the weakened domestic natural gas and oil industry. We urge the President and Congress to support measures to encourage the development of both conventional and non-conventional

natural gas and oil in this country, as well as measures which preserve and promote marginal natural gas and oil wells, by implementing the following initiatives:

- **CRUDE OIL.** Revise policies governing oil imports and exports to stabilize and expand domestic oil production and to prevent the premature loss of stripper oil production, including establishment of an import fee on crude oil and petroleum products and repeal of the ban on the export of Alaska's north slope crude oil; adopt policies that ensure a greater share of federal research funding for crude oil and technology transfer.
- **NATURAL GAS.** Implement recently enacted policies that expand domestic and international markets and make them more competitive, including full implementation of natural gas pipeline rate reform; adopt policies that ensure a greater share of federal research funding for natural gas and technology transfer, that encourage longer term sales contracts, that maintain a level playing field for domestic and imported natural gas, and that recognize the environmental benefits of natural gas for electric generation, industrial use and as a transportation fuel.
- **TAXES.** Adopt policies that encourage capital formation for oil and natural gas exploration, development and production, that encourage the maximum recovery of the domestic oil and natural gas resource base through initiatives to maintain existing marginal production and the use of advanced recovery technology, and that improve the economics of environmental protection. Oppose any new tax imposed on energy at the wellhead.
- **ENVIRONMENTAL PROTECTION.** Support environmental proposals that are equitable, cost effective, and which prevent documented environmental harm; work to change existing laws that do not meet these requirements; support retention of the present state-based regulatory program for oil and natural gas exploration and production wastes, and ensure that the present federal policy that exempts such wastes from designation as hazardous waste is retained under the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), and is incorporated into other appropriate statutes and regulations.
- **PUBLIC LANDS.** Adopt policies to improve and increase access to federal lands for oil and natural gas exploration and production under reasonable terms and conditions.

STATES WITH 50% OR MORE STRIPPER WELL PRODUCTION



% of Total Crude Oil Output produced by Stripper Wells

Arkansas	50%	Kentucky	81%	Ohio	73%	Tennessee	87%
Illinois	92%	Missouri	90%	Oklahoma	72%	Virginia	100%
Indiana	100%	New York	94%	Pennsylvania	100%	W. Virginia	99%
Kansas	71%						

Source: National Stripper Well Association

PREPARED STATEMENT OF SENATOR MAX BAUCUS

Thank you Mr. Chairman.

I appreciate you calling this hearing today, giving us the opportunity to receive testimony on the state of the domestic oil and gas industry and tax proposals to increase production. I also want to commend you and Congressman Brewster for your leadership in establishing the bipartisan Congressional working group to focus on the plight of the domestic oil and gas industry.

Mr. Chairman, this is a jobs issue for Montana. Thirty two of the fifty six counties in Montana are involved in oil and/or gas production. As of September 1993, approximately 8,000 Montanans were employed in some capacity in the petroleum industry.

As is the case nationwide, however, the oil and gas producing industry is quickly disappearing in Montana. In the 10 year period ending in 1992, the price of a barrel of oil produced in Montana has declined 45% from $31.30 per barrel to $17.20 per barrel. This decline in price has led to a decrease in Montana oil and gas production—down 41% from 31 million barrels in 1982 to 18 million barrels in 1992.

Accompanying the decline in production is a 72% decline in oil and gas extraction employment, from 5,5550 jobs in 1982 to 1,550 in September of 1993. Despite the success of the 1993 Budget Act in stimulating the nation's economy, the decline of the domestic oil and gas industry is causing serious economic dislocation in parts of Montana and many other sectors of the country.

It is time for the Congress and the Administration to sit down with industry representatives and make some fundamental decisions about the future of the oil and gas industry. It is in the best interest of Montana and the nation that our domestic energy industry survive.

However, hard times for the oil and gas industry should not be used as an excuse to lower domestic environmental standards. I know that the protections embodied in the Clean Air Act are expensive for domestic refiners. But, through the benefits to our environment, our health, and our quality of life, I believe we are getting what we pay for. And I appreciate the efforts of the industry to comply with the law. But rather than seeking to scale back domestic environmental laws, we should concentrate our efforts on forcing other countries to raise their standards. We must do everything we can, short of improper trade measures, to push the rest of the world to elevate their standards and reward other countries that protect their domestic environments.

The plight of the U.S. domestic oil and gas industry is one of the many reasons why the next round of trade talks must be a "green round." These tensions and economic dislocations will only continue unless we face these problems head on. Moreover, attacking other U.S. industries, such as the ethanol industry, is not the answer. The proposed rule mandating that 30% of all oxygenated fuels be renewable is a good compromise and, in my opinion, consistent with the Clean Air Act.

Quick fixes, such as requiring cost-benefit analysis on all regulations are not the answer either. This sort of analysis, if used improperly, will gut environmental protections that have taken 20 years to achieve. Cost-benefit analysis is just one tool that policy makers must use in crafting a regulation. Such analysis should never be used to undermine the clear intent of Congress as expressed in laws such as the Clean Air Act.

Thus, we must search for new answers to these tough questions regarding how to keep our domestic industries competitive while preserving our environment. I look forward to working with my colleagues in coming up with a consensus package of tax and other proposals to help counterbalance the cost of domestic production and to allow this industry to compete in a global market economy.

PREPARED STATEMENT OF VICTOR G. BEGHINI

The following statement is submitted to the Senate Finance Committee Subcommittee on Taxation on behalf of the American Petroleum Institute (API) for the record of the March 22 hearing on the State of the Domestic Oil and Gas Industry and Tax Proposals to Increase Production.—API represents approximately 300 companies involved in all aspects of the oil and gas industry, including exploration, production, transportation, refining and marketing.

We commend the Committee for the timeliness of this hearing. The current state of the U.S. petroleum industry is, in a word, fragile. Moreover, this current fragility is ironic, insofar as it comes at a time when the industry has successfully adapted to one of the most difficult periods in its history, and in many ways stands uniquely

poised to meet the major challenges of a domestic and world market that will require growing supplies of our principal products.

In the past decade, the industry has made enormous adjustments to meet challenges on a number of fronts—from foreign competition, from changing product demand patterns, from rising standards of environmental performance, and from increasingly restrictive constraints on domestic exploration and development. In the process, the industry has become smaller and cut its costs dramatically, but has at the same time developed sophisticated new technology and vastly improved its environmental performance, in the process greatly enhancing its competitiveness in the international marketplace.

The record of the industry's accomplishments is impressive. This industry has been the leader in the development of sophisticated new technologies for exploration, development, and production. New 3-D seismic surveys combined with new imaging technology increase greatly the precision with which a prospective structure can be drilled. Horizontal drilling greatly improves the economics of certain types of prospects, often increasing several fold the prospective productivity of a well. In the process, it also greatly reduces the adverse land use impact associated with developing a property. Enhanced oil recovery technology, developed primarily over the past two decades, now accounts for over 11% of U.S. production.

Similarly, the downstream portion of our industry has adapted to changing market and regulatory conditions at breakneck speed during the past two decades. Since the mid 70s, we have virtually phased out the production of leaded gasoline in response to the Clean Air Act of 1970. Particularly since 1980, we have greatly increased the flexibility and complexity of refining operations in order to handle a progressively heavier, higher sulfur mix of crude oil inputs, and to conform to new and emerging environmental standards. The industry phased in the production of low sulfur highway diesel fuel last year, and further additions to downstream capacity will continue to be required to meet the reformulated gasoline requirements of the Clean Air Act Amendments of 1990.

As a consequence of these investments and those of the automobile industry, vehicles and fuels have become progressively cleaner in recent years, and air quality nationwide has been steadily improving. According to EPA, over the 1982–91 period, lead emissions were down 89%, carbon monoxide 30%. Cars built from 1983 to 1993 emit 96% fewer hydrocarbons per mile than those built in the 60s. Gasoline is now lead free. In 36 cities, oxygen was added to gasoline to reduce carbon monoxide. The diesel fuel that was brought to market last fall has nearly 85% less sulfur than the old fuel. Today, Americans drive two and a half times as many cars three times as many miles, with total tailpipe emissions only one third of what they were 40 years ago. By 1995, U.S. refiners will produce new reformulated gasoline that will cut emissions of hydrocarbons and air toxics by another 15%. A joint oil-auto industry research program has been conducted to identify further means of cost effectively reducing emissions. Progress is being made, and further improvements are on the horizon.

This is the record of the petroleum industry. It is a record of solid accomplishment in steadily improving both the economics and the environmental performance of our major products.

In the meantime, both in the U.S. and the world, there is every indication that sustained economic growth will require growing supplies of our principal products. And, the fact is that for the foreseeable future there are few practical alternatives to oil as a transportation fuel, and in applications where alternatives to oil are available, such as industrial and electricity generation, the most economical and environmentally benign alternative is likely to be none other than the other product of our industry, namely natural gas.

In the most recent outlook published by the Department of Energy, released in January, a relatively modest sustained 2.5% annual growth in GDP would require an increase of 2 million barrels a day of refined product between now and the year 2000, even assuming a strong growth in conservation trends and alternative fuels supply, along with aggressive natural gas development and the fuel use mandates implied by the Energy Policy Act of 1992. Under their quite conservative assumption that domestic crude declines at less than 2% between now and then, imports rise by nearly 5 million barrels a day between 1992 and the year 2000, reaching 56% of consumption by that time. In fact, the dependence will be much higher if domestic production continues to decline at recent rates, which in 1993 was well over twice the decline rate estimated by DOE. Oil imports are not themselves the problem. Realistically, we cannot expect to supply all of the oil required for the growth of this economy from domestic sources. Imports will be a part of any realistic scenario, and we need to accept that fact and manage its associated risks with the SPR and worldwide supply diversification. Government should not, however, artifi-

cially bolster those imports by refusing to let the U.S. industry compete on the same terms as our foreign competitors. But this seems to be precisely what is happening.

The technological strides made in the U.S. industry over the past decade give us the potential to participate in supplying these growing energy needs in an economic and environmentally sound manner. But, the industry is in a fragile condition—due both to continuing low oil prices and staggering costs imposed by government mandates.

Unfortunately, the evidence of that fragility is overwhelming in both the upstream and downstream portions of our industry. In 1993, only 754 drilling rigs were active in the United States, down 25% from 1990, and down more than 80% from the peak of domestic activity in 1981. A record low 22 thousand wells were completed in 1992. The decline in exploration activity has been even more dramatic than these totals indicate. New field wildcat wells fell by nearly half between 1990 and 1992. For the largest companies, domestic exploration expenditures have fallen by about half since the mid 80s and have recently been reaching new lows. As a consequence of these low investment levels, additions to domestic oil reserves have recently been falling far short of current production. In 1991 and 1992, new additions to domestic oil reserves replaced less than half of the oil produced in those years. Even in the early 70s, when domestic production was falling at 4-6% annual rates, upstream investment was replacing more than 60% of production. By 1993, domestic crude supply was 6.9 million barrels a day, nearly 30% below its 1970 level, and declining in excess of 4% per year.

But the problems of the upstream portion of the industry are not only reduced investments in new capacity. There is also an alarming rate of abandonments of existing marginal wells. Between 1985 and 1993, more than 138 thousand marginal wells in this country have been shut in.

As domestic investment has dwindled and marginal properties have been abandoned, employment in the industry has shrunk, having already fallen by nearly 470 thousand since its peak in March of 1982. This decline in employment has been about two and a half times the size of the decline in the U.S. automobile industry since its peak in January of 1979. Many more jobs are at risk. It has been estimated that existing marginal wells alone account for 27 thousand jobs in the oil and gas sector and another 32 thousand jobs in associated industries.

The downstream segment of the industry is also properly characterized as fragile. Again, in simple numbers, there is an unmistakable pattern of decline. In 1981, there were 324 operable refineries in the United States. By 1993, closings had shrunk the number by 42%, to 187, causing an 18% decline in domestic refining capacity.

These trends present legitimate cause for concern, and we believe that these hearings are especially timely. Continued healthy economic growth cannot occur without growing secure supplies of energy, in particular oil and gas. Our industry stands ready to facilitate this growth with new supplies, which we can produce and transport in a manner consistent with the highest world standards of environmental performance, and we can refine these supplies into a slate of products which dominate the available alternatives in terms of both economic and environmental performance. However, our domestic petroleum reserves only have value if we maintain the expertise and risk capital to bring those resources to market. Especially in a period of low oil prices, we must preserve at risk marginal production and stimulate development of new resources.

Toward that end, the industry has developed a modest tax incentive proposal in the form of a credit for existing marginal production (stripper, heavy oil and high water cut) and new production, effective only when crude oil prices fall below a target price. The API supports adoption of this proposal. But, this modest step alone will not solve the problem. We urge that the Committee also look at additional tax measures such as expensing of G&G, Alternative Minimum Tax relief, and enhanced oil recovery and deepwater incentives to determine cost efficient ways to encourage increased domestic petroleum activity.

While improved tax treatment will help, aggressive action is needed to mitigate the onerous effects of burdensome government actions. Despite the dramatic achievements of this industry over the past decade, our potential to contribute to sustaining the competitiveness of the U.S. economy is being squandered by misguided constraints on upstream domestic activity and by regulatory initiatives that require expending scarce capital on mandates with little environmental payoff. Upstream, we see systematically implemented policies which restrict investment in new domestic supply and encourage the premature abandonment of marginal properties, often in ways that provide no environmental benefit or even incur environmental costs.

API estimates that lifting the ban on ANWR development alone could offset more than a third of the expected decline in domestic supply over the next fifteen years. Similarly, the moratoria on OCS leasing deprives the U.S. of one of the principal prospective sources of new supply that is needed to help stabilize U.S. output. In 1992, over a third of oil discoveries and over half of natural gas discoveries originated in Federal OCS waters, which are increasingly off limits to new development.

Moreover, new regulations for underground injection wells being considered by EPA could aggravate the problem of abandonments of existing wells beyond that already occurring due to low oil prices. For instance, one engineering firm estimates that this could cause the shut in of nearly 16% of the wells in the East Texas Field, currently the largest producing field in Texas, despite the fact that produced waters from that field have been disposed of for over 51 years in a manner that has never damaged any of the producing wells or fresh water sands in the area, and that has become a model for the industry.

Similarly, the downstream portion of our industry already faces a multitude of new domestic regulations on refining, marketing, and distribution. For example, about 70% of U.S. refining capacity is located in ozone nonattainment areas. Many are in carbon monoxide or other nonattainment areas as well. Such refineries will require major new investments to reduce stationary source emissions to secure compliance with the Clean Air Act Amendments of 1990. One estimate puts the cost of achieving NOx reductions alone at over a billion dollars in 1995 and 1996. Similarly, Title III of the Clean Air Act Amendments requires that EPA promulgate Maximum Achievable Control Technology (MACT) standards for petroleum refineries which are estimated to entail initial costs of one to two billion dollars and ongoing costs of as much as a half billion dollars annually between 1995 and 2000. This is not to mention the investments which will be required to change our product characteristics to comply with mandates of the Clean Air Act Amendments.

It is especially troubling to the industry to have these expenditures misallocated by inflexible regulatory provisions that compromise the intent of the legislation which they claim to implement. A perfect example of this has been the proposed mandated use of ethanol in reformulated gasoline. A few years back, federal and state officials, environmental groups, the petroleum industry, ethanol manufacturers and other interested parties entered into a negotiated regulatory process, called a reg-neg, to agree on provisions to implement the 1990 Clean Air Act Amendments. All parties signed an agreement which would reduce smog in urban areas with the worst air pollution. However, once it became apparent that ethanol creates as many environmental problems as it appears to solve, the ethanol industry backed out of the agreement, politicized the issue, and has sought to convince the EPA to mandate the use of ethanol in reformulated gasoline with a new regulation. If the ethanol industry prevails, motorists will pay more for a fuel with no environmental benefits.

As an industry, we have already adapted to many changes in our market and regulatory environment, and will continue to do so in the future. But we hope that in promulgating further legislative and regulatory mandates on this industry, policymakers understand that major amounts of industry capital are being absorbed. The petroleum industry currently is spending more than $8 billion annually on environmental quality and protection. By 1990, these expenditures exceeded industry spending on oil and gas exploration. By the end of this decade, API estimates that new costs already mandated may add $17 to $25 billion a year to this total.

Appendix A of this statement is a list of regulatory issues that serve to drive up costs and make less capital available for productive investment in the United States, such as wells and new plant and equipment. Proper resolution of these issues will reduce the unwarranted regulatory burden on this industry and free up needed capital for productive investment. In addition, we would urge that as a matter of general principle, any new regulatory proposals should be subjected to thorough risk assessment, cost benefit analysis, peer-review science and economic impact statements.

Our industry recognizes the need for improving the environmental performance associated with both the manufacturing and use of our major products. We hope that government recognizes the extraordinary efforts we have already devoted and are continuing to devote to these efforts. We are now world leaders in the technology and practice of producing oil and gas in the most environmentally benign manner possible. We are facing a world market which values this capability, and will require growing supplies of oil and gas for continued prosperity. We hope that these hearings and any legislative action resulting from them will assist us in developing our potential for seizing this opportunity, and work to rationalize the increasingly burdensome regulatory apparatus that is increasingly preventing us from doing so.

APPENDIX A—AMERICAN PETROLEUM INSTITUTE

REGULATORY ISSUES

The proper resolution of the following regulatory issues is important to the petroleum industry since they serve to drive up costs and make less capital available for investment in the United States such as wells and new plant and equipment:

Ethanol/ETBE Mandate for Reformulated Gasoline (Regulation proposed by EPA)

This proposed ethanol/ETBE mandate is inconsistent with both the Clean Air Act and the negotiated agreement on RFG reached in 1991, which allow gasoline producers flexibility to choose the most economic oxygenate for manufacturing RFG. The proposed mandate also has no environmental benefit and little if any energy security benefit. The cost of the proposed mandate would be in the hundreds of millions of dollars annually. The cost of each barrel of imported oil avoided as a result of this approach would be on the order of $100 per barrel, or approximately seven times the current cost of crude oil.

Underground Injection Control (Regulations under development by EPA)

EPA is in the process of developing new regulations for the Class II Underground Injection Control (UIC) program, which potentially could be very costly to the industry. API participated in the Federal Advisory Committee (FAC) which developed specific recommendations for the new regulation's. API will continue to work closely with EPA to ensure its proposed rules are cost effective and consistent with these recommendations. API is particularly concerned about provisions which could require Area of Review (AOR) studies on numerous injection wells which were in existence before the UIC program took effect in 1982.

Natural Resource Damage Assessments (Regulations under development by DOI and NOAA)

Under the authority of CERCLA and OPA '90, the Departments of Interior and Commerce are developing regulations to impose liability for injuries to natural resources caused by discharges of hazardous substances and petroleum. The regulations could—but are not required to—include damages for the emotional loss of persons who do not use the natural resources. The proposal to include such "non-use" damages relies on an economic methodology, known as contingent valuation (CV) for damage assessments, that is seriously flawed. A blue ribbon panel of economists created by NOAA to address the reliability of CV was not able to identify any study conducted to date which satisfied its stated criteria of reliability. Final regulations for natural resource damages should not include liability for non-use value losses measured by the contingent valuation methodology.

Financial Responsibility Regulations (ANPRM issued by MMS)

Minerals Management Service (MMS) has misinterpreted the Oil Pollution Act of 1990 to extend the financial responsibility requirement to hundreds of thousands of onshore facilities, such as pipelines, docks, storage tanks and marinas. As a result, many small businesses will be forced to close because they cannot meet a $150 million requirement. In addition, many economically marginal offshore oil and gas wells will be shut down and plugged for the same reason. Finally, insurers and other potential providers of financial responsibility have indicated that they will not agree to be sued by oil spill claimants in U.S. courts, as the MMS has proposed to require in these regulations. In a recent report to the Secretary of Energy, the National Petroleum Council detailed the potentially serious impacts of these new requirements, as proposed by MMS, on the petroleum industry and the U.S. economy.

Risk Management Plans (Regulations proposed by EPA)

The proposed regulation on risk management plans would apply to an astonishingly large number of facilities. EPA estimates that 145,000 facilities would be covered. Industry believes this substantially underestimates the impact. For example, over 190,000 service stations alone would be subject to the regulations at an estimated cost of $1.9 to $2.9 billion. The proposal would require many other small and large businesses to prepare risk management plans. EPA's own regulatory impact analysis estimated the cost of the regulation to be $3.7 billion and the benefits to be less than $900 million, and use of more realistic costs numbers would further widen the gap between costs and benefits .

Enhanced Monitoring (Regulation proposed by EPA)

The rule would increase the stringency of many emission standards. In addition, the cost for petroleum facilities to comply with the proposed regulation is estimated to be $360 million in capital expenditures and an annual operating cost of $335 mil-

lion. The low level proposed for triggering the applicability of enhanced monitoring requirements (*i.e.*, 30 percent of the emissions level used to determine whether a source is "major") will lead to costly monitoring programs that provide little, if any, air quality benefit. Furthermore, the applicability level will limit emissions trading, averaging, and bubbling.

Maximum Achievable Control Technology for Hazardous Air Pollutants (MACT Regulations under development by EPA)

API has been working with EPA by providing data, particularly on the level of hazardous air pollutants actually emitted by petroleum industry facilities. API data (from 1992) show that actual emissions from certain types of petroleum facilities are an order of magnitude lower than older emission factors (from 1980) EPA is using to judge the cost-effectiveness of MACT. This means that some levels of MACT are not cost-effective because of the expense of controlling relatively small amounts of hazardous air pollutants. However, EPA has not used the API data so far as a basis for its MACT regulations. In addition, EPA has proposed to interpret the best-performing 12-percent statutory criterion for MACT to be based on the best-performing 6 percent, resulting in more stringent and therefore more costly MACT.

Testing of Fuels and Fuel Additives for Motor Vehicles (Regulation proposed by EPA)

Delays in finalizing regulations for the testing of reformulated gasoline (RFG) could inhibit the sale of this fuel because of the lack of time available to register the fuel before it can be sold. By law, the fuel is required to be sold in nine metropolitan areas beginning January 1, 1995. These nine areas, plus other areas that have voluntarily opted in to the RFG program, account for one third of all domestic gasoline use. Regulations to assess RFG must be compatible with the time frame for mandatory introduction of these fuels.

Changes to Definition of Solid Waste (Under consideration by EPA)

Regulating these potentially recyclable materials as hazardous wastes unnecessarily stigmatizes them and discourages recycling. This approach is contrary to the Administration's emphasis on pollution prevention, which encourages recycling and the minimization of waste generation.

Hazardous Waste Identification Rule (Existing rule being reexamined by EPA)

Two overly broad RCRA rules (the "mixture" and "derived from" rules) require waste generators to spend money unnecessarily to handle wastes as "hazardous" that actually pose a low risk. The cost of disposing of these wastes as hazardous is up to four times greater (about $250 per ton) than managing them as non-hazardous wastes. In addition, generators of soils and groundwater (environmental media) contaminated with hazardous waste are also required to apply hazardous waste requirements to managing these materials. The costs and administrative burdens associated with managing these environmental media as if they were hazardous wastes has created a disincentive to expeditious clean up of past contamination.

Land Disposal Restriction Regulations (Under development by EPA)

RCRA controls for wastewaters managed in Clean Water Act (CWA) systems would provide little additional benefit because compliance with CWA requirements already minimizes any risks. Additionally, replacing all existing in-ground CWA treatment units with tanks and more aggressive treatment technology could cost the petroleum refining industry over $5 billion. EPA has not yet estimated whether any benefits would result from requiring RCRA controls on these CWA wastewaters and treatment units.

Great Lakes Water Quality Initiative (GLI) (Regulation proposed by EPA)

The proposed GLI is of concern both because of the potential direct impact on municipal, federal, and industry facilities located in the Great Lakes Basin and because EPA has suggested that elements of the GLI may be considered for national application. Because the initiative focuses almost exclusively on controlling point sources which are already tightly regulated, it would yield few environmental benefits yet impose substantial compliance costs on industry. The proposal is estimated to cost four refineries in the Great Lakes Basin $78—$292 million in capital costs and $36–$64 million in annual operating costs.

PREPARED STATEMENT OF SENATOR DAVID L. BOREN

The Subcommittee on Taxation is meeting today to discuss the alarming deterioration of a vital American industry—the domestic oil and natural gas industry. Last

week, the *Tulsa World* reported that the price for "Oklahoma Sweet" crude oil declined yet again, reaching $12.50 per barrel. This price is well below the cost of producing the resource. In fact, crude oil prices have fallen nearly 45 percent in the last decade—and this decline shows no sign of abating.

This situation has sent shock waves throughout our nation as businesses are forced to close, thousands of Americans lose their jobs, and States lose large amounts of production and income taxes. The statistics speak clearly to the crisis that we face. 13,600 Americans have lost their jobs since November because of the extraordinarily low prices. This job loss is in addition to the nearly 500,000 jobs that have been lost in the last decade. In addition, my State alone has lost at least $2 million in gross production taxes.

Precious natural resources as well as jobs are at stake. Low prices inevitably result in lost natural resources. 453,000 marginal wells operate in the United States today, contributing 14 percent of total domestic production and accounting for 60,000 jobs. The average marginal well produces only 2.23 barrels a day, and many rely on enhanced oil recovery techniques, artificial lift, or other expensive recovery methods. Most are therefore unprofitable to produce at current prices and may be plugged or abandoned. It is estimated that nearly 50, 000 wells will be abandoned in 1994 if oil prices stay at $14 a barrel—certainly more resources will-be lost forever if the price remains at $12.50 a barrel!

Many people don't understand that once these wells are plugged, the remaining resources cannot be recovered in the future unless a completely new well is drilled. This is an expense no rational person would incur for a well that produces an average of less than 3 barrels a day. We must change the economics of marginal production because we simply cannot afford to waste these resources on which we have already paid the environmental costs.

Domestic production is declining precipitously. U.S. oil production averaged only 6.8 million barrels per day in 1993, our nation's lowest oil production level since 1958. It is almost certain that the 1994 production levels will be even lower. This is particularly disturbing in light of the fact that we import 49.5 percent of U.S. oil consumption. We have never been so dependent on foreign oil, even during the oil shortages of the 1970s. Thus, our efforts to safeguard and to increase domestic oil and gas resources relate to national security interests as well as domestic economic interests.

We must also encourage drilling for new sources of natural gas. Our country increasingly relies on this source of energy, but we are not finding new natural gas as quickly as we are using existing reserves. It is estimated that 500 to 600 rigs need to be drilling every day to meet current natural gas consumption needs. However, the most recent data reveals that only 405 natural gas rigs are currently drilling.

This hearing is only part of the effort to bring this crisis to the attention of the American people and policymakers. I realize that many sectors of the economy have reaped economic benefits from the very low oil and gas prices. Certainly, no one wants to impede economic growth, but the country must realize the high price that our domestic oil and gas industry is paying for the luxury of cheap energy. It is in the best interest of the entire nation that our domestic industry survives and that we obtain the maximum value from our current investment in the resources extracted through marginal and stripper wells.

Along with approximately 120 other Senators and Representatives, I have requested a meeting with President Clinton to search for solutions to this problem. We have identified several solutions, including a tax credit for marginal production and new production that would phase out as the prices for oil and gas increased. Other solutions might require legislative solutions—such as expensing geological and geophysical costs—or could be accomplished through regulatory changes. Many of these changes would improve the economics of domestic production without raising the price of oil and natural gas to the American consumer.

Today I look forward to discussing with my colleagues and the distinguished witnesses the problems facing our domestic oil and natural gas industry. The information that we bring forward today can serve as the basis for an intelligent and informed discussion of solutions. We will hear from state officials who can discuss the effects of various state proposals aimed at increasing domestic production. We will focus on marginal production, which is increasingly uneconomical as the prices of oil and gas continue to plummet. We will also discuss other issues that concern all oil and gas companies, majors and independents, and ways to increase the drilling of new gas wells to keep up with demand. In addition, we have some fine written testimony that has been offered by those who cannot be here today. For example, Governor Evan Bayh of Indiana—not a state typically considered as an oil and gas

state—discusses the economic importance of marginal production in the testimony he has submitted on behalf of the Interstate Oil and Gas Compact Commission.

I welcome all your comments and your suggestions for solutions. We must respond to this crisis promptly and effectively. Without strong action, we remain at great risk of the premature and permanent loss of vital production.

Attachment.

OVERVIEW OF PRESENT-LAW TAX RULES RELATING TO DOMESTIC OIL AND GAS EXPLORATION AND PRODUCTION

[Scheduled for a Hearing before the SUBCOMMITTEE ON TAXATION of the SENATE COMMITTEE ON FINANCE on March 14, 1994, Prepared By the Staff of the JOINT COMMITTEE ON TAXATION, March 11, 1994, JCX-2-94]

INTRODUCTION

This document,[1] prepared by the staff of the Joint Committee on Taxation, provides an overview of various present-law tax provisions that relate to the exploration for, and the production of, crude oil and natural gas located within the United States. The Subcommittee on Taxation of the Senate Finance Committee has scheduled a public hearing on tax proposals to increase domestic oil and gas production on March 14, 1994.

PRESENT-LAW TAX RULES APPLICABLE TO DOMESTIC OIL AND GAS OPERATIONS

A. DEPLETION

General rules

Depletion, like depreciation, is a class of ordinary and necessary business expense. In both cases, the taxpayer is allowed a deduction in recognition of the fact that an asset—in the case of depletion for oil or gas interests, the mineral reserve itself—is being expended in order to produce income. Certain costs incurred prior to drilling an oil- or gas-producing property are recovered through the depletion deduction. These include costs of acquiring the lease or other interest in the property, and geological and geophysical costs (in advance of actual drilling).

Depletion is available to any person having an economic interest in a producing property. Treasury Department regulations state that an economic interest is possessed in every case in which the taxpayer has acquired by investment any interest in mineral in place, and secures, by any form of legal relationship, income derived from the extraction of the mineral, to which it must look for a return of its capital.[2] Thus, for example, both working interests and royalty interests in an oil- or gas-producing property constitute economic interests, thereby qualifying the interest holders for depletion deductions with respect to the property. A taxpayer who has no capital investment in the mineral deposit does not possess an economic interest merely because through a contractual relation it possesses a mere economic or pecuniary advantage derived from production.

Two methods of depletion are currently allowable under the Internal Revenue Code (the "Code"): (1) the cost depletion method, and (2) the percentage depletion method (secs. 611–613). Under the cost depletion method, the taxpayer deducts that portion of the adjusted basis of the depletable property which is equal to the ratio of units sold from that property during the taxable year to the number of units remaining as of the taxable year (in general, the number of units remaining to be recovered in the property at the end of the taxable year, plus the number of units sold during the taxable year). The amount recovered under cost depletion, thus, may never exceed the taxpayer's basis in the property.

Under the percentage depletion method, generally 15 percent of the taxpayer's gross income from an oil- or gas-producing property is allowed as a deduction in each taxable year (sec. 613A(c)). The amount deducted may not exceed 100 percent of the net income from that property in any year (the "net-income limitation") (sec. 613(a)).[3] Additionally, the percentage depletion deduction for all oil and gas prop-

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[1] This document may be cited as follows: Joint Committee on Taxation, *Overview of Present-Law Tax Rules Relating to Domestic Oil and Gas Exploration and Production* (JCX-2-94), March 11, 1994.

[2] Treas. Reg. sec. 1.611-1(b)(1).

[3] By contrast, for any other mineral qualifying for the percentage depletion deduction, such deduction may not exceed 50 percent of the taxpayer's taxable income from the depletable property. A similar 50-percent net-income limitation applied to oil and gas properties for taxable years beginning before 1991. Section 11522(a) of the Omnibus Budget Reconciliation Act of 1990

erties may not exceed 65 percent of the taxpayer's overall taxable income (determined before such deduction and adjusted for certain loss carrybacks and trust distributions) (sec. 613A(d) (1)).[4] Because percentage depletion, unlike cost depletion, is computed without regard to the taxpayer's basis in the depletable property, cumulative depletion deductions may be greater than the amount expended by the taxpayer to acquire or develop the property.

A taxpayer is required to determine the depletion deduction for each oil or gas property under both the percentage depletion method (if the taxpayer is entitled to use this method) and the cost depletion method. If the cost depletion deduction is larger, the taxpayer must utilize that method for the taxable year in question (sec. 613(a)).

Limitation of oil and gas percentage depletion to independent producers and royalty owners

The Tax Reduction Act of 1975 (the "1975 Act") repealed the deduction for percentage depletion with respect to much oil and gas production. Following the 1975 Act, only independent producers and royalty owners (as contrasted to integrated oil companies) are allowed to claim percentage depletion with respect to up to 1,000 barrels of average daily production of domestic crude oil or an equivalent amount of domestic natural gas (sec. 613A(c)).[5] For producers of both oil and natural gas, this limitation applies on a combined basis. All production owned by businesses under common control and members of the same family must be aggregated (sec. 613A(c) (8)); each group is then treated as one producer for application of the 1,000-barrel limitation.

For purposes of the percentage depletion allowance, an independent producer is any producer who is not a "retailer" or "refiner." A retailer is any person who directly, or through a related person, sells oil or natural gas or any product derived therefrom (1) through any retail outlet operated by the taxpayer or related person, or (2) to any person that is obligated to market or distribute such oil or natural gas (or product derived therefrom) under the name of the taxpayer or the related person, or that has the authority to occupy any retail outlet owned by the taxpayer or a related person (sec. 613A(d) (2)). Bulk sales of crude oil and natural gas to commercial or industrial users, and bulk sales of aviation fuel to the Department of Defense, are not treated as retail sales for this purpose. Further, a person is not a retailer within the meaning of this provision if the combined gross receipts of that person and all related persons from the retail sale of oil, natural gas, or any product derived therefrom do not exceed $5 million for the taxable year.

A refiner is any person who directly or through a related person engages in the refining of crude oil, but only if such person or related person has a refinery run in excess of 50,000 barrels per day on any day during the taxable year (sec. 613A(d)(4)).

In addition to the independent producer and royalty owner exception, certain sales of natural gas under a fixed contract in effect on February 1, 1975, and certain natural gas from geopressurised brine,[6] are eligible for percentage depletion, at rates of 22 percent and 10 percent, respectively. These exceptions apply without regard to the 1,000-barrel-per-day limitation and regardless of whether the producer is an independent producer or an integrated oil company.

Prior to enactment of the Omnibus Budget Reconciliation Act of 1990 (the "1990 Act"), if an interest in a proven oil or gas property was transferred (subject to certain exceptions), the production from such interest did not qualify for percentage depletion.[7] The 1990 Act repealed the limitation on claiming percentage depletion on transferred properties effective for property transfers occurring after October 11, 1990.

(P.L. 101–508) prospectively changed the net-income limitation threshold to 100 percent only for oil and gas properties, for taxable years beginning after 1990.

[4] Amounts disallowed as a result of this rule may be carried forward and deducted in subsequent taxable years, subject to the 65-percent taxable income limitation for those years.

[5] As originally enacted, the depletable oil quantity was 2,000 barrels of average daily production. This was gradually phased down to 1,000 barrels of average daily production for 1980 and thereafter. The 1975 Act also phased down the percentage depletion rate from 22 percent in 1975 to 15 percent in 1984 and thereafter.

[6] This exception is limited to wells the drilling of which began between September 30, 1978, and January 1, 1984.

[7] The exceptions to this rule included transfers at death, certain transfers to controlled corporations, and transfers between control led corporations or other business entities.

Percentage depletion on marginal production

The 1990 Act also created special percentage depletion provisions for oil and gas production from so-called marginal properties held by independent producers or royalty owners (sec. 613A(c)(6)). Under this provision, the statutory percentage depletion rate is increased (from the general rate of 15 percent) by one percent for each whole dollar that the average price of crude oil (as determined under the provisions of the nonconventional fuels production credit of section 29) for the immediately preceding calendar year is less than $20 per barrel. In no event may the rate of percentage depletion under this provision exceed 25 percent for any taxable year. The increased rate applies for the taxpayer's taxable year which immediately follows a calendar year for which the average crude oil price falls below the $20 floor. To illustrate the application of this provision, the average price of a barrel of crude oil for calendar year 1992 was $15.98;[8] thus, the percentage depletion rate for production from marginal wells is increased by four percent (to 19 percent) for taxable years beginning in 1993.

The Code defines the term "marginal production" for this purpose as domestic crude oil or domestic natural gas which is produced during any taxable year from a property which (1) is a stripper well property for the calendar year in which the taxable year begins, or (2) is a property substantially all of the production from which during such calendar year is heavy oil (i.e., oil that has a weighted average gravity of 20 degrees API or less corrected to 60 degrees Fahrenheit) (sec. 613A(c)(6)(D)). A stripper well property is any oil or gas property which produces a daily average of 15 or less equivalent barrels of oil and gas per producing oil or gas well on such property in the calendar year during which the taxpayer's taxable year begins (sec. 613A(c)(6)(E)).[9]

The determination of whether a property qualifies as a stripper well property is made separately for each calendar year. The fact that a property is or is not a stripper well property for one year does not affect the determination of the status of that property for a subsequent year. Further, the stripper well property determination is made by a taxpayer for each separate property interest (as defined under section 614) held by the taxpayer during a calendar year. The determination is based on the total amount of production from all producing wells that are treated as part of the same property interest of the taxpayer. A property qualifies as a stripper well property for a calendar year only if the wells on such property were producing during that period at their maximum efficient rate of flow.

If a taxpayer's property consists of a partial interest in one or more oil- or gas-producing wells, the determination of whether the property is a stripper well property or a heavy oil property is made with respect to total production from such wells, including the portion of total production attributable to ownership interests other than the taxpayer's. If the property satisfies the requirements of a stripper well property, then that person receives the benefits of this provision with respect to its allocable share of the production from the property for its taxable year that begins during the calendar year in which the property so qualifies.

The allowance for percentage depletion on production from marginal oil and gas properties is subject to the 1,000-barrel-per-day limitation discussed above. Unless a taxpayer elects otherwise, marginal production is given priority over other production for purposes of utilization of that limitation.

B. INTANGIBLE DRILLING AND DEVELOPMENT COSTS

In general

In general, costs that benefit future periods must be capitalized and recovered over such periods for income tax purposes, rather than being expensed in the period the costs are incurred. Special rules are provided, however, for the treatment of intangible drilling and development costs ("IDCs"). Under these special rules, an operator (i.e., a person who holds a working or operating interest in any tract or parcel of land either as a fee owner or under a lease or any other form of contract granting working or operating rights) who pays or incurs IDCs in the development of an oil or gas property located in the United States, may elect either to expense or capitalize those costs (sec. 263(c)).

IDCs include all expenditures made by an operator for wages, fuel, repairs, hauling, supplies, etc., incident to and necessary for the drilling of wells and the prepa-

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[8] IRS Notice 93-28, I.R.B. 1993-18, 14.

[9] Equivalent barrels is computed as the sum of (1) the number of barrels of crude oil produced, and (2) the number of cubic feet of natural gas produced divided by 6,000. If a well produced 10 barrels of crude oil and 12,000 cubic feet of natural gas, its equivalent barrels produced would equal 12 (i.e., 10 + (12,000 ÷ 6,000)).

ration of wells for the production of oil and gas. In addition, IDCs include the cost to operators of any drilling or development work (excluding amounts payable only out of production or gross or net proceeds from production, if the amounts are depletable income to the recipient, and amounts properly allocable to the cost of depreciable property) done by contractors under any form of contract (including a turnkey contract). Such work includes labor, fuel, repairs, hauling, and supplies which are used in the drilling, shooting, and cleaning of wells; in such clearing of ground, draining, road making, surveying, and geological works (as are necessary in preparation for the drilling of wells); and in the construction of such derricks, tanks, pipelines, and other physical structures as are necessary for the drilling of wells and the preparation of wells for the production of oil and gas. Generally, IDCs do not include expenses for items which have a salvage value (such as pipes and casings), or items which are part of the acquisition price of an interest in the property.[10]

If an election to expense IDCs is made, the taxpayer deducts the amount of the IDCs as an expense in the taxable year the cost is paid or incurred. Generally, if IDCs are not expensed, but are capitalized, they may be recovered through depletion or depreciation, as appropriate; or in the case of a nonproductive well ("dry hole"), they may be deducted, at the election of the operator.[11] In the case of an integrated oil company (i.e., a company that engages, either directly or though a related enterprise, in substantial retailing or refining activities) that has elected to expense IDCs, 30 percent of the IDCs on productive wells must be capitalized and amortized over a 60-month period (sec. 291(b)(1)(A)).[12]

Notwithstanding the fact that a taxpayer has made the election to deduct IDCs, the Code provides an additional election under which the taxpayer is allowed to capitalize and amortize certain IDCs over a 60-month period beginning with the month the expenditure was paid or incurred (sec. 59(e)(1)). This rule applies on an expenditure-by-expenditure basis; that is, for any particular taxable year, a taxpayer may deduct some portion of its IDCs and capitalize the rest under this provision.

The election to deduct IDCs applies only to those IDCs associated with domestic properties.[13] For this purpose, the United States includes certain wells drilled offshore.[14]

Exemption from uniform capitalization rules

The uniform capitalization rules, which were enacted as part of the Tax Reform Act of 1986, require certain direct and indirect costs allocable to property to be included in inventory or capitalized as part of the basis of such property (sec. 263A). In general, the uniform capitalization rules apply to real and tangible personal property produced by the taxpayer or acquired for resale. Pursuant to a special exception, these rules do not apply to IDCs incurred with respect to oil or gas wells which are otherwise deductible under the Code (sec. 263A(c) (3)).

C. GEOLOGICAL AND GEOPHYSICAL COSTS

In general

Under the Code, no current deduction is allowed for any amount paid for new buildings or for permanent improvements or betterments made to increase the value of any property or estate (sec. 263(a)). The regulations define capital amounts to include amounts paid or incurred (1) to add to the value, or substantially prolong the useful life, of property owned by the taxpayer or (2) to adapt property to a new or different use.[15]

The proper income tax treatment of geological and geophysical expenditures ("G&G costs") has been the subject of a number of court decisions and administra-

[10] Treas. Reg. sec. 1.612-4(a).

[11] Treas. Reg. sec. 1.612-4(b)(4).

[12] The IRS has ruled that if a company that has capitalized and begun to amortize IDCs over a 60-month period pursuant to section 291 ceases to be an integrated oil company, it may not immediately write off the unamortized portion of the capitalized IDCs, but instead must continue to amortize the IDCs so capitalized over the 60-month amortization period. (Rev. Rul. 93–26, 1993–15 I.R.B. 5.)

[13] In the case of IDCs paid or incurred with respect to an oil or gas well located outside of the United States, the costs, at the election of the taxpayer, are either (1) included in adjusted basis for purposes of computing the amount of any deduction allowable for cost depletion or (2) capitalized and amortized ratably over a 10-year period beginning with the taxable year such costs were paid or incurred (sec. 263(i)).

[14] The term "United States" for this purpose includes the seabed and subsoil of those submarine areas that are adjacent to the territorial waters of the United States and over which the United States has exclusive rights, in accordance with international law, with respect to the exploration and exploitation of natural resources (i.e., the Continental Shelf area) (sec. 638).

[15] Treas. Reg. sec. 1.263(a)–(1)(b).

tive rulings. G&G costs are incurred by the taxpayer for the purpose of obtaining and accumulating data that will serve as a basis for the acquisition and retention of mineral properties by taxpayers exploring for minerals. Courts have ruled that such costs are capital in nature and are not deductible as ordinary and necessary business expenses.[16] Accordingly, the costs attributable to such exploration are allocable to the cost of the property acquired or retained.[17] The term "property" is used in this case in the sense of an interest in a property as defined in the Code (sec. 614) and related regulations, and includes an economic interest in a tract or parcel of land notwithstanding that a mineral deposit has not been established or proven at the time the costs are incurred.

Revenue Ruling 77–188

In Revenue Ruling 77–188[18] (hereinafter referred to as the "1977 ruling"), the Internal Revenue Service ("IRS") provided guidance regarding the proper tax treatment of G&G costs. The ruling describes a typical geological and geophysical exploration program as containing the following elements:

- It is customary in the search for mineral producing properties for a taxpayer to conduct an exploration program in one or more identifiable project areas. Each project area encompasses a territory that the taxpayer determines can be explored advantageously in a single integrated operation. This determination is made after analyzing certain variables such as the size and topography of the project area to be explored, the existing information available with respect to the project area and nearby areas, and the quantity of equipment, the number of personnel, and the amount of money available to conduct a reasonable exploration program over the project area.
- The taxpayer selects a specific project area from which geological and geophysical data are desired and conducts a reconnaissance-type survey utilizing various geological and geophysical exploration techniques that are designed to yield data that will afford a basis for identifying specific geological features with sufficient mineral potential to merit further exploration.
- Each separable, noncontiguous portion of the original project area in which such a specific geological feature is identified is a separate "area of interest." The original project area is subdivided into as many small projects as there are areas of interest located and identified within the original project area. If the circumstances permit a detailed exploratory survey to be conducted without an initial reconnaissance-type survey, the project area and the area of interest will be coextensive.
- The taxpayer seeks to further define the geological features identified by the prior reconnaissance-type surveys by additional, more detailed, exploratory surveys conducted with respect to each area of interest. For this purpose, the taxpayer engages in more intensive geological and geophysical exploration employing methods that are designed to yield sufficiently accurate sub-surface data to afford a basis for a decision to acquire or retain properties within or adjacent to a particular area of interest or to abandon the entire area of interest as unworthy of development by mine or well.

The 1977 ruling provides that if, on the basis of data obtained from the preliminary geological and geophysical exploration operations, only one area of interest is located and identified within the original project area, then the entire expenditure for those exploratory operations is to be allocated to that one area of interest and thus capitalized into the depletable basis of that area of interest. On the other hand, if two or more areas of interest are located and identified within the original project area, the entire expenditure for the exploratory operations is to be allocated equally among the various areas of interest.

If, however, from the data obtained by the exploratory operations no areas of interest are located and identified by the taxpayer within the original project area, then the 1977 ruling states that the entire amount of the G&G costs related to the exploration is deductible as a loss under section 165 for the taxable year in which that particular project area is abandoned as a potential source of mineral production.

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[16] See, e.g., *Schermerhorn Oil Corporation*, 46 B.T.A. 151 (1942).

[17] By contrast, section 617 of the Code permits a taxpayer to elect to deduct certain expenditures incurred for the purpose of ascertaining the existence, location, extent, or quality of any deposit of ore or other mineral (but not oil and gas). These deductions are subject to recapture if the mine with respect to which the expenditures were incurred reaches the producing stage.

[18] 1977-1 C.B. 76.

The 1977 ruling further provides that if, on the basis of data obtained from a detailed survey that does not relate exclusively to any particular property within a particular area of interest, an oil or gas property is acquired or retained within or adjacent to that area of interest, the entire G&G exploration expenditures, including those incurred prior to the identification of the particular area of interest but allocated thereto, are to be allocated to the property as a capital cost under section 263(a). If more than one property is acquired or retained within or adjacent to an area of interest, it is proper to determine the amount of the G&G costs allocable to each such property by allocating the entire amount of the costs among the properties so acquired or retained on the basis of the comparative acreage of the properties.

If, however, no property is acquired or retained within or adjacent to that area of interest, the entire amount of the G&G costs allocable to the area of interest is deductible as a loss under section 165 for the taxable year in which such area of interest is abandoned as a potential source of mineral production.

In 1983, the IRS issued Revenue Ruling 83-105,[19] which elaborates on the positions set forth in the 1977 ruling by setting forth seven factual situations and applying the principles of the 1977 ruling to those situations. In addition, Revenue Ruling 83–105 explains what constitutes an "abandonment as a potential source of mineral production."

D. TAX CREDITS

1. Nonconventional fuels production credit

Taxpayers that produce certain qualifying fuels from nonconventional sources are eligible for a tax credit ("the section 29 credit") equal to $3 per barrel or Btu oil barrel equivalent.[20] Fuels qualifying for the credit must be produced domestically from a well drilled, or a facility treated as placed in service, before January 1, 1993.[21] The section 29 credit generally is available for qualified fuels sold to unrelated persons before January 1, 2003.[22]

For purposes of the credit, qualified fuels include: (1) oil produced from shale and tar sands; (2) gas produced from geopressured brine, Devonian shale, coal seams, a tight formation, or biomass (i.e., any organic material other than oil, natural gas, or coal (or any product thereof)); and (3) liquid, gaseous, or solid synthetic fuels produced from coal (including lignite), including such fuels when used as feedstocks. The amount of the credit is determined without regard to any production attributable to a property from which gas from Devonian shale, coal seams, geopressured brine, or a tight formation was produced in marketable quantities before 1980.

The amount of the section 29 credit generally is adjusted by an inflation adjustment factor for the calendar year in which the sale occurs.[23] There is no adjustment for inflation in the case of the credit for sales of natural gas produced from a tight formation. The credit begins to phase out if the annual average unregulated wellhead price per barrel of domestic crude oil exceeds $23.50 multiplied by the inflation adjustment factor.[24]

The amount of the section 29 credit allowable with respect to a project is reduced by any unrecaptured business energy tax credit (sec. 48) or enhanced oil recovery credit (sec. 43) claimed with respect to such project.

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[19] 1983–2 C.B. 51.

[20] A barrel-of-oil equivalent generally means that amount of the qualifying fuel which has a Btu (British thermal unit) content of 5.8 million.

[21] Pursuant to section 1918 of the Energy Policy Act of 1992, a facility that produces gas from biomass or produces liquid, gaseous, or solid synthetic fuels from coal (including lignite) generally will be treated as being placed in service before January 1, 1993, if it is placed in service by the taxpayer before January 1, 1997, pursuant to a written binding contract in effect before January 1, 1996. In the case of a facility that produces coke or coke gas, however, this provision applies only if the original use of the facility commences with the taxpayer.

Also, the IRS has ruled that production from certain post-1992 "recompletions" of wells that were originally drilled prior to the expiration date of the credit would qualify for the section 29 credit. (Rev. Rul. 93–54, 1993–27 I.R.B. 5.)

[22] If a facility that qualifies for the 1992 Energy Policy Act's binding contract rule is originally placed in service after December 31, 1992, production from the facility may qualify for the credit if sold to an unrelated person before January 1, 2008.

[23] The inflation adjustment factor for the 1992 taxable year was 1.8430. Therefore, the inflation-adjusted amount of the credit for that year was $5.53 per barrel or barrel equivalent. (IRS Notice 93-28, I.R.B. 1993-18, 14.)

[24] For 1992, the inflation adjusted threshold for onset of the phaseout was $43.31 ($23.50 x 1.843) and the average wellhead price for that year was $15.98. (IRS Notice 93-28, I.R.B. 1993-18, 14.)

As with most other credits, the section 29 credit may not be used to offset alternative minimum tax liability. Any unused section 29 credit generally may not be carried back or forward to another taxable year; however, a taxpayer receives a credit for prior year minimum tax liability to the extent that a section 29 credit is disallowed as a result of the operation of the alternative minimum tax (sec. 53).

2. Enhanced oil recovery credit

Taxpayers are permitted to claim a general business credit for a taxable year, which consists of several different components (sec. 38(a)). One component of the general business credit is the enhanced oil recovery credit (sec. 43). The general business credit for a taxable year may not exceed the excess (if any) of the taxpayer's net income over the greater of (1) the tentative minimum tax, or (2) 25 percent of so much of the taxpayer's net regular tax liability as exceeds $25,000. Any unused general business credit generally may be carried back three taxable years and carried forward 15 taxable years.

The enhanced oil recovery credit for a taxable year is equal to 15 percent of certain costs attributable to qualified enhanced oil recovery ("fOR") projects undertaken by the taxpayer in the United States during the taxable year. To the extent that a credit is allowed for such costs, the taxpayer must reduce the amount otherwise deductible or required to be capitalized and recovered through depreciation, depletion, or amortization, as appropriate, with respect to these costs. A taxpayer may elect not to have the enhanced oil recovery credit apply for a taxable year.

The amount of the enhanced oil recovery credit is reduced in a taxable year following a calendar year during which the annual average unregulated wellhead price per barrel of domestic crude oil exceeds $28 (adjusted for inflation since 1990).[25] In such a case, the credit would be reduced ratably over a $6 phaseout range.

For purposes of the credit, qualified enhanced oil recovery costs include the following costs which are paid or incurred with respect to a qualified EOR project: (1) the cost of tangible property which is an integral part of the project and with respect to which depreciation or amortization is allowable; (2) IDCs with respect to which a taxpayer may make an election to deduct under section 263(c);[26] and (3) the cost of tertiary injectants with respect to which a deduction is allowable under section 193.

A qualified EOR project means any project that is located within the United States and involves the application (in accordance with sound engineering principles) of one or more tertiary recovery methods as defined under section 193(b)(3) which can reasonably be expected to result in more than an insignificant increase in the amount of crude oil which ultimately will be recovered. The tertiary recovery methods referred to in section 193(b)(3) generally include the following nine methods which were listed in section 212.78(c) of the June 1979 Department of Energy regulations: miscible fluid displacement, steam-drive injection, microemulsion flooding, in situ combustion, polymer-augmented water flooding, cyclic-steam injection, alkaline flooding, carbonated water flooding, and immiscible non-hydrocarbon gas displacement, or any other method approved by the IRS. In addition, for purposes of the enhanced oil recovery credit, immiscible non-hydrocarbon gas displacement generally is considered a qualifying tertiary recovery method, even if the gas injected is not carbon dioxide.

A project is not considered a qualified EOR project unless the project's operator submits to the IRS a certification from a petroleum engineer that the project meets the requirements set forth in the preceding paragraph.

The enhanced oil recovery credit is effective for taxable years beginning after December 31, 1990, with respect to costs paid or incurred in EOR projects begun or significantly expanded after that date.

E. ALTERNATIVE MINIMUM TAX

In general

A taxpayer is subject to an alternative minimum tax ("AMT") to the extent that its tentative minimum tax exceeds its regular income tax liability (sec. 55(a)). A corporate taxpayer's tentative minimum tax generally equals 20 percent of its alternative minimum taxable income in excess of an exemption amount. (The marginal AMT rate for a noncorporate taxpayer is 26 or 28 percent, depending on the amount of its alternative minimum taxable income above an exemption amount.) Alternative

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[25] The average per-barrel price of crude oil for this purpose is determined under the same manner as it is for purposes of the section 29 credit.

[26] In the case of anintegrated oil company, the credit base includes those IDCs which the taxpayer is required to capitalize under section 291(b)(1).

minimum taxable income ("AMTI") is the taxpayer's taxable income increased by certain tax preferences and adjusted by determining the tax treatment of certain items in a manner which negates the deferral of income resulting from the regular tax treatment of those items.

The AMTI of a corporation is increased by an amount equal to 75 percent of the amount by which adjusted current earnings ("ACE") of the corporation exceed AMTI (as determined before this adjustment) (sec. 56(g)). In general, ACE means AMTI with additional adjustments that generally follow the rules presently applicable to corporations in computing their earnings and profits.

AMT treatment of depletion

As stated above, for purposes of computing regular taxable income, taxpayers involved in the production of natural resources (including oil and gas) generally are permitted to claim a deduction for depletion under either of two methods—the cost depletion method or the percentage depletion method. The percentage depletion deduction is not limited to the taxpayer's adjusted basis in the depletable property. Thus, a taxpayer is permitted to claim such deductions that are in excess of the amount the taxpayer invested in the depletable property.

As a general rule, percentage depletion deductions claimed in excess of the basis of the depletable property constitute an item of tax preference in determining the AMT (sec. 57(a) (1)). For taxable years beginning after 1992, however, the Energy Policy Act of 1992 provides that excess percentage depletion deductions related to crude oil and natural gas production are not items of tax preference for AMT purposes.

Moreover, as a general rule a corporation must use the cost depletion method in computing its ACE adjustment (sec. 56(g)(4)(F)). Thus, the difference between a corporation's percentage depletion deduction (if any) claimed for regular tax purposes and its allowable deduction determined under the cost depletion method is factored into its overall ACE adjustment. The Energy Policy Act of 1992 provided an exception to this general rule in the case of corporations which are independent oil and gas producers and royalty owners. Under this exception, for taxable years beginning after 1992, these corporations are permitted to determine depletion deductions using the percentage depletion method in computing their ACE adjustments.

AMT treatment of IDCs

Also as discussed above, in computing its regular tax, a taxpayer who pays or incurs IDCs in the development of domestic oil or gas properties may elect to either expense or capitalize these amounts. The difference between the amount of a taxpayer's IDC deductions and the amount which would have been currently deductible had IDCs been capitalized and recovered over a 10-year period may constitute an item of tax preference for the AMT to the extent that this amount exceeds 65 percent of the taxpayer's net income from oil and gas properties for the taxable year (the "excess IDC preference") (sec. 57(a)(2)). In addition, for purposes of computing the a corporation's ACE adjustment to the AMT, IDCs are capitalized and amortized over the 60-month period beginning with the month in which they are paid or incurred (sec. 56(g)(4)(D)(i))

For taxpayers other than integrated oil companies, the Energy Policy Act of 1992 repealed the excess IDC preference for IDCs related to oil and gas wells for taxable years beginning after 1992 (sec. 57(a)(2)(E)). The repeal of the excess IDC preference, however, may not result in the reduction of the amount of the taxpayer's AMTI by more than 40 percent (30 percent for taxable years beginning in 1993) of the amount that the taxpayer's AMTI would have been had the excess IDC preference not been repealed.

In addition, for corporations other than integrated oil companies, the 1992 Energy Policy Act repealed the ACE adjustment for IDCs paid or incurred in taxable years beginning after December 31, 1992, with respect to oil and gas wells. That is, such a taxpayer is permitted to utilize its regular tax method of writing off IDCs for purposes of computing its adjusted current earnings.

F. PASSIVE ACTIVITY LOSS AND CREDIT RULES

A taxpayer's deductions from passive trade or business activities, to the extent they exceed income from all such passive activities of the taxpayer (exclusive of portfolio income), generally may not be deducted against other income (sec. 469).[27] Thus, for example, an individua taxpayer may not deduct losses from a passive activity against income from wages. Losses suspended under this "passive activity loss" limitation are carried forward and treated as deductions from passive activities

[27] This provision applies to individuals, estates, trusts, and personal service corporations.

in the following year, and thus may offset any income from passive activities generated in that later year. Undeducted losses from a passive activity may be deducted in full when the taxpayer disposes of its entire interest in that activity to an unrelated party in a transaction in which all realized gain or loss is recognized.

An activity generally is treated as passive if the taxpayer does not materially participate in it. A taxpayer is treated as materially participating in an activity only if the taxpayer is involved in the operations of the activity on a basis which is regular, continuous, and substantial.

A working interest in an oil or gas property generally is not treated as a passive activity, whether or not the taxpayer materially participates in the activities related to that property (sec. 469(c) (3) and (4)). This exception from the passive activity rules does not apply if the taxpayer holds the working interest through an entity which limits the liability of the taxpayer with respect to the interest. In addition, if a taxpayer has any loss for any taxable year from a working interest in an oil or gas property which is treated pursuant to this working interest exception as a loss which is not from a passive activity, then any net income from such property (or any property the basis of which is determined in whole or in part by reference to the basis of such property) for any succeeding taxable year is treated as income of the taxpayer which is not from a passive activity.

Similar limitations apply to the utilization of tax credits attributable to passive activities (sec. 469(a) (1) (B)). Thus, for example, the passive activity rules (and, consequently, the oil and gas working interest exception to those rules) apply to the nonconventional fuels production credit and the enhanced oil recovery credit.[28]

G. SALES AND EXCHANGES OF PROPERTY INTERESTS

Under present law, individual taxpayers are subject to a maximum statutory income tax rate of 39.6 percent. If an individual recognizes capital gains, however, the gains are subject to a maximum tax rate of 28 percent. There currently is no differential between the rates of taxation of capital gains and ordinary income in the case of corporate taxpayers.

Gain recognized from the disposition of an interest in an oil or gas property generally is characterized as capital gain. The Code contains a special recapture provision, however, which mandates that in certain cases a portion of any gain is to be treated as ordinary income and not as capital gain (sec. 1254). Specifically, the Code provides that if a taxpayer disposes of "section 1254 property" that was placed in service after 1986, then the lesser of (1) the gain recognized on the disposition or (2) the aggregate amount of (a) depletion deductions which resulted in a reduction in the basis of the property disposed of and (b) IDCs deducted pursuant to an election under section 263(c) and which, but for the deduction, would have been included in the adjusted basis of the property, is characterized as ordinary income.[29] For this purpose, the term "section 1254 property" means any property (within the meaning of section 614) if any IDCs are properly chargeable to such property or the adjusted basis of such property includes adjustments for depletion deductions.

PREPARED STATEMENT OF ROBERT H. CAMPBELL

Mr. chairman and Members of the Committee, my name is Robert H. Campbell, President, CEO&Chairman of Sun Company, Inc. I am appearing today on behalf of the Independent Refiners coalition of which my company is a member. The Independent Refiners coalition is composed of sixteen domestic independent refining companies who operate 33 refineries which have 25% of U.S. capacity. The members are Clark Oil & Refining Corporation, Louisiana Land & Exploration, The Coastal Corporation, Tosco Corporation, Crown Central Petroleum Corporation, Valero Energy Corporation, Ashland Oil Incorporated, United Refining Company, Tesoro, Kerr-McGee Corporation, Indian Refining, Fina, Inc., Phibro Energy-USA, Frontier Oil & Refining Co., Lion Oil Company and Sun.

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[28] A proposed technical correction to section 469 would provide that if a taxpayer has net income from a working interest in an oil and gas property which is treated as not arising from a passive activity, then any tax credits attributable to the interest in that property would be treated as credits not from a passive activity (and, thus, not subject to the passive activity credit limitation) to the extent that the amount of such credits does not exceed the regular tax liability of the taxpayer for the taxable year which is allocable to such net income. (H.R. 3419, 103d Cong., 1st Sess., sec. 1003(d), as reported by the Rouse Committee on Ways and Means, H. Rept. 103–353, 216.)

[29] For dispositions of property placed in service before 1987, taxpayers are not required to recapture depletion deductions and are required to recapture IDC deductions only in excess of the amounts which would have been deductible as depletion if the IDCs had been capitalized.

Independent refiners process more than 38% of the gasoline consumed in the United States and have been in business for more than 65 years. In 1992 there were more than 70 independent refining companies operating 140 refineries in 34 states employing 200,000 people. Independent refiners are defined as those who buy at least 70% of their crude oil requirements on the open market and rely largely on their refining and marketing operations to meet all of their capital requirements in contrast to integrated oil companies which have revenue streams from oil and gas production. In addition, they are primarily domestic in operations and not multinational.

It is our understanding that this hearing is being held to focus on the current problems of the upstream side of the oil industry. The Coalition has requested the opportunity to be heard today to point out that there are problems on the downstream side—domestic refining—too which merit your attention. We wish to testify in favor of a tax on imported gasoline and blending components. The coalition's support for such a tax is joined by other refiners, as well. It is strongly felt by the Coalition and these refiners that a tax is needed on imported gasoline and blending stocks to offset the differential in the substantial embedded costs of environmental compliance in this country compared with relatively minimal environmental compliance costs faced by foreign competitors. This differential is an unfair trade advantage affecting our competitiveness and will cause a continued loss of U.S. refining capacity. The result is a threat to the national security of the United States, and the global environment.

The problem of a significant difference in protection of the environment between the United States and other countries creating an unfair trade advantage has been recognized by the Administration and members of Congress. For example, when the President was campaigning in 1992 and announced his support for the North American Free Trade Agreement (NAFTA), he did so on the condition that the environment had to be protected on both sides of the border or it would lower Mexican cost of production which would be unfair to American workers.[1] Vice President Al Gore wrote in his book, *Earth In The Balance,* that ". . . weak and ineffectual enforcement of pollution control measures should also be included in the definition of unfair trading practices."[2] U.S. Trade Representative Mickey Kantor has testified on several occasions before the Congress on NAFTA pointing out that there would be a trade advantage[3] in Mexico's favor if it failed to enforce environmental laws . He also stated, "I think we'll recognize that if a difference is maintained, that will probably give a competitive advantage to a firm operating, say in Mexico, compared to that same firm operating in the United States."[4]

The Majority Leader of the U.S. House of Representatives, Congressman Richard Gephardt, has spoken of the need of other countries to have environmental laws and enforcement of them as a competitiveness issue;[5] as has Senator Max Baucus, Chairman of the Senate Environment and Public Works Committee.[6] In addition Mr. Chairman, you introduced legislation in the past on the subject.[7] One scholar has written that even according to present law, the lack of environmental controls or the failure to enforce them should be considered a subsidy subject to a countervailing duty.[8] Therefore, representatives of the Executive and Legislative branches of our government have recognized that the lack of environmental protection laws and regulations or enforcement of them is a competitiveness problem for American industries. This problem has been recognized by environmentalists as well.[9]

The cost to domestic refining for pollution abatement is substantial and is higher than for most other industries.[10] Based on older figures, it has been calculated that petroleum refining could account for a disproportionate 17% of the national environmental expenditure in the year 2000.[11] The domestic petroleum refining industry will, according to a very recent study done for the Secretary of Energy, invest $37 billion from 1991 through the year 2000 and $14 billion more from 2001 to 2010 to comply with government environmental regulations.[12] The sums spent this decade will actually exceed the total 1990 book value of all domestic refineries (after depreciation) which is only $31 billion.[13] Refineries =spent 21% of their capital in the 1980's on pollution abatement, which will increase to 42% in the 1990's and 47% in the first decade of the next century.[14] The significance of this massive cost is that the cash flow of all of these refineries from 1991 through 1995 will be $25 billion *less* than the required environmental expenditures.[15] These new costs of environmental compliance will increase the cost of gasoline by approximately 5¢ a gallon in 1994 and will rise to approximately 13¢ a gallon by the year 2000,[16] on top of the existing pollution abatement costs of 2¢ a gallon.[17]

The recent National Petroleum Council (NPC) study is the only one of which we are aware that attempts to look at foreign refining environmental protection requirements. While we think this study in general has been very helpful, a great deal more work needs to be done in actually determining specific information on foreign

environmental protection. There is, in our opinion, too much speculation as to what environmental standards will be applied when and where as well as whether or not they will be enforced. One review of the study has noted that unlike the detailed analysis of U.S. costs, the estimate of foreign costs ". . . is more arbitrary and assumption-based and thus subject to greater uncertainty."[18] The NPC study is aware of this shortcoming and has termed foreign cost estimates as subject to "significant uncertainty."[19] Present and projected foreign environment, safety and health costs need to be studied in much more detail and, due to the competitiveness problem, a study needs to be done as soon as possible.

Even with these caveats, the NPC study has concluded that, ". . . most foreign areas lag the United States in health, safety, and environmental regulations and, consequently, have lower embedded environmental costs than the United States."[20] For example, the U.S. presently spends 1.7% of its GDP on environmental programs while the European Community's average is only 1.2% or a third less.[21] The report goes on to note that although many countries have adopted some environmental regulations, it is ". . . far less common for these regulations to be enforced."[22] It is further observed that oil producing and lesser developed countries ". . . view government interests in refining as vital to national economic health—a belief that can supersede environmental agendas."[23]

The NPC report concludes that, "overall, foreign regions today are estimated to be where the U.S. was roughly 5–20 years ago in terms of environmental regulations."[24] Thus, by the best information available, most competing refining areas of the world are any where from 5–20 years behind us and may or may not adopt similar environmental protection as required of our refiners. If they are adopted, they may not be enforced.

Even with the best case of a five year lag time for foreign refiners to "catch up" with U.S. environmental standards and enforcement, the damage to domestic refiners will have been done and in all probability, will be irreversible. Over the critical next five years, imported gasoline will be readily available to replace reduced domestic production which will prevent U.S. market prices from rising to allow full cost recovery of increased environment, safety, and health costs.[25] Once a refinery closes for these reasons, it will not likely restart.[26]

The NPC report concludes that if foreign environmental protections do not materialize, the cost of foreign produced gasoline would be less than domestic gasoline.[27] This disparity would result in increased imports of gasoline and reduced U.S. refinery utilization.[28]

Today management teams at domestic refining headquarters around the U.S. face a most difficult quandary: Whether to commit the capital investments necessary for pollution abatement to continue operations knowing that lower cost imported product will make it unlikely to be profitable or not to invest. To not invest means to close the refinery.

A very important fact here that must be acknowledged is that although the NPC report concludes there is a similarity in the projected foreign refinery investments for the rest of this decade to American refining cost increases, those increases in the United States are largely attributed to the environmental requirements. Foreign increases included a more significant capacity expansion.[29] Increased costs for environmental protection neither builds additional capacity to produce gasoline nor does it improve efficiency of existing capacity and while it is good for the ecology, it is nonproductive in terms of production of additional gasoline or producing it cheaper.[30] Rather, these costs add another layer of costs to products offered in competitive markets.[31] The report concludes that recovery of these costs is going to be difficult unless demand is increased by further refinery capacity shutdowns.[32]

Increasing refinery shutdowns is precisely what has been happening in the refining industry. In the 1980's, the number of domestic refineries dropped from a high of 315 to 184. 131 refineries closed for a 42% decrease in the number of refineries and the refining capacity fell from 18.62 million barrels per day to 15.7 or by 20%.[33] During that same time period, imports of foreign refined gasoline more than doubled from 140,000 barrels a day to 366,000.[34]

The shutdown of American refineries is continuing. Wright Killen & Co. conducted a plant-by-plant analysis of all refining operations in the U.S. in 1992. Their report predicted that 37 additional U.S. refineries with 1.5 million barrels a day of capacity or another 10% of the total capacity is at risk of closing in the next 3–5 years.[35] They have found that in the year since the 1992 study, almost a third of the predicted capacity closure, 498,000 barrels per day, has in fact closed.[36] At least one more refinery has closed since that report with a loss of another 50,00 barrels per day capacity.[37] Their findings are corroborated by the NPC study which predicts that there is going to be a substantial restructuring in the coming years characterized by shutdowns of refining capacity.[38] Indeed, the NPC study concluded that

shutdowns accelerated in 1992 to the third highest level in history.[39] A third recent analysis by USEA reports that dropping refining capacity ". . . is likely to continue due to the coet of complying with environmental regulations, particularly amendments to the clean Air Act, and also due to narrow profit margins for most refining operations."[40] This report predicts increased petroleum41 product imports and, as a result, dropping U.S. employment.[41]

Therefore, we have seen a 20% decline in refining capacity already and we are well on our way to a predicted additional 10% for a total of a 30% loss of domestic refining capacity in just over a decade. While additional imports will likely occur to offset the reduced domestic production, one should not focus on the amount of imports as the sole determinant of the problem. Refining and marketing price margins are just as important if not more so.

The way the gasoline marketing operates in the United Sates is that the marginal barrel of gasoline coming into a market sets the price. The price is set at the margin. Those last barrels of gasoline coming into the market are imported because we are not producing all that we consume. Because they have less embedded costs for environmental protection of at least 7¢ a gallon, they can sell their gasoline in our markets for less than that domestically produced even taking into consideration the difference in transportation costs of finished products and crude oil. Their marginal barrel coming in sets the price for all of the domestic gasoline. If domestic gasoline refiners don't lower their prices to meet imports, then more imported gasoline will come in further displacing domestic production which will then have no market since it costs more at the pump. If domestic refiners try to raise prices to recoup some of the increasing costs of environmental compliance, the same thing happens.

Today the margin of profit on a gallon of domestic produced gasoline is a penny a gallon or less. Thus, the 7¢ a gallon differential now enjoyed by imported gasoline which will continue to increase is a significant factor depressing costs at the pump. If a domestic refiner cannot get back the capital it must invest in the future for environmental protection, it will not make that investment and will shut down the refinery. This scenario is exactly the point made in the NPC study in comparing the total pollution costs of $37 billion over the rest of this decade substantially exceeding the cash flow of the refineries.

Unless there is some tremendous increase in demand for gasoline, which is not predicted by anyone, it is not possible for the rate of return to justify these expenses. Therefore, the real problem is not so much whether the present levels of imported gasoline are going to go up or down, but rather what is the marginal rate of return to the domestic refiner. As long as it is depressed as it currently is, more refineries will shut down rather than invest further. If the embedded cost differential disappeared, however, the margin would increase and refineries should remain on stream. The environmental playing field needs to be leveled.

There are several results to a continued shut down of domestic refineries. The first is the economic consequences to the United States. The additional 10% reduction in refining capacity, according to the conservative scenario of a recent economic analysis, would increase inflation .7 of a percent.42 It would also affect interest rates by raising the short and long term rates by 40 basis points.[43] The report calculates that the dollar would rise as interest rates went up which in turn would inhibit the competitiveness of U.S. produced goods in international markets.[43] The decline in refining capacity would also affect U.S. employment by a decline of nearly 200,000 jobs.[45] Lastly, the Gross Domestic Product would see a decline of .3 of a percent in 1994 and 1995.[46]

A second result of this decline in domestic refining capacity is the effect on the national security of the United States. A recent report noted that five different Presidents—Eisenhower, Kennedy, Nixon, Ford and Carter—imposed restrictions on imports of refined petroleum products because they recognized that maintaining domestic refining capacity was essential to national security.[47] The report analyzes military needs in several scenarios and then compares those needs to our domestic refining capacity. There is a gap today between what we refine and consume of 1.8 million barrels a day and by the year 2000 to 6.9 million barrels a day.[48] With a military conflict arising, the gap would obviously increase due to the needs of the military and military industrial complex, widening the gap to 4.9 million barrels a day in 1995 and a 8.6 in the year 2000.[49] "Even if draconian and rationing measures were employed during a conflict and succeeded in achieving a reduction in civilian demand of as much as 20%, a severe shortage would still develop."[50] Therefore, the report concludes, "There can be no doubt in light of the enormous and growing gap between domestic refining capacity and domestic demand, that the tests set forth in the Ford Administration's standard for determining the point at which refined petroleum product import levels could constitute a national security threat has been met."[51]

The economic impact and the threat to our national security are both to be avoided if at all possible. As has been concluded by the United States Energy Association, "the decline in our domestic . . . refining capacity cannot conceivably be in our national interest."[52]

In our opinion, it is possible to avoid. congress must take action to prevent further decline in our industry, damage =to our economy, and worsening of the threat to our national security. We propose that congress pass a tax on imported gasoline approximately equalling the embedded costs differential of environmental costs starting at 7¢ per gallon in 1994 and increasing 1¢ per year thereafter until it reaches 13C per gallon in 2000. In our opinion, this tax will eliminate the differential environmental cost subsidy enjoyed by foreign refiners. The tax will in turn cause an increase in the domestic refiners margins which will improve their profitability preventing further shut downs. This tax offers several advantages:

1. The tax would eliminate the unfair competitive advantage held by foreign refiners.
2. It would remove a further increase in the threat to national security of reduced refining capacity.
3. It would encourage domestic refiners to expend the money necessary for future environmental protection by giving them an opportunity to recover their costs.
4. It would eliminate the incentive for foreign refiners to resist imposition of environmental standards or their enforcement as they would no longer have a cost advantage.
5. It would provide additional needed revenues to the U.S. Treasury.

Either Congress through legislation or the President under existing legislation could impose a tax on imported gasoline on the grounds of national security. Section 232 of the Trade Expansion Act of 1962 expressly authorizes the President to adjust imports by quotas or import fees which threaten to impair the national security.[54] This legislation' is broad and does not define what constitutes a threat to national security as it is left to the President's judgment.[55] Six recent Presidents have already used this authority to regulate imports of petroleum and petroleum products. President Eisenhower used a quota,[56] President Nixon imposed license fees,[57] and President Ford increased the import fees.[58]

The Congress can also legislatively find a threat to national security and impose a tax on imported gasoline. The fact that congress granted to the President powers under §232 of the Trade Expansion Act of 1962 is not an abdication of its constitutional responsibilities. Rather, it is a grant of concurrent power to the Executive Branch which gives the President the limited power to make national security findings under the congressionally prescribed circumstances, while Congress also retains its powers to make national security finding.[59]

A tax on imported gasoline passed by the Congress is also consistent with U.S. international obligations. It does not violate the General Agreement of Tariffs and Trade. Article XXI of GATT provides a specific exception to a contracting party imposing trade restrictions for reasons of national security. That Article reads in part: "Nothing in [GATT] shall be construed . . . to prevent any contracting party from taking any action which it considers necessary for the protection of its essential security interests. . . ." This Article makes 'no requirement about the manner in which a contracting party determines when it does have a national security interest sufficient to trigger this exception. GATT practice has been to defer to the decision of the contracting party when they invoke the national security exception.[60]

Such a tax would also be an important environmental policy. If American businesses are expected to make significant investments to protect the environment, they must be reasonably secure in believing they are going to be able to get their money back from the operation of their business and not be rendered less competitive. This tax would show American refiners that our government is not going to let them lose competitiveness and that they have a chance in the marketplace to get their investment returned. At the same time, it would show the countries of the world that have not implemented environmental protections or are not enforced them, there will be no profit or trade advantage in their failing to do so. The domestic and international environment will be improved as a result.

A final result of this tax is that it will raise revenue. Even exempting Canada with whom we have a free trade agreement, the tax beginning at 7¢ in 1994 and increasing 1¢ per year until it reaches 13¢ per year in 2000 will raise approximately $1.9 billion over the next five years.[61] Although it will raise a substantial sum of money, it will not reflect a corresponding increase at the pump. One report has estimated that the average U.S. gasoline pump prices would not increase by more than 1¢ per gallon and in some cases less than 1/4¢ per gallon as a result of the passage of this tax.[62]

Therefore, Mr. chairman and members of the Committee the Coalition urgently requests that you pass a tax on imported gasoline and blending components in a miscellaneous revenues bill which might result from these hearings starting at 7¢ per gallon in 1994 and increasing by 1¢ per gallon year until it reaches 13¢ per gallon in 2000 as necessary to protect the national security of the United States, help our domestic economy, protect the domestic and international environment, and give relief to the domestic refining industry from foreign unfair competition.

FOOTNOTES

1. Governor Bill Clinton speaking of the North American Free Trade Agreement at a presidential campaign rally at North Carolina State University, Raleigh, North Carolina, on October 4, 1992.
2. Senator Al Gore, *Earth In The Balance,* (Houghton Mifflin Co.: Boston 1992) p. 343.
3. Testimony of U.S. Trade Representative Mickey Kantor before the Senate Finance Committee, May 20, 1993.
4. Testimony of U.S. Trade Representative Mickey Kantor before the Senate Environment and Public Works Committee on March 16, 1993.
5. *BNA Daily Report for Executives,* May 12, 1993.
6. Hearing of the Senate Environment and Public Works Committee, March 15, 1993.
7. International Pollution Deterrence Act of 1991, S. 984.
8. Thomas K. Plofchan, Jr., "Recognizing and countervailing Environmental Subsidies," *The International Lawyer,* Volume 26, Number 3 (Fall 1992), p. 763.
9. Testimony of Robert F. Housman, Center for International Environmental Law, before the Subcommittee of Foreign Commerce and Tourism, committee on Commerce, Science and Transportation, U.S. Senate, May 18, 1993.
10. Office of Technology Assessment, Congress of the United States, report "Trade and Environment," 1992. p. 98.
11. American Petroleum Institute report, "Costs to the Petroleum Industry of Major New and Future Federal Government Environmental Requirements," October 1991, p. 21.
12. National Petroleum Council, *U.S. Petroleum Refining* August 2, 1993 Draft, p. 1. I–1.
13. *Ibid.*
14. *Ibid.,* p. 1. I–2.
15. *Ibid.,* p. 1. I–1.
16. *Ibid.,* raw data used for conclusions in chapter 1.
17. Dept. of Commerce report MA–200.
18. Wright Killen & Co. report, "A Broader Look at U.S. Refining Industry Survivability and International competitiveness," June 8, 1993, p. 2.
19. NPC Draft report, Executive Summary, p. 37.
20. *Ibid.,* Executive Summary, p. 11.
21. EOP Group, Inc., "The United States versus European community," August 13, 1993, p. 3.
22. *Ibid.,* Appendix L, Section VII–9, p. 5.
23. *Ibid.,* p. 14.
24. *Ibid.,* Appendix L., Section VII–10, p. 1.
25. Wright Killen & Co., June 8, 1993 report, p. 3.
26. *Ibid.*
27. NPC Draft report, Executive Summary, p. 11.
28. *Ibid.*
29. *Ibid.,* Executive Summary, p. 39.
30. *Ibid.,* p. 1 II–2.
31. *Ibid.*
32. *Ibid.*
33. *Ibid.,* Executive Summary, p. 17; Office of Industrial Resource Administration, U.S. Department of Commerce, The Effect of crude Oil and Refined Petroleum Product imports on the National Security, and Investigation conducted under Section 232 of the Trade Expansion Act of 1962, Table III–3 (Dec. 1, 1988).
34. *Ibid.,* Table III–1.
35. Wright Killen & Co. report, "Btu Energy Tax Study," May 1993, p. 2.
36. Wright Killen & Co. study, June 8, 1993, p. 1.
37. Marathon Oil Company refinery in Indianapolis, Indiana, *The American Oil & Gas Reporter,* August 1993, p. 14.
38. *NPC Draft report,* p. 1. VI–1.
39. *Ibid.*

40. United States Energy Association, "U.S. Energy '93, May 1993, p. 3.
41. *Ibid.*
42. The WEFA Group, "Macro Economic Impact of a Ten Percent Reduction in U.S. Refining capacity," May 25, 1993, p. 3.
43. *Ibid.*, p. 5.
44. *Ibid.*, p. 7.
45. *Ibid.*, p. 8.
46. *Ibid.*
47. The National Defense Council Foundation, "Refineries in Crisis: The Threat to National Security," July 23, 1993, p. 3.
48. *Ibid.*, p. 9.
49. *Ibid.*
50. *Ibid.*
51. *Ibid.*
52. United States Energy Association, "Energy '93 Report," p. 10.
53. National Defense council Foundation report, p. 11.
54. 19 U.S.C. §1862(c)(1)(A).
55. *Independent Gasoline Marketers Council* v. *Duncan,* 492 F. Supp. 614 (D.C.D.C. 1980).
56. Proclamation No. 3279, March 10, 1959, 24 Fed. Reg. 1,781.
57. Proclamation No. 4210, April 18, 1973, 38 Fed. Reg. 9,645.
58. Proclamation No. 4341, January 23, 1975, 40 Fed. Reg. 3,965.
59. *Consumers Union of U.S. Inc.* v. *Kissinger,* 506 F2d 136 (D.C.D.C. 1974).
60. *Handbook of GATT Disputes Settlement,* Pierre Pescatore, Transitional Juris Publications, 1992, Part 1: Introduction, p. 58; GATT Activities 1986, pp. 58–59; GATT Activities 1987, pp.69-70; John H. Jackson *World Trade and the Law of the GATT* (1969), p. 749; GATT Activities 1982, p. 72; GATT Activities 1985, p. 47.
61. Energy Information Administration, Petroleum Supply Monthly for Imports January—December, 1992 of Finished Motor Gasoline and Motor Gasoline Blending components Total led 121,668,000 barrels; divided by 42 gallons to the barrel equals 5,100,056,000 gallons multiplied time 7¢ and then an additional cent for each year through 11¢ in the fifth year equal $2,299,525,200 less imports from Canada that year which were 17% of the total; equal $1.9 billion.
62. Wright Killen & Co., "The Effects of National Security Fee on U.S. Gasoline Prices," June 14, 1993, p. 1.

PREPARED STATEMENT OF MIKE CANTRELL

Gentlemen: I appreciate the opportunity to visit with you about the state of the marginal well industry in America. This fragile but significant American industry is at risk. I am a small marginal oil well producer from Ada, Oklahoma, a community of 17,000 people. We operate 107 stripper oil wells that average 3.58 BOPD and 40 barrels of saltwater per day. These wells are all within a 25 mile radius of my home. Needless to say we have a very bare bones operation with three people in the office and five in the field. As you can see from the attached Exhibit A at the current price of around $14 per barrel for oil our company will lose $148,000 next year. This simply means we will have to shut down 25% of our current production and cut costs even further through layoffs and other measures in order to survive. However as you can also see by the attached exhibit if the $3 per barrel tax credit currently under consideration by this committee was implemented our corporation's losses would be cut to $18,000 for next year. At this level we could keep most of our production on line and all of our employees working.

Frankly, our company is probably one of the healthier companies in Oklahoma. While the state's average oil production per well is 2.7 BOPD, ours is 3.58. We are the 98th largest company out of 4,925 companies operating oil and gas wells in Oklahoma. Over 3,000 of these companies in Oklahoma produce less than 20 barrels of oil per day. These non integrated independent oil companies in Oklahoma do not have any down-stream marketing or refining capability. In other words, they must accept whatever price they can get for their product with no way of passing on increased cost through the sale of a final product.

In the past ten years we have seen our environmental regulatory burden grow at an almost exponential rate, increasing our cost dramatically. We now have one person that does nothing but environmental regulatory compliance work. At the same time, we have seen the tax incentives available to keep these marginal oil and gas wells running severely curtailed. The depletion allowance is currently at 19% down from the 27 1/2% historical level. It is an allowance made to encourage reinvestment in a continually depleting vital asset. The current calculation is extremely complex

requiring several stages and side calculations to get to the bottom line. As I see it the most critical of these computations is the net income limitation computation. On a property by property basis you are only allowed to use the depletion allowance to the point that it does not exceed 100% of the taxable income of the property. This is especially punitive to the more marginal properties. In other words, the more marginal the property is the less the depletion allowance it can receive. This paradox is by far the most onerous to my company. Simply put, the properties that need the depletion allowance the most cannot get it at all. Even if the property makes enough money to receive the depletion allowance the actual deduction is limited to 65% of the overall taxable income from all sources. To the extent you are not making money you lose depletion allowance. This again penalizes the operation that needs the break the most. To illustrate these points I have included on the attached Exhibit A information using actual results from our corporate tax return. This exhibit shows that the 19% depletion allowance is reduced to 6.6% after the net income limitation computation and then is further reduced by the 65% of taxable income limitation to an effective depletion allowance rate of just 2.2%.

An Interstate Oil and Gas Compact Commission reserve study has found that in Oklahoma alone we have produced 13 billion barrels of oil since the beginning of production. We have another two billion barrels left to be discovered. But we have another 26 billion barrels left in the ground to be recovered from current fields, when the price becomes high enough for the technology. It is extremely important that we do all we can do to preserve marginal wells for future recovery projects. Once they are plugged it will never be feasible to redrill most of them for any kind of enhanced recovery project. The current proposal being studied by this committee to allow for a $3/per barrel tax credit on these marginal wells would be very instrumental in keeping these wells producing.

Oklahoma's most famous native son said, "The problem with this country is that we cannot plan beyond the next 60 days. Even the Russians have a five year plan. It's not any good but at least they've got one." The year was 1931 the man was Will Rogers. This criticism is still applicable today. We should, before it is too late, ask ourselves some tough questions about our energy future:

Do we believe in the permanent stability of the Middle East?

Could OPEC be dumping low priced oil in the United States in order to decimate the domestic oil industry and gain total control of our market?

How long will they supply our country with cheap oil after our domestic industry is gone?

Isn't it in our best interest as a country to have a long term energy policy that combines preserving our current production infrastructure with conservation measures, to begin to wean us eventually from our insatiable thirst for hydrocarbon fuels?

The thousands of marginal stripper wells all across America represent a low cost strategic petroleum reserve. With over 50% of the oil ever produced from these wells left in the ground awaiting a price sufficient initiate future enhanced recovery processes, they represent an asset too valuable to waste.

EXHIBIT A—OIL AND GAS INCOME & DEPLETION SCHEDULE

	Actual per 1993 oil price		Estimated at current oil price	
Income:				
Gross Production		780,547		607,351
Expenses:				
Gross Production Taxes		55,380		43,092
Operating & Overhead Expenses		612,104		612,104
Intangible Drilling Costs		18,254		18,254
Other Expenses:				
Depreciation		82,617		82,617
Total Expenses Before Depletion		768,355		756,067
Net Income Before Depletion		12,192		(148,716)
19% Gross Production	@19%	148,304	@21%	127,544
100% Net Income Before Depletion		12,192		(148,716)
Tentative % Depletion	Effec 6.6%	51,585	Effec 3.0%	18,392
Cost Depletion		32,231		32,231

EXHIBIT A—OIL AND GAS INCOME & DEPLETION SCHEDULE—Continued

	Actual per 1993 oil price		Estimated at current oil price	
Percent depletion allowed (after 65% taxable income limitation)	Effec 2.6%	20,417	Effec 0%	0
Cost Depletion Allowed		30,307		32,231
Total Depletion Allowed		50,724		32,231
Net Income (Loss)		(38,532)		(180,947)
Proposed domestic production tax credit		N/A		130,114
Estimated loss after domestic tax credit				(50,833)

PRPEARED STATEMENT OF CODY L. GRAVES

Thank you Mr. Chairman. I am here today in my capacity as Vice-Chairman of the Oklahoma Corporation Commission, an elected three member panel that regulates the exploration and production of oil and natural gas in my home state and as Chairman of the Legal Committee of the Interstate Oil and Gas Compact Commission.

I urge you and your committee to listen carefully to the comments that will be made today by Harold Hamm, Mike Cantrell and George Alcorn. To paraphrase a former boss of mine, "we [elected public officials and their staffs] cannot fully appreciate the impact our decisions have on business and industry because we are not in the business on a daily basis, dealing with changing conditions and circumstances." It is incumbent on all of us as public officials to listen closely to producers so that we can better understand what are the real problems.

Mr. Chairman, as you well know from your years of involvement with and concern for our domestic energy industry perhaps the greatest problems facing us is the lack of an adequate sustained price signal. Rapid price fluctuations, dictated by foreign producers motivated more by political rather than economic reasons, have wrecked havoc on our domestic industry. As prices rose dramatically in the late seventies and early eighties consumers become suspicious. As prices fell precipitously during the middle eighties and again recently, capital markets have become very wary of the domestic industry. A variable import fee, would in my opinion, go a long way towards providing the price stability the capital markets need to begin re-investing in America's energy industries.

However, political reality being what it is, it appears unlikely that we will be able to wean consumers from the narcotic that is cheap energy.

Given that unfortunate scenario, as public policy makers we must then consider what we can do to reduce the tax and regulatory burdens on our domestic producers.

In these tight fiscal times it would appear counter intuitive to talk about reducing government revenues. However, the reality of the situation is that if we do not take steps now to stop the hemorrhaging in our domestic oil and gas industry the long term costs to our economy will dwarf any short-term reduction in tax revenues.

Consider if you will the economic impact of stripper oil wells. The IOGCC has recently completed a study that shows that in 1992, 16,211 marginal wells were abandoned with the resulting impact on our nation's economy:

—a reduced economic output of $416.9 million
—an earnings reduction of $55.4 million
—and a loss of 2,385 jobs.

These calculations are based upon a weighted average wellhead price of $17.89 per barrel. In today's market the losses are even more significant.

The IOGCC report concludes that every dollar of stripper oil production creates an additional $.5171 of economic activity throughout the economy and that 9.1 jobs are dependent on every $1 million of stripper oil produced. When we consider Dr. Mankin's testimony that over 60% of all the oil discovered in Oklahoma is still in the ground, representing millions of dollars in economic activity and thousands of jobs, we must come to the conclusion that we cannot allow the premature abandonment of oil and gas wells to continue. When the price of crude oil falls to a level that approaches the actual cost of production we must intervene and we must do so quickly.

I urge this committee to ask the producers who are here today to describe their current situations. The fact that they are here today is testimony to their abilities as businessmen. Operating costs outside of the control of producers, like taxes, royalties, fees, insurance, and other regulatory and administrative costs have crippled the industry.

In Oklahoma today posted prices range from $10.90 per barrel for sour crude to $12.75 per barrel for sweet crude. In constant dollars these prices are less than $8.00 per barrel in 1983 dollars. These prices represent a 73% decline in real dollar revenue from the 1983 price of $30.00 per barrel. There is not an industry in this country, with the possible exception of agriculture, that has had to face this type of economic pressure.

If we do not act now to stop the premature abandonment of marginal wells, we will foreclose forever our ability to produce significant amounts of the abundant domestic reserves of crude oil and natural gas that underlie our nation. Every well we are forced to plug in Oklahoma means that we will be forced to import that much more foreign oil on foreign flagged tankers through the ports and harbors of the United States and run the increasing risk of another Valdez type accident.

Producing states have learned the hard lesson that a lack of a comprehensive federal energy policy means a systematic dismantling of an important part of our local economies. In Oklahoma over the last 10 years we have experienced a steady decrease in oil production, not because we are running out of oil, but rather because of increasing environmental and regulatory costs and decreasing prices. Our ability to develop proven reserves of natural gas has also declined over the same time period. We are beginning to realize that if we wait much longer for federal action there may not be much of an industry left to help.

In fact, as hard as it is to admit that Texans do anything well, I must commend to you the actions of my colleagues on, the Texas Railroad Commission. Last year they proposed to their Legislature and had enacted a sweeping series of production incentives. Theirs is a story we should all listen to.

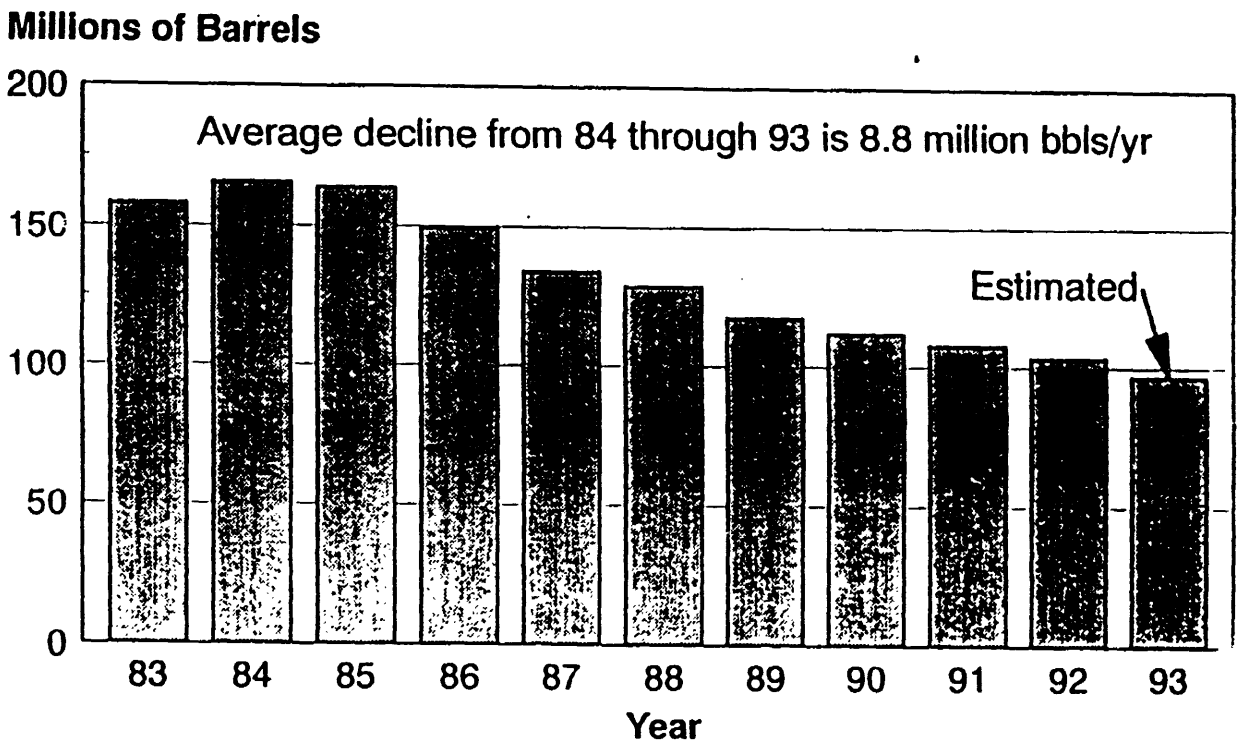
In Oklahoma, the Commission on Natural Gas Policy, a bi-partisan, public-private sector panel chaired by Senator Kevin Easley, has proposed similar legislation to encourage additional production in Oklahoma. Simply by doing nothing the State of Oklahoma will lose at least $10 million in gross production taxes and countless millions in lost income, payroll and sales taxes during the next twelve months. A proposal as simple as exempting incremental production increases from the gross production tax will stimulate millions of dollars in economic activity and increase overall tax revenues to our State.

State action, however, is not enough. We must have corresponding action at the federal level to reduce the cost of production. Please ask Mr. Cantrell, Mr. Hamm and Mr. Murfin what impact the recent changes in the alternative minimum tax (AMT) had on their business. Ask them what they would be able to accomplish if full relief from the AMT were granted and then multiply that by the thousands of other producers and imagine the economic activity that would be created.

Mr. Chairman, as a nation we failed to respond to the wake-up call of the mid-eighties. Some would say as a result we were drawn into an armed conflict over the supply of cheap crude oil. I truly hope that our nation's energy policy is more developed than simply placing 500,000 of our young people in the Middle East. We cannot and must not underestimate the national security implications of maintaining a viable domestic energy industry.

Thank you Mr. Chairman for your leadership on this issue. We stand ready to help.

PETROLEUM PRODUCTION IN OKLAHOMA



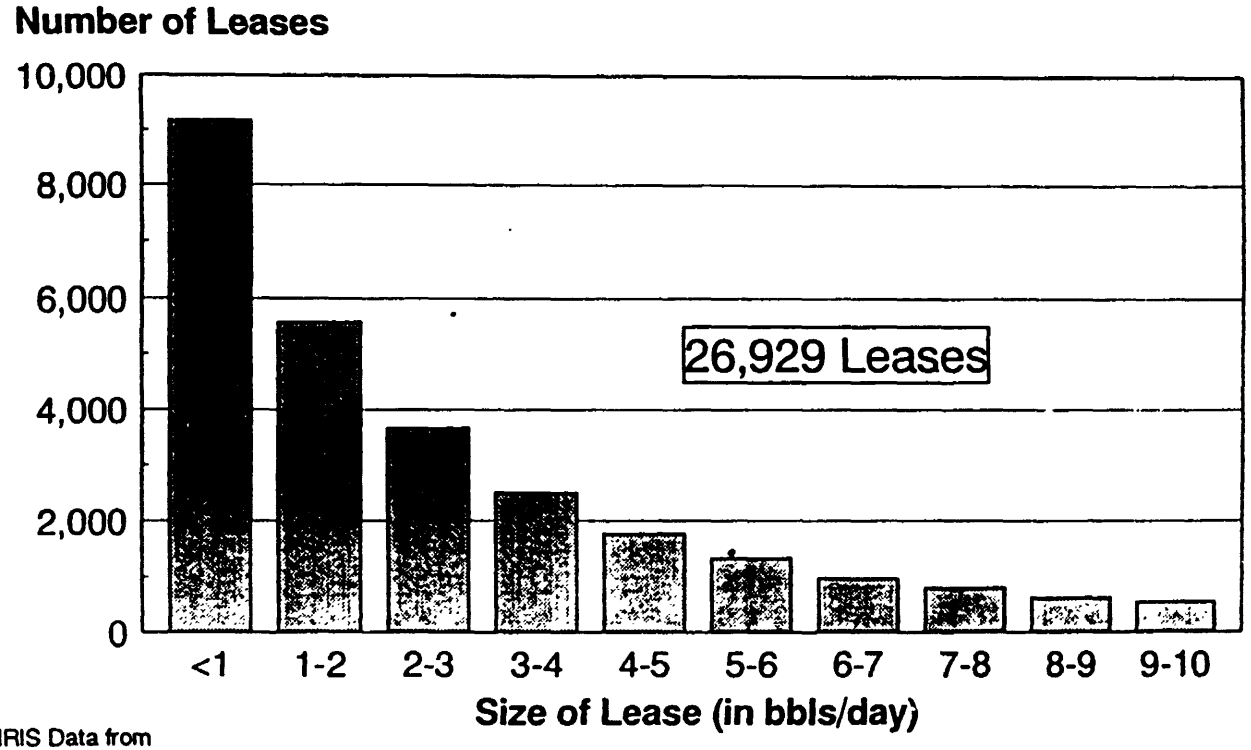
NRIS Data from
OGS/GIS

PETROLEUM PRODUCTION IN OKLAHOMA

- In 1992, Oklahoma had 32,459 petroleum-producing leases
- 26,929 or about 80% of these leases produced less than 10 barrels per day
- The leases that produced less than 10 barrels per day accounted for more than 25 million barrels or about 25% of total State production

PETROLEUM-PRODUCING LEASES IN OKLAHOMA

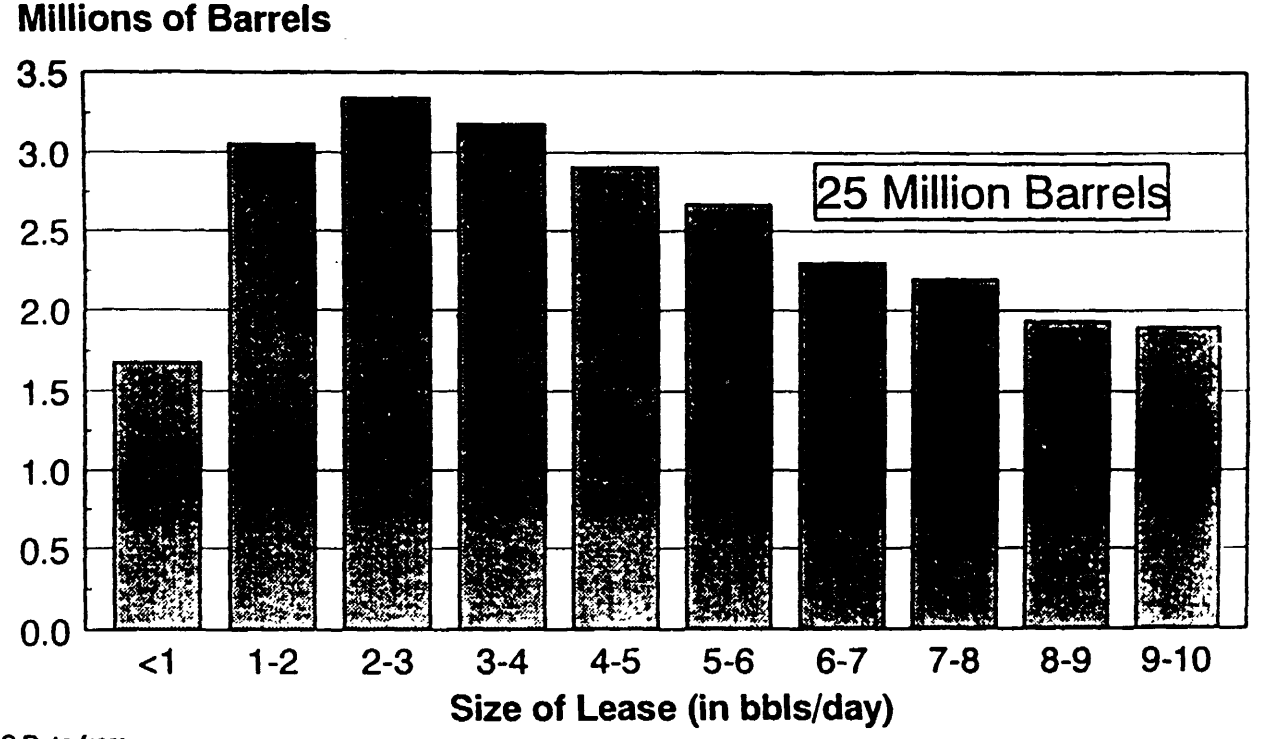
(Includes Leases that Produce < 10 Bbls/Day)



NRIS Data from
OGS/GIS

OKLAHOMA PETROLEUM PRODUCTION BY SIZE OF LEASE FOR 1992

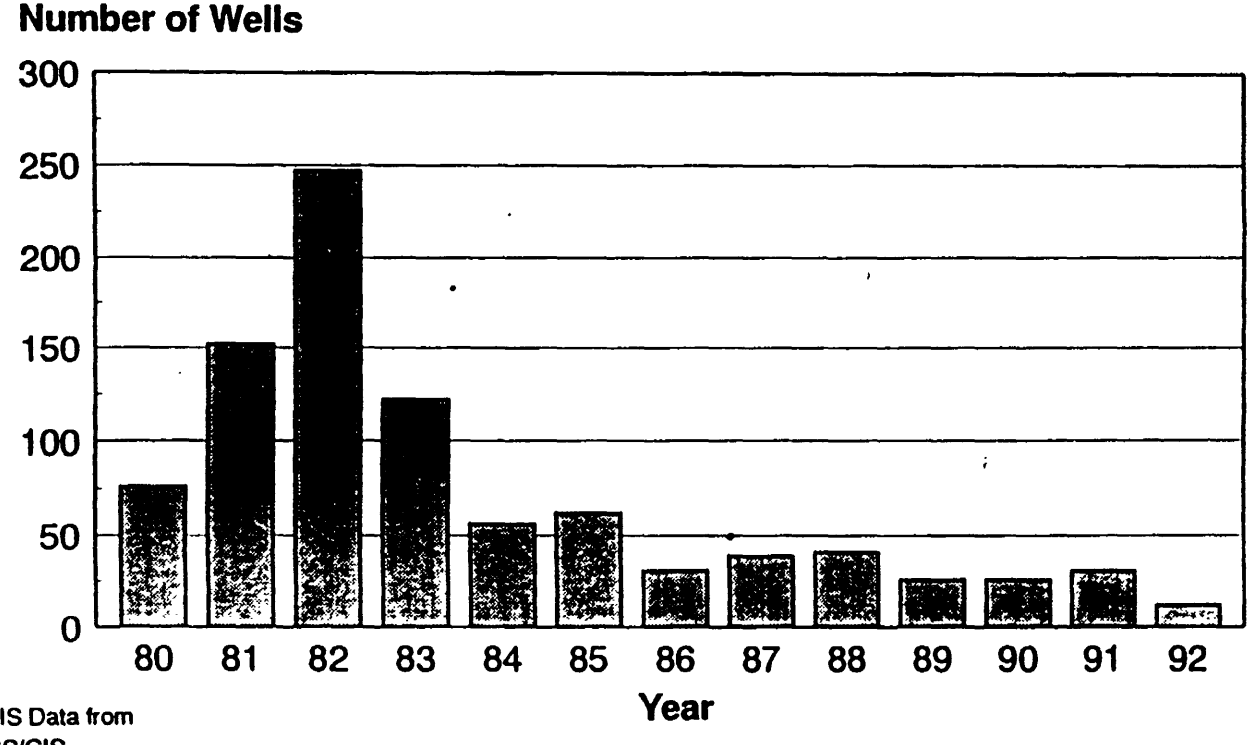
(For Leases that Produce < 10 Bbls/Day)



NRIS Data from
OGS/GIS

DEEP-WELL COMPLETIONS IN OKLAHOMA

(GREATER THAN 15,000 FEET)



NRIS Data from
OGS/GIS

SUMMARY OF EXISTING ECONOMIC PROGRAMS

BY

MEMBER STATE / PROVINCE

The following economic programs of the member states / province are summarized on the following pages:

Program States / Province X = Program exists in State / Province

	Al	Ak*	Ar	Co	La	Ms	NM	Ok	Tx	Wy	AB
Enhanced Rec	x	No	No	No	No	No	x	x	x	No	x
High Cost Gas	x	No	No	No	No	x	No	No	x	No	x
Horizontal Wells	No	No	No	No	x	No	No	x	No	No	x
Inactive Wells	No	No	No	No	No	No	No	No	x	No	x
Marginal Well	x	No	x	x	x	No	No	No	No	x	x
New Fields	No	No	No	No	x	No	No	No	x	x	x
Tertiary	No	No	No	No	x	x	x	x	No	x	x

* Economic Limit Factor helps in some of these areas, but none of these specific programs exist.

ENHANCED OIL RECOVERY

Summary of Existing Economic Programs by Member State / Province

Alabama	Alaska	Arkansas	Colorado	Louisiana*	Mississippi	N. Mexico	Oklahoma*	Texas*	Wyoming*	Alberta
Yes	No	No	No	No	No	Yes	Yes	Yes	NO	Yes
6% of Value on any incremental oil produced from a "Qualified Enhanced Recovery Project"				See Tertiary Summary	See Tertiary Summary	Reduced rate of 1.875% for Qualified EOR Projects Only when Texas Crude is below $28 per Barrel	Incremental Production is Exempt until Payback See Tertiary Summary	Reduced Severance Tax Rate from 4.6% to 2.3 % for EOR Projects and Incremental Production See High Cost Summary	See Tertiary Summary	Approved costs deducted from Crown Royalty

* Identifies State / Province as one that has either Tertiary or High Cost Economic Program or both.

See individual State / Province Summaries for additional information on their Economic Programs

HIGH COST GAS and COAL SEAM GAS

Summary of Existing Economic Programs by Member State /Province

Alabama	Alaska	Arkansas	Colorado	Louisiana	Mississippi	N. Mexico	Oklahoma	Texas	Wyoming	Alberta
Yes	No	No	No	No	Yes	No	No	Yes	No	Yes
Tax Rate of 2% on Natural Gas Prod. from Coal Seam Wells until 6/7/94					3.5% rate on Coal Seam Gas only for 5 years			Total Sev Tax Exemption on High Cost Gas from wells drilled betwn 8/31/91 and 9/1/96. Exempt until 8/31/01		Scaled benefit tied to depth of well

High Cost Gas and Coal Seam Gas defined as Section 107 gas under the Natural Gas Policy Act.

HORIZONTAL WELLS

Summary of Existing Economic Programs by Member State / Province

Alabama	Alaska	Arkansas	Colorado	Louisiana	Mississippi	N. Mexico	Oklahoma	Texas	Wyoming	Alberta
No	No	No	No	Yes 3.13% sev. tax rate until production = 2 1/3 x tot. investment	No	No	Yes 100% Exemption on Horizontal Well drilled prior to 7/1/94 is exempt until Payback or first 24 months of production	No	No	Yes Applies to new hori wells and to existing wells converted to horizontal wells. See p. 47

INACTIVE WELLS

Summary of Existing Economic Programs by Member State / Province

Alabama	Alaska	Arkansas	Colorado	Louisiana	Mississippi	N. Mexico	Oklahoma	Texas	Wyoming	Alberta
No	No	No	No	No	No	No	No	Yes	No	Yes
								10 yr sev. tax exemption on wells that have been inactive for 3 yrs. Apply before 8/31/95. Applies to oil and gas.		Royalty holiday for qualifying wells of first 8,000 cubic meters of oil produced. See p.47

Inactive Well is one that has not produced for more than one month during the last three years.

MARGINAL and STRIPPER PRODUCTION

Summary of Existing Economic Programs by States / Province

Alabama	Alaska	Arkansas	Colorado	Louisiana	Mississippi	N. Mexico	Oklahoma	Texas	Wyoming	Alberta
Yes	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes
6% Severance tax rate on stripper wells; i.e. produce less than 25 barrels or 200,000 CF Per Day	See Economic Limit Factor in Summary	4% of market value for well or wells producing 10 barrels or less per day during calendar month	Reduced rate for wells that produce 10 Barrels or Less	Gas - $0.013 MCF for wells that produce Less than 250,000 CF Daily Production Oil - 6.25% for Wells that Produce 25 BPD/50% Saltwater 3.125% for Wells that Produce 10 BPD					4% rate on Tertiary and Stripper Projects for 5 years Workovers betwn 7/1/93 and 12/31/96 Incremental production taxed at 2% for first 24 months	Lower royalty rate of 5% or oil royalty formula. See p.47

NEW DISCOVERY OR FIELD WELLS

Summary of Existing Economic Programs by Member State / Province

Alabama	Alaska	Arkansas	Colorado	Louisiana	Mississippi	N. Mexico	Oklahoma	Texas	Wyoming	Alberta
No	No	No	No	Yes	No	No	No	Yes	Yes	Yes
				New Fields Discovery Exemption for 2 yrs from date of regular production				Begins in 1994, provides for $10,000 per well sev. tax benefit after 521 new fields discovered in 1994 Additional benefits after 721 fields and 842 fields discovered	Wildcat Well drilled after 1/1/91 entitled to 4 year rate at 2% New Wells drilled btwn 71/93 and 12/31/96 except hori wells, first 40 barrels or 240 MCFD taxed at 2% for 24 months	Third Tier Exploratory Wells that qualify get 12 month royalty holiday o: $1,000,000 royalty credit, whichever comes first

TERTIARY RECOVERY PROJECTS

Summary of Existing Economic Programs by Member State / Province

Alabama	Alaska	Arkansas	Colorado	Louisiana	Mississippi	N. Mexico	Oklahoma	Texas	Wyoming	Alberta
No	No	No	No	Yes	Yes	No	Yes	No	Yes	Yes
See Enhanced Oil Recovery and Coal Seam Gas				Tertiary Projects are exempt until payout	3% rate on production from Tertiary Project	See Enhanced Oil Recovery	Tertiary Project is exempt for first 36 months	See Enhanced Oil Recovery, High Cost Gas, and Co-Production	Sev. tax rate of 4% on Tertiary and Stripper Projects	Certain costs allowed as deduction from royalty.

Appendix A

Existing Tax Rates and Economic Programs by Member State / Province

The current taxes and economic programs of each individual state and province are summarized on the following pages. Summarized are the following taxes for each state and province:

Income Taxes;
General Property Taxes;
Severance / Production Taxes
Conservation Taxes;
Sales and Use Taxes; and
Franchise Taxes.

The economic programs summarized are those currently in place in the respective states and province.

ALABAMA

CURRENT TAXES

Income Taxes	5.0% of Taxable Income with 27.5% Depletion Allowance
General Property Taxes	Oil and Gas Production is Exempt
	Well Equipment is assessed at Book Value times 20 % of assessment ratio times Local Levy
Severance / Production	**Wells drilled after July 1, 1988**
	Onshore 8 % of Value Offshore 6 % of Value
	Wells drilled before July 1, 1998
	Onshore 10 % of Value Offshore 8% of Value
Conservation Tax	2 % of Value for oil and gas
Sales and Use Taxes	**State** 4 %
	County, City, MTA 6%
Franchise Tax	$3 per $1,000 of Taxable Alabama Capital

EXISTING ECONOMIC PROGRAMS

Marginal Wells	6 % of Value on wells that produce 25 barrels of oil or less or 200 MCFD of natural gas
Enhanced Oil Recovery	6 % of Value on any incremental oil produced from a "Qualified Enhanced Recovery Project"
Coal Seam/High Cost	Taxed at 2% of Value until 6/7/94

ALASKA

CURRENT TAXES

Income Taxes	9.4% Corporate Income Tax
General Property Tax	20 mils / 2 % of assessed value
Severance / Production*	**Gas** 10% of Market Value or $0.064 per MCF, whichever is greater **Oil** 12.25 % of Market Value for first five years 15% after first five years or $0.80 per barrel, which ever is higher.
*	Oil and Gas Severance Taxes subject to Economic Limit Factor (ELF). See Below
Conservation Tax	**Gas** 4 tenths of a percent per 50,000 cubic feet of natural gas **Oil** 4 tenths of one percent per barrel with conservation surcharge of $0.05 per barrel of crude oil
Sales and Use Taxes	Not Applicable
Franchise Tax	Not Applicable

Existing Economic Programs

Economic Limit Factor The respective severance tax rates for oil and gas are reduced by a fields' ELF. During the life of a field, production diminishes while some operating costs remain fixed. At some point the total costs including operation costs, royalties and production taxes will exceed gross revenue and the field becomes unprofitable. This is called the economic limit. The ELF is designed in recognition of the economic limit of a field. The formula protects fields as they decline and encourages operators to drill development wells.

Exploration Credits Provides for a credit up to 50% of certain exploration costs that can be applied against royalty, rentals and severance taxes due the state. This provision is accomplished by state leases. Covers two years following the lease sale and applies to well footage drilled and geophysical costs. Geophysical data must be made public.

Royalty Reduction After two years of lease production, royalty may be reduced to prolong economic life of field. Lessee must show revenue is insufficient to yield a reasonable rate of return.

ARKANSAS

CURRENT TAXES

Income Taxes	1 % to 6 % incremental rate on net income under $100,000. Flat rate of 6.5% on net income exceeding $100,000.	
General Property Tax	Oil and Gas Production at a 20% rate of assessment of Market Value x Local Levy	
Severance / Production	**Gas** 3/10ths of one cent per MCF	
	Oil 5% of market value at time and point of severance	
Conservation Tax	**Gas** 5 mills per MCF	
	Oil 25 mills per barrel	
Sales and Use Taxes	**State**	4.5 %
	County, City, MTA	Varies among locals, but total tax can not exceed $25 per single purchase
Franchise Tax	0.11% of the par value of outstanding capital stock that Arkansas real and personal property bears to total value of the real and personal property of the corporation	

EXISTING ECONOMIC PROGRAMS

Marginal Wells	Reduced severance tax rate of 4 % of market value at time and point of production for a well or a group of wells producing 10 barrels or less per day during any calendar month

COLORADO

CURRENT TAXES

Income Taxes	5.0% (effective 7/1/93)
General Property Taxes	Well Equipment is valued at 29.0% of Replacement Cost Less First Year's Depreciation x Local Levy Oil/Gas Production is valued at 87.5% of Selling Price of Previous Year's Production excluding Government Royalties x Local Levy
Severance / Production	**Gas.** 2.0% on First $25,000 3.0% on Next $75,000 4.0% on Next $200,000 5.0% on greater than $300,000

	Oil.	2.0% on First $25,000 3.0% on Next $75,000 4.0% on Next $200,000 5.0% on greater than $300,000
Conservation Tax	**Gas.**	1.5 mills per Dollar of Value at the Well
	Oil.	1.5 mills per Dollar of Value at the Well
Sales and Use Taxes	**State**	3.0%
	County, City, MTA, etc.	4.0%
Franchise Taxes	Not applicable	

EXISTING ECONOMIC PROGRAMS

Stripper Well Exemption	Exempts wells with less than 10 Barrels Per Day
Tax Credit	Credit is allowed against severance tax for 87.5% of all ad Valorem Taxes Paid Based on Production, excluding Stripper Production.

LOUISIANA

CURRENT TAXES

Income Taxes	4.0% on first $25,000 5.0% on second $25,000 6.0% on next $50,000 7.0% on next $100,000 8.0% on all amounts over $200,000		
General Property Taxes	Oil and Gas Production is Exempt Surface Well Equipment is valued at 15% of Market Value Less Depreciation x Local Levy		
Severance / Production	**Gas**	$0.075 $0.03 $0.013	MCF (Gas Well) MCF (Oil Well) MCF for wells with less than 250,000 CF Daily Production
	Oil	12.5% of Value at the Well Location	
	Exemptions 6.25% for wells with less than 25 Barrels per Day/50% Saltwater 3.125% for wells with less than 10 Barrels per Day		
Conservation Tax	Not applicable		

Sales and Use Tax	**State**	4.0%
	County, City, MTA, etc.	4.0%
Franchise Tax	$1.50 per 1000 on first $300,000. $3 per 1000 on remainder of Equity in State	

EXISTING ECONOMIC PROGRAMS

Severance Tax Exemptions	6.25% for wells with less than 25 Barrels per Day with 50% Saltwater 3.125% for wells with less than 10 Barrels per Day
Tertiary Recovery Projects.	Exempt until payout

Louisiana -- Existing Economic Programs cont.

New Field Discovery.	Exempt for two years from date of regular production (First 2 MCF or 100 Barrels per Day)
Sales Tax Offshore.	No sales tax on items used for the offshore.

MISSISSIPPI

CURRENT TAXES

Income Taxes	3% on first $5,000 4% on $5,000 to $10,000 5% on all amounts in excess of $10,000	
General Property Taxes	Oil and Gas Production is Exempt	
Severance / Production	6 % of Market Value for Oil and Gas	
Conservation Tax	None	
Sales and Use Tax	**State**	7 %
Franchise Tax	None	

EXISTING ECONOMIC PROGRAM

Tertiary Recovery	Oil produced from a tertiary enhanced oil recovery program is taxed at 3 % of value.
Coal Seam Gas	3.5 % severance tax rate on Coal Seam Gas for 5 years

NEW MEXICO

CURRENT TAXES

Income Taxes	4.8% on the first $500,000 6.4% on the next $500,000 7.6% on all amounts over $1,000,000
General Property Taxes	Equipment is assessed at 33.3% of 27% of prior year's value less exempt royalties x Local Levy Production Assessment based on 33.3% of 150% of prior year's value x Local Levy
Severance / Production	**Gas.** 3.75% of Value plus Privilege Tax of 4% of Value **Oil.** 3.75% of Value plus Privilege Tax of 3.15% of Value
Conservation Tax	**Gas.** 18/100 of 1% of Value (Fund over $1 million) **Oil.** 18/100 of 1% of Value (Fund over $1 million)
Sales and Use Tax	**State.** 5.00% **County,City,MTA,etc.** 2.06%
Franchise Tax	Not Applicable

EXISTING ECONOMIC PROGRAMS

Enhanced Oil Recovery	Rate of 1.875% for Qualified Projects when Texas Crude Price below $28 per barrel

OKLAHOMA

CURRENT TAXES

Income Taxes	6.0% of Income
General Property Taxes	Oil and Gas Production is Exempt Shut-in wells are assessed at 10% of the market value of Equipment x Local Levy
Severance/Production	**Gas** 7.095% of Value **Oil** 7.095% of Value

Conservation Tax	$0.07 per 1,000 CF less 7% of value of Casinghead Gas not to exceed one-third of Value
Sales and Use Tax	**State** 4.50% **County, City, MTA,etc.** 6.25%
Franchise Tax	$1.25 per 1000 of Stockholder Equity in the State with a maximum of $20,000 per year

EXISTING ECONOMIC PROGRAMS

Tertiary Recovery Projects.	Exempt for the first 36 months
EOR Incremental Production.	Incremental Production is exempt until payback
Horizontal Wells.	If producing before 7/1/94, then exempt until payback or 24 months, whichever comes first

TEXAS

CURRENT TAXES

Income Taxes	See Franchise Taxes	
General Property Taxes	Oil/Gas Production valued at 100% of Market Value of Remaining Reserves using Discounted Cash Flow Approach x Local Levy Well Equipment is valued at 100% of market value x Local Levy	
Severance/Production	**Gas**	7.5% of value at the wellhead except on sweet/sour gas shall not be less than 121/1500 of 1 cent per MCF
	Oil	Greater of 4.6% of Value or 4.6 cents per barrel
Conservation Tax	**Gas**	Clean-Up tax of .003 cent per MCF
	Oil	3/16th of 1 cent per barrel plus Clean-Up of 5/16th cent per barrel
Sales and Use	**State** 6.25 % **County,City, MTA,etc.** 2.00%	
Franchise Tax	Higher of 4.5% of Taxable Income apportioned to state or $2.50/1000 stockholders equity in state	

EXISTING ECONOMIC PROGRAMS

Enhanced Oil Recovery Reduced rate of 2.3% severance tax for ten years that begin after 12/31/89 but before 1/1/98

Enhanced Oil Recovery Reduced rate of 2.3% severance tax for ten years on incremental production from EOR projects that begin after 9/1/89 and expanded after 8/31/91. Application for expanded projects is now 1/98.

High Cost Gas. Total severance tax exemption through 8/31/01 for "High Cost Gas Wells" spudded or completed between 6/16/89 and 9/1/96

New Field Discovery. For new fields discovered in 1994. After 521 new fields discovered, then $10,000 for each new field discovery well spudded. $25,000 for discovery wells after 721 and additional tax credits after 842 new fields discovered. See HB 1974 73rd Session.

Inactive Wells. Ten year severance tax exemption on oil and gas produced from a "Three Year Inactive Well" i.e. one that has not produced for more than one month in the three years prior to the application to the Commission. Regulations being developed. Apply during 9/1/93 through 8/31/95. See HB 1975 73rd Session.

Co-Production

Co-Production Gas Exempt from 7.5% severance tax on first day of month commission approves the project through 8/31/01. Pay full rate through 7/31/95 and seek refund after 9/1/95. Apply before 1/1/94

Co-Production Oil Regardless of whether new or expanded project, co-production oil production receives 2.3% severance tax rate for 10 years. Starts first month commission certifies positive production response. Pay full rate on oil produced before 7/31/95, then seek refund. Apply before 1/1/94.

CURRENT TAXES

Income Taxes Not Applicable

General Property Taxes Oil and Gas Production 100% of Previous Year's Value Less Exempt Royalties x Local Levy

Surface Well Equipment is assessed at 11.5% of Actual Value x Local Levy

Severance / Production **Gas.** 6% of Value **Oil.** 6% of Value

Conservation Tax **Gas.** .06% of Value **Oil.** .06% of Value

Sales and Use Taxes

State.	4.0%
County, City, MTA, etc.	2.0%

Franchise Tax $100 per $1,000,000 assets located in the State

EXISTING ECONOMIC PROGRAMS

Wildcat Well Exemption. First 4 years of production taxed at 2% and then reverts to 6% thereafter

Tertiary Recovery Projects. Reduced severance tax rate to 4% rather than 6% for 5 years. Oil only.

Stripper Well Exemption. Reduced severance tax rate to 4% rather than 6% for 5 years. Oil only.

New Wells Applies to wells drilled between 7/1/93 and 12/31/96 excluding horizontal wells, first 40 barrels per day or 240 MCFD taxed at 2% for 24 months and then full 6% thereafter

Workovers and Recompletions Applies to all wells between 7/1/93 and 12/31/96, the incremental production taxed at 2% for the first 24 months and then back to full 6%

ALBERTA

Approximately 85% of the mineral interests in Alberta are held by the province and the province receives most of its revenue via the income tax and a royalty. Privately held mineral interests are taxed via the income tax and the freehold tax.

Individuals to contact and conversion factors are set out at the end of this summary. All dollars are Canadian Dollars subject to the exchange rate.

CURRENT TAXES

Income Taxes The Provincial Basic Corporate Tax Rate is 15.5% of the amount of taxable income in Alberta. The taxable in Alberta is the product of taxable income as assessed for federal taxes less the royalty tax deduction and the quotient obtained when taxable income earned in Alberta is divided by taxable income.

General Property Taxes Local tax only without a cap based on market value. Effective tax rate ranges between 1.2% to 3+%.

Freehold Mineral Rights Tax **Gas.** Levied on the holder of a natural gas right based upon field gas factors and gas well condensate factors calculated for each well on the basis of production. Both formulas are price and production volume sensitive.

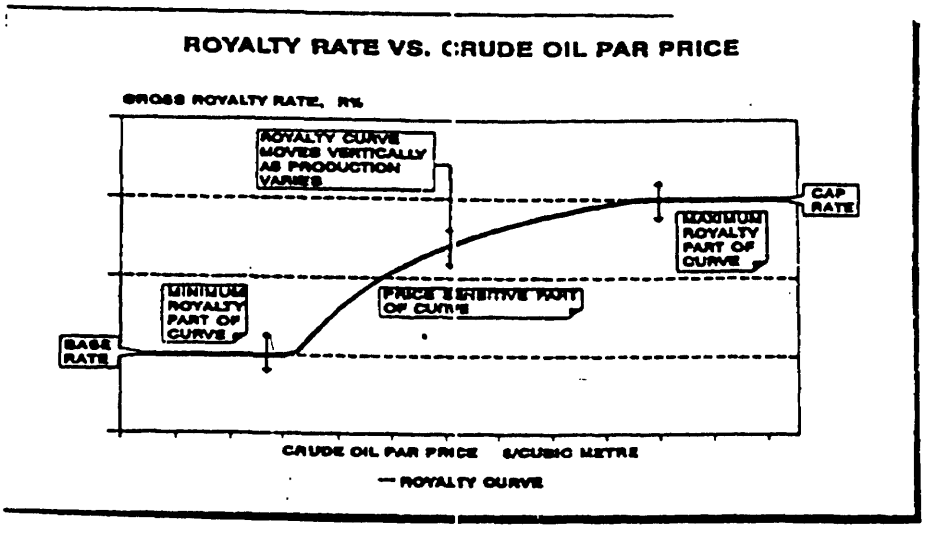
Oil. Levied on the holder of a petroleum right based upon the aggregate of crude oil factors and solution gas factors calculated for each well on the basis of production. Both formulas are price and production volume sensitive.

Sales and Use Tax Federal Goods and Services tax of 7%

Alberta Royalty Tax Credit (ARTC) This program provides oil and gas producers with a refundable tax credit equal to a percentage of the first $2.5 million in Crown royalty paid. A sliding scale formula linked to crude price, ranging from 25% for prices at $210 per cubic meter (6.29 barrels of oil) or greater to 85% for prices at or below $100 per cubic meter. It works to decrease effective royalty when prices are low.

CURRENT ROYALTY AND ECONOMIC PROGRAMS

Crown Royalty Oil. The Crown Royalty Share is tied to various royalty formulas that recognize and are sensitive to well productivity, crude oil price, the quality of oil and the vintage of the oil. Old, New and Third Tier Oil Royalty Formulas result in a royalty rate that is designed to take 10% of the provinces selected price and 40% of the price in excess of the selected price at a well production rate of 572.1 cubic meters per month (3,600 bopm). The Low Productivity Royalty Formula is designed for wells producing at less than 190.7 cubic meters (1,200 bopm) and results in a lower royalty rate. In all cases, the royalty formula appears to be designed to result in the province receiving less during times of low oil prices in exchange for a greater share in times of high prices. See Figure 3.



Natural Gas By-Products Crown Royalty The objective of the formula is to take 22% of the first $40.90 per cubic meter of the price and 50% and 35% of the price over $40.90 for oil and new pentanes. Butane and Propane have a royalty rate of 30%

Gas Cost Allowance This deduction from gross royalties on natural gas and byproducts is designed to compensate producers for gathering, compressing and processing the Crown Royalty. Operating costs, a capital cost allowance and a 15% rate of return on capital before taxes are allowed.

Royalty Economic Programs

Royalty Holiday Programs

Exploratory Wells Eligible for $1,000,000 crown royalty credit on qualifying wells. Spud date limitations. See Alberta Energy Information Letter 91-28.

Third Tier Exploratory Well For new field wildcats, new pool wildcats and deeper pool test wells that qualify enjoy royalty holiday of 12 months or $1,000,000, whichever comes first. Applies to wells spudded after September 30, 1992. Permanent Policy. See Alberta Energy Information Letter 93.8.

Royalty Holiday Programs continued

Development Wells Recently concluded. Provided for $400,000 crown royalty credit or no royalty for 12 months, whichever came first. See Alberta Energy Information Letter 91-26.

Reactivated Oil Wells Applies to wells reactivated after October 1, 1992 that did produce for 12 months prior to reactivating (if reactivated in Oct., Nov. or Dec. 1992 or Jan. 1993) or for 24 months if reactivated in February 1993 or later. The royalty holiday applies to the first 8,000 cubic meters (50,000 barrels) produced. Royalty thereafter is at the new oil rate. Permanent Policy. See Alberta Energy Information Letter 93-8.

Deep Gas Scaled benefit tied to depth of well that find undefined gas pools or extend existing pools below 2,500 meters. Maximum value is to 5,500 meters or deeper in the amount of $3.6 million. Entitlements must be used within 10 years. See Alberta Energy Information Letter 85-29.

Horizontal Wells Applicable until March 31, 1994. Horizontal wells drilled are eligible for a 24 month royalty adjustment tied to the number of vertical wells replaced. See Alberta Energy Information Letter 91-9,92-6 and 93-13.

Low Productivity Wells Establishes a royalty rate of 5% or the rate determined by the oil royalty formula, whichever is lower, for wells that qualify. During the qualifying period, the well must produce 121 cubic meters per month or less in any single month. For the six months prior to qualifying the well must have produced an average of not more than 73 cubic meters per month. See Alberta Energy Information Letter 93-2.

Horizontal Re-Entry Wells For existing wells that are converted to horizontal wells after October 1, 1992. Benefits tied to the volume of production. Permanent Policy. See Alberta Energy Information Letter 93.4.

Enhanced Oil Recovery Allows approved costs associated with the enhanced oil recovery project to be deducted from Crown Royalty See Section 11 of Alberta Petroleum Royalty Regulations

Contacts / Conversions

Alberta Energy Information Letters	**Denise Bouvier**	**403-427-7707**
Crude Oil Royalty Holiday	**D.M. Ampleford**	**403-427-6583**
Energy Resources Conservation Bd	**Harvey Streitz**	**403-427-7707**
Minister of Energy	**Pat Black**	**403-427-3740**

6.29 barrels of oil = 1 cubic meter of oil
35.3 cubic feet of natural gas = 1 cubic meter of natural gas

PREPARED STATEMENT OF HAROLD HAMM

My name is Harold Hamm, president, founder, and owner of Continental Resources, Inc. ("Continental"), a mid-sized independent exploration and production company headquartered in Enid, Oklahoma. I have been in the oil and gas industry for 25 years as an oil and gas producer, drilling contractor, oil well service contractor and owner of other oilfield service entities which currently employ 500 people. Continental owns and operates 800 medium depth oil and gas wells in Oklahoma, Texas, Montana, and North Dakota. The average well production of Continental is 5.7 BOPD and 40.7 MCF gas per day. Continental is a company focused on exploration which most recently discovered an oil productive ancient meteorite crater underlying the mature Sooner Trend Fields of northwestern Oklahoma.

Before outlining my proposal, I would like to address three popular misconceptions or unreal paradigms held by many Americans and Governmental leaders. Those misconceptions are: (1) that most oil companies are run by flamboyant characters such as J. R. Ewing of the long-running TV show, Dallas; (2) that major oil company fat cats dominate United States Exploration and Production; and (3) that the United States is running out of oil and gas and the industry is all but finished. The truth of these matters is that this industry did attract undesirables in the boom cycle of the 80's due to the nature of this risk/reward business. But they were not astute businessmen which have long been gone and the survivors do not fit the typical J. R. Ewing stereotype. Mr. Chairman, you have known me for 25 years. How do I fit that mold? Is George Kaiser or Raymond Plank anything like that? I should think not. Independent oil and gas companies produce 51½% of America's petroleum energy and that number is increasing evermore as major oil companies are being driven overseas where a potential profit exists of proportionate size to be of significance to their bottom line. The United States exploration and production industry is becoming an industry of independent producers through a transition of property acquisitions and production enhancement. The myth that the United States is running out of oil and gas is the oldest myth of all having been around since the early 1900's. The recent Independent Petroleum Association of America report confirms that abundant resources of oil and gas remain in the United States - more than 62 years for oil and 68 years for natural gas at current reserve/production ratios. No, I do not believe we should take extreme measures to try to become energy dependent on our own oil resources, but I do believe that due to the high cost of importation, we have no choice but to sufficiently find and develop our natural gas reserves to supply United States energy needs. I do not believe that our energy resources are finite, but in fact, that they are very dynamic and expanding along with new technology for both finding and recovering reserves.

I have not come to you today with a frustrated anti-government attitude, but rather, with a very real and logical solution to the problem at hand and a great confidence that you will share my vision and accept and adopt the important and necessary measures that I propose.

My mission today is (1) to dispel certain persisting popular myths; (2) to present to you the changed domestic exploration and production industry as I know it; and (3) to outline a program that takes a long-term approach to our current problems instead of yet more management by crisis. This industry has been driven over the past dozen years to the brink of collapse which negatively impacts on national energy security. Unless a significant program of change is adopted, more drastic emergency energy measures will be needed in the future.

Gentlemen, unless your work here is tremendously successful, the United States must prepare itself for a natural gas shortage of major proportion within the next three years. United States demand for natural gas is growing by 3.5% annually, while supply reserves of natural gas are declining by 2% annually. The gas bubble is gone. This winter's cold weather has proven that our supply is nip and tuck with demand right now. While we may be able to refill gas storage during the summer months this year, the ability of the industry to do so in subsequent years is more uncertain. Unlike the OPEC Oil Embargo caused oil shortage of the 1970's, the coming supply shortage of natural gas will be real, not political, and it will take time, capital, and knowledgeable professionals to correct. We should not wait until we are short of supply and in a national crisis to address this imminent problem.

Unlike the regulation induced natural gas shortage of the late 1970's, this recovery will take 5-7 years assuming adequate financial, capital, and personnel resources. Due to the past 10 years of economic ruin, the oil and gas industry infrastructure is severely damaged. The United States domestic exploration and production industry has shrunk from 800,000 professional and skilled workers in 1981 to approximately 380,000 today. Employment losses for less than these in the automotive industry resulted in Governmental intervention. We are all familiar with the bailout of Chrysler. Today the industry is still shrinking in capital and skilled workers. As a result of low oil prices due to unrestrained OPEC production the available capital for exploration is at an all-time low.

The industry is not asking for a bailout, but rather, only relief from lingering archaic and punitive governmental barriers from the late 1970's and early 1980's. While these barriers were directed at the major oil companies, they have blocked the paths of independent exploration and production companies. Positive change in this governmental policy must occur. You, gentlemen, are the only bright spot on the horizon for exploration and production companies like mine. Political policy rules our industry. The recent relief from the alternative minimum tax has allowed my company's exploration budget to be expanded three-fold.

I need to add a little clarity right here. Too many people mistakenly take a shotgun aim at the energy industry because they do not understand it properly. Today's problem is not that the major oil company located on the corner is not selling enough gasoline. As a matter of fact, the corner station is selling more gasoline than ever before. The problem stems from the fact that United States exploration and production companies cannot raise capital in the current political environment to support a drilling program sufficient to replace produced reserves of oil and gas. It is obvious that this administration, whose platform is centered around change, is different from those in the past who penalized this industry indiscriminately through price controls, windfall profit taxes, and the elimination of most of the percentage depletion allowance. We have reached the time for change.

The second portion of my mission today is to describe for you the new shape of the changed exploration and production industry. I have witnessed the hardship of the past several years as 50% of Oklahoma's oil and gas operators were merged, sold, consolidated, or simply ceased to exist. My drilling company was forced to idle 80% of its rigs and lay off 80% of its employees. I observed all of the conventional sources of capital dry up and go away as certain provisions of the tax act of 1986 sealed the fate of the last of the investors from the private sector. I have seen the transition made by the major oil companies as they sold off their properties and moved their personnel overseas. At present, approximately 80% of Oklahoma's oil and gas is produced by independent oil companies and 20% by major oil companies. I have seen a reduction in the service sector by 75% as company after company declined, consolidated, or went broke. And most recently, I have witnessed most oil and gas operators grapple with the decision of whether to plug out uneconomic leases due to the low oil price, or to continue to produce for negative dollars.

And so you may ask "What is left?" The United States energy production industry (our industry) is the most efficient in the world. During 1992, we produced 8.8MM BOPD, or 13% of the world's supply, while we only have 3.2% of the world's oil reserves. We produced 49 BCFD or 25% of the world's total natural gas production while we only have 3.4% of the world's natural gas reserves. We are a very efficient and lean industry that has been starved for capital.

I applaud President Clinton who said recently in a conversation with Hedrick Smith on PBS that new tax laws must be written which would bring private capital back into industry once again. This proposal will do just that.

The program that I have submitted for your acceptance is designed as a Long-Term synergetic performance plan to recapitalize this segment of the industry at no significant loss of revenue to the treasury. If the industry does not perform and produce, it costs the treasury nothing. Certain provisions are included which will "prime the pump" but pertain only to funds spent on the exploration of oil and gas.

Most importantly this program removes restrictions on capital investments from the private sector. The capital must be made available for our predominantly independent industry to be able to drill the number and type of wildcat exploratory wells needed for reserve replacement. Since the major oil companies have focused the exploration efforts elsewhere, this responsibility now falls on the shoulders of the independents.

My plan contains two "Technology Triggers" which will set off activity and provide stimulus for research development and education through increased usage in certain high tech areas.

The first is horizontal drilling. In 1991 the Canadian Government granted a tax and royalty holiday for the first 75,000 B.O. produced from a horizontally drilled well. This tax incentive spurred the usage of this new technology and took its use from experimental to widespread, thereby creating an employment boom in Saskatchewan and Manitoba. For 1994 Canada is projecting a 20.6% increase in exploration budgets compared to 4.1% in the United States. The Williston Basin producing province extends across the United States/Canada border with two-thirds of it in the United States. Last year, of the 240 horizontal wells drilled in the Williston Basin, 230 of them were drilled on the Canadian side. As a result, 5% of the wells in Saskatchewan are horizontal and now account for 23% of its oil production.

The second "Technology Trigger" would apply to non-conventional sources such as tight gas and coalbed methane. As late as the mid-1980's gas from tight sands and coalbeds was considered "unconventional" and little, if any, was included in resource estimates. Today it forms a major part of the existing resource base, a good part of the reserve base of many companies, and a major part of the economies of several states. The technology has been partially self-sustaining on its own economic merits as the Section 29 tax credit proved to be the "Technology Trigger" needed to start the development of this resource. Partial restoration of this tax credit should be adopted to develop the needed reserve of natural gas for our country's future use.

Complete restoration of the Percentage Depletion Allowance will round out this Long-Term approach. Our nation and the exploration and production industry was served well by this provision for more than 43 years. By replacing the original rate and effectiveness of this measure, our industry will be able to survive periods of economic hardship and OPEC maneuvering by providing the long-term economic impetus necessary to allow the industry to replenish our reserves and maintain our exploration programs through good and bad times. Adoption of this measure displaces the need for revolving crisis management measures.

I ask each of you to look to the future to focus only on today's existing conditions in the exploration and production sector of our industry, and adopt a plan to allow producers like myself to continue producing America's energy needs. This program will result in a positive impact on the United States economy by adding hundreds of thousands of highly paid jobs while generating the stability and support necessary to allow the industry to replace its reserves.

But most importantly, you will proclaim to all of the world that the United States will have a viable domestic energy policy well into the future.

PROGRAM TO REVITALIZE AND RECAPITALIZE DOMESTIC OIL AND GAS INDUSTRY

- COMMON MISCONCEPTIONS OF DOMESTIC OIL AND GAS INDUSTRY
  - CHARACTERIZATION OF INDUSTRY LEADERS
  - MAJOR OIL COMPANY DOMINATION OF DOMESTIC OIL AND GAS INDUSTRY
  - RECOVERABLE U. S. OIL AND GAS RESERVES ARE DEPLETED

- PRESENT REALITY OF DOMESTIC OIL AND GAS INDUSTRY
  - INDEPENDENT PRODUCERS ARE THE KEY DOMESTIC PLAYERS
  - SIGNIFICANT RECOVERABLE RESERVES REMAIN IN U. S.
  - INDUSTRY HAS LOST MORE THAN 400,000 SKILLED WORKERS
  - U. S. IS ON THE VERGE OF A NATURAL GAS SHORTAGE
  - DOMESTIC EXPLORATION PROGRAM NEEDS STIMULUS PACKAGE TO PROMOTE CAPITALIZATION FROM THE PRIVATE SECTOR

- PROPOSED PROGRAM
  - TECHNOLOGY TRIGGERS
    - HORIZONTAL DRILLING
      - WILLISTON BASIN ANALOGY
    - TIGHT GAS AND COALBED METHANE
      - GAIN FROM EXPERIMENTAL TO ACCEPTED PRACTICE
  - RESTORATION OF FULL PERCENTAGE DEPLETION ALLOWANCE

PROGRAM TO REVITALIZE AND RECAPITALIZE DOMESTIC OIL AND GAS INDUSTRY

PURPOSE

To provide the necessary recapitalization to revitalize the domestic energy industry to enable it to replace declining oil and gas reserves to meet the future energy needs of our country.

I. **Depletion**

1. Allow an additional deduction from 15% up to a maximum of 27.5% on all funds spent on the exploration of oil and gas.
2. Remove the 1000 bbl per day quantity restrictions for independent oil and gas producers.
3. Eliminate the disparity between marginally producing properties and other properties.
4. Remove all restrictions related to transfers of proven property and the depletion limitation.

II. **Alternative Minimum Tax**

1. Establish one method of depreciation for both the regular and alternative minimum tax.
2. The Intangible Drilling Cost preference should be entirely eliminated for independent oil and gas producers.

III. **Deduction Limitations-Passive Activities**

1. Reinstate the deductibility of working interests held in limited partnerships to encourage private investment in the oil and gas industry.

IV. **Tax Credits**

1. Section 29 tax credits should be reinstated at 50% of their former amount.
2. General business credits and section 29 tax credits should offset 50% of AMT as well as regular income taxes.

V. **Federal and Tribal Royalties**

1. Reinstate the 10% investment tax credit on federal and tribal lands when the gross production tax and royalty burdens exceed 20%.

VI. **Enhanced Oil Recovery Credit**

1. Delete the word tertiary from the definition of a qualified project and add waterflooding as a component of the EORC and allow the credit to offset 50% of the AMT as well as regular income tax.

VII. **New Technology and Development Credit**

1. Add a tax credit equal to 30% of all the costs associated with horizontal drilling.

PREPARED STATEMENT OF CHARLES J. MANKIN

Thank you Mr. Chairman: I am Charles Mankin, Director of the Oklahoma Geological Survey. During the 27 years that I have served in this capacity, I have seen major changes in the petroleum industry. Prior to the 1973 Arab Oil Embargo, the domestic petroleum industry operated in an extended period of stability with respect to price and supply. Since the Arab Oil Embargo, the domestic industry has been beset with large fluctuations in price stemming from actions beyond the direct control of either the industry or our government. Rapid price escalations, followed by even more rapid declines, have produced an environment of enormous economic uncertainty in an industry that also must face the traditional uncertainty of success with every exploratory well that is drilled.

With the prospect of a protracted period of low world oil prices, the domestic industry faces the greatest challenge to its survival since the discovery of the East Texas Field and the corresponding excessive supply of crude oil in the 1 93Os. By comparison, the collapse of world oil prices in 1986 was painful at the time to the industry, but a high cash flow from elevated prices tended to soften the impact. The collapse in world prices at the end of last year came at a time when the industry was struggling to recover from the decline of 1986, and did not have the financial resources to cushion the blow. Today, Mr. Chairman, the very survival of the domestic petroleum industry is in serious question. While that may sound overly dramatic, I could not be more serious.

In the time I have available, I would like to make three points:

1. Contrary to popular opinion, the United States is not running out of crude oil. In fact, we have about twice as much oil in known reservoirs as this Nation has produced since Colonel Drake drilled his well in Titusville, Pennsylvania in 1859. Furthermore, new and major discoveries continue to confound the "experts."
2. The onshore, lower 48, domestic petroleum industry is becoming the domain of the small company and independent operator. Unlike the major oil companies who have the option of exploring throughout much of the world, most of these small operators must either survive in the U.S. or perish.
3. As crude oil imports increase, the U.S. must place increasing reliance on the strategic petroleum reserve as an economic safeguard against disruptions of supply. It should be recognized that our most effective strategic petroleum reserve is the 600,000 producing oil wells in the U.S.

Now to my first point, Mr. Chairman. Crude-oil recovery from existing fields is about 35 percent of the oil-in-place. This means that we are leaving about two-thirds of the oil in the ground, or about twice as much oil as the industry has produced. For Oklahoma, these numbers are 13 billion barrels of oil that have been produced since Statehood (1907), and 25 billion barrels that remain in known fields in the State.

While much has been made of this remaining oil as a target for sophisticated applications of expensive chemical flooding and other related processes, generally known as enhanced oil recovery, little has been said about the amount that can be recovered using conventional technology.

There is a growing body of knowledge about the development of "compartments" or barriers to flow in petroleum reservoirs that prevent oil from moving through the reservoir to the well bore. If these compartments are large enough to trap an economic quantity of oil, then conventional methods such as targeted in-fill drilling or horizontal drilling can be used for the additional recovery. For certain classes of reservoirs, the additional quantity that may be recovered using these conventional methods approaches the amount that has already been recovered.

In addition, water flooding has long been considered to be a conventional method of oil recovery. Abundant opportunities exist in the U.S. to apply improved waterfloods to existing fields for additional oil recovery. In Oklahoma, prior to the present collapse in oil prices, development of new waterfloods was the largest source of increased oil production in the State.

Finally, conventional wisdom says that most of the oil, especially within the Continental U.S., has been found. In Oklahoma, more than 400,000 wells have been drilled in the search for oil and gas since Statehood. From that statistic alone, one would assume that the State must look like a pin-cushion, and nothing is left to be found. However, in 1987, the Wilburton "Deep" and Cottonwood Creek fields were discovered. The Wilburton "Deep" field had an initial estimate of 600 billion cubic feet of recoverable natural gas, and wells were drilled into this reservoir that had initial flows of more than 100 million cubic feet per day; some of the largest gas wells ever developed in the world. The discovery well in the Cottonwood Creek

field had an initial flow of about 2,500 barrels of oil per day, and the ultimate recovery is estimated to be about 15 million barrels of oil. I would consider that to be a respectable field for a state that had nothing left to find.

In 1991, a structure, known as the "Ames Hole," was drilled in northwestern Oklahoma (Major County) that resulted in the discovery of oil production in the Arbuckle Group. Production subsequently has been discovered in several additional formations, and current estimates of recovery from this field exceed 100 million barrels of oil. If a field of this size can be found in a state that has been "drilled-up," how many more "Ames Holes" are waiting to be found in other parts of the country?

In summary of the first point, Mr. Chairman, the United States is far from being "over-the-hill" in petroleum recovery. Some believe, as I do, that we are less than one-half way there.

Now to my second point. For a variety of reasons, major oil companies have reduced or discontinued their operations in much of the continental U.S. Many of the producing properties formerly operated by majors have been sold to small companies and independents. In Oklahoma, the number of oil-producing leases operated by majors in 1983 was 5,600. In 1993, that number was less than 2,500. While the loss of the major oil companies has been an economic blow to the State, some benefits have accrued as well. Most of the owners of the small companies and the independents live in Oklahoma. Thus, the revenue generated from their producing leases tends to remain in the State. In fact, an appropriate way to consider a producing lease is to compare it to a small business. Each lease produces revenue from a product that had no real value before it was produced. That production requires labor in the form of pumpers and other maintenance personnel, power to operate the pumps, and other equipment and supplies. Taxes are paid on the production, on the salaries paid to the employees, and on the power, equipment, and supplies. Most of this business activity takes place in the local community. Thus, the abandonment of a lease is equivalent to the loss of a small business to the local community. In 1984, there were 44,600 producing oil leases in Oklahoma; in 1993, that number declined to 33,300. In less than a decade the State has lost more than 11,000 "small businesses" and 2,400 of them in the last year.

While some may argue that the majors were merely disposing of marginally producing properties and continue to control much of the production, some data on that production might prove instructive. In 1984, major oil companies produced 41 million barrels of crude oil in Oklahoma; in 1992, the last year for which complete records are available, their production declined to 22.7 million barrels. By comparison, Oklahoma's crude-oil production in 1984 was 94 million barrels, and 74 million barrels in 1992.

To summarize my second point, Mr. Chairman, the Federal government has given particular attention to the plight of small businesses in this Nation through a variety of programs designed to help them survive, prosper, and grow into big businesses. What about the 31,000 "small businesses" in the form of producing oil leases in Oklahoma?

Finally, to my third point, Mr. Chairman. Recognizing the economic risks associated with importing an ever-increasing share of our energy needs from politically unstable parts of the world, the Federal government established the Strategic Petroleum Reserve (SPR). Some $18 billion was spent on the 587 million barrels of crude oil reported to be in that reserve. At present rates of imports, if those supplies were disrupted, the SPR would be able to meet this Nation's current demand for less than 80 days. By any measure, that is a very poor national "health-care policy." Furthermore, that oil rests quietly in those salt domes contributing nothing to the U.S. economy except for those federal jobs required to maintain the facilities, and the interest on the $18 billion used to purchase that oil continues to add to our growing deficit.

By comparison, there are some 600,000 producing oil wells in the U.S. that generate revenue, pay taxes, and create jobs, and serve as our most effective deterrent to supply disruption. By any measure of comparison, Mr. Chairman, that would have to be described as a "win-win" situation.

In summary, Mr. Chairman, I believe the domestic petroleum industry is critical to the economic survival of this Nation. I know it is critical to the economic survival of Oklahoma. This industry is not now on a level playing field with respect to foreign sources of supply, and faces a real and immediate threat to its survival. Production costs are higher in the U.S. than any other place in the world. Those higher costs are not solely related to lower production rates. Rather, taxes and costs related to regulatory and environmental compliance tilt the playing field substantially in the direction of foreign sources of supply.

Mr. Chairman, we can either continue to debate this issue as we have for the past several years and watch the domestic petroleum industry wither and die, or we can

take the action needed to help this important industry survive as we have other segments of our economy. I would hope that you and your colleagues will choose the latter course for three very selfish reasons-my three grandchildren.

PREPARED STATEMENT OF DAVID MURFIN

My name is David Murfin, I appear today in a dual capacity. First, I will offer comments based on my personal views as a Kansas independent oil and gas producer. Second, I will offer comments in my capacity as Chairman of the LIAISON Committee of Cooperating Oil and Gas Associations.

First a few comments on the state of the industry. Nationally, over one million barrels of oil per day is produced from marginal wells averaging 2.2 BOPD, representing 18% of the US daily production. Many of these wells are uneconomic at todays price. They are an important national resource, and their potential loss should be a national issue. I would like to personally thank Senator Boren and all of the members of Congress who are focussing attention on this issue.

The Kansas oil business is in a state of crisis. Oil production in Kansas is at a 59 year low. Our net price with transportation and quality adjustments averages approximately $3.00/bbl below the New York mercantile price. Currently we receive approximately $11.00/bbl for our crude, or 28¢/gallon, approximately 1/3 the price of bottled drinking water. Approximately 95% of the 45,000 producing oil wells in Kansas, are classified stripper wells, and average only 2.4 BOPD.

In the past 10 years, Kansas oil field employment decreased 57% and the Kansas rig count is down by 78%. Our rig crews have had one 3% raise since they took a 10% wage reduction in 1986. In 1992, new oil reserves found in Kansas were only 8% of current annual Kansas production. If the Kansas oil business was a participant in a prize fight, the fight would have been stopped by now!

A recent Wichita Eagle newspaper story, a portion of which is attached; very clearly portrayed the economics of operating a slightly above average Kansas oil well. The bottom line was a loss of $350.00 per month, per well, on average. These same wells could each be characterized as resident Kansas consumers spending over $13,000 annually on Kansas goods, services, labor, and utilities. This represents over $500,000,000 annually in Kansas consumption. It is estimated that it would take almost 30,000 new jobs to replace the loss of the economic base from marginal wells in Kansas alone. The typical marginal well dollar expended goes approximately 40% to labor, 35% to utilities, and 25% to goods and services.

Our family has been in the oil and gas business in Kansas for almost 70 years. Of the 374 oil and gas wells our company was operating last summer, to date we have shut in 105 wells or 28% of our wells because they are not economic at todays price. We have another 50-100 wells that probably should be shut down but we are continuing to operate to prevent potential damage to the formation, prevent possible loss of leases, or will operate until it is necessary to spend additional money for repairs.

At a recent town hall meeting in Hays, Kansas, called by the Kansas Independent Oil and Gas Association (KIOGA), over 300 people attended. Virtually all were small producers or small business owners working in the oil field. During the question and answer period, it became very clear, there is a crisis. The majority wanted to totally shut-in production to try and get the message to Washington. Many were upset that part of the upside of the business was removed when the windfall profits tax pulled over $50 Billion from the industry. That money would be well spent now to prevent the erosion of the industry.

Also the crowd was confused, because as they were meeting in rural Kansas in distress, President Clinton was in Russia offering substantial support for the Russian Oil Industry. They were curious why they are paying 5¢ per barrel to a reserve for cleaning up tanker spills when their inland production actually reduces the likelihood of tanker spills. They also wanted people to be aware that independents drill the vast majority of the wells in the lower 48 even though they are totally dependent on well head revenue only, to stay in business. They suggested that future purchases for the Strategic Petroleum Reserve should come from marginal wells at a higher market price. Thereby, also protecting the strategic reserves available in the marginal wells.

Back to the purpose of this hearing, from a Kansas perspective, and I believe a national perspective, the preservation of the marginal wells should be the first focus of any relief for the industry and any plan should not be spread so thin as to not achieve that pressing objective. If additional resources are available, incentives for new wells should be

supported. Perhaps one of the best things that could be done in addition to tax credits would be to allow expensing of all costs associated with the drilling of a new well. This would immediately stimulate drilling activity.

Now to further discuss the effectiveness of tax incentives, I'd like to switch hats and make some comments in my capacity as Chairman of the LIAISON Committee of Cooperating Oil and Gas Associations. LIAISON is composed of 25 associations from around the country that represent independent producers and royalty owners. Other than the individual submissions below, the views I will state have not been specifically endorsed by any of the 25 groups active in LIAISON; however, I believe they accurately reflect the sentiment of our industry.

My message is simple -- our biggest problem is one of price. Accordingly, if this Committee wants to know about the effectiveness of tax incentives as a way to address this industry's problems, my answer is that the most effective tax incentives will be those that most readily substitute for cash at the wellhead.

I am not a tax expert. I do not know whether credits are the most effective mechanism. Some people say that there may be so many limitations on the use of the credits that removing restrictions in depletion rules might be a better answer. One limitation that I am concerned about is the need for credits to be fully chargeable against Alternative Minimum Tax (A.M.T.) (which I believe a majority of small independents pay). Without this, I am afraid that the credits would least help the people who need the relief the most.

Others point to the undeniable success of the Section 29 credit in stimulating drilling. (In Michigan, for example, this credit was largely responsible for the drilling of 4000 wells that added 2 Trillion Cubic Feet of reserves). I do not know what the best answer is, but I do know that in the low price environment that faces us today, tax incentives must substitute for cash at the wellhead as much as possible.

I would like to conclude by submitting several documents for the record on behalf of individual associations that belong to the LIAISON Committee.

On behalf of the American Association of Petroleum Landmen (AAPL), I am submitting an opinion piece by Mr. James Bovard that was published in the Wall Street Journal of April 7, 1993. This piece described an IRS campaign to force businesses, especially those with less than $3 million in assets, to reclassify many independent contractors as employees. This effort has serious tax consequences for small businesses and most oil and gas producers would consider a solution to this problem to be a form of tax incentive.

On behalf of the California Independent Petroleum Association (CIPA), I am submitting a position statement, dated March 9, 1994, that advocates using regional average prices, rather than a single national price, for purposes of administering the phase-out of the marginal production tax credit proposed by Senator Boren and others. CIPA is separately submitting an additional statement, dated February 28, 1994, calling for extending the Section 43 Enhanced Oil Recovery Credit to existing EOR projects. I am unable to provide it to you as part of my own submission without exceeding the page limit.

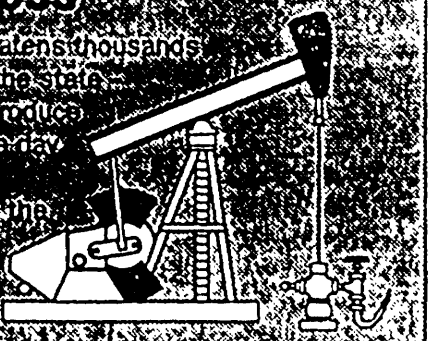
On behalf of the Independent Petroleum Association of Mountain States (IPAMS), I am submitting a document entitled the "IPAMS Domestic Energy Policy Statement." It was adopted by that organization's Executive Committee on February 4, 1994.

On behalf of the Kansas Independent Oil and Gas Association (KIOGA), I am submitting a copy of a resolution adopted by the Interstate Oil and Gas Compact Commission (IOGCC) in December, 1993. The Resolution is entitled - Resolution Pertaining to a Current National Crisis in Crude Oil Production and Price Stability. KIOGA believes the resolution adopted by the IOGCC is a good summary of appropriate solutions to the current crisis. The IOGCC is a non partisan commission consisting of the governors and representatives from 35 states.

I encourage you to review these submissions in detail, but I would note that most have one thing in common -- a concern that low oil prices are threatening the ability of this industry to contribute to national security. I believe this underscores the point I made earlier that the most effective tax incentives will be those that substitute for cash at the wellhead.

Pumping at a loss

The collapse in oil prices threatens thousands of marginal wells throughout the state, particularly those wells that produce less than three barrels of oil a day or those that produce large quantities of water. Below are the revenues and expenses for a well in Ness County that produces 2.7 barrels of oil and about 21 barrels of water a day. Costs will vary throughout the state and from well to well, but these figures are representative of a marginal well in Kansas.



Per-barrel revenue

Oil price	$12.50
Deduction for "western" Kansas crude	-.25
Deduction for low gravity (33.6 degrees)	-.96
12.5 percent royalty	-1.41
5.47 percent override for geologist	-.62
Total	$9.26

Monthly Revenues

(2.7 barrels a day at $9.26 a barrel)	$760.06

Monthly Expenses

Pumper wages and car allowance	$152.50
Electricity	135.55
Well servicing	160.03
Supplies and repairs	110.37
Chemicals	79.57
Salt water disposal	30.08
Administration/miscellaneous	366.73
Taxes	44.15 (a)
Total	-$1,098.98
Monthly loss	**($348.92)**

(a) Based on 1993 property taxes of $529.77

Source: Pickrell Drilling Co.

The Wichita Eagle

THE WALL STREET JOURNAL WEDNESDAY, APRIL 7, 1993

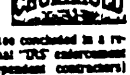
The IRS vs. the Self-Employed

By James Bovard

The Internal Revenue Service is carrying out a sweeping campaign to slash the number of Americans permitted to be self-employed – and to punish the companies that contract with them. The IRS's attack has devastated thousands of small businesses and is undermining high-tech industries, the health-care industry, and even freedom of religion. IRS officials indicate that more than half the nation's self-employed should no longer be allowed to work for themselves.

The controversy originates in arcane federal regulations on the proper classification of workers. If a person is an employee, the employer must withhold all of that person's payroll taxes and remit them to the IRS, pay half of the employee's Social Security taxes and all of the unemployment insurance tax. But if an individual is an independent contractor, a business need only file a Form 1099 with the IRS reporting how much it paid that person, and the contractor pays his taxes directly to the IRS.

The IRS has long sought to forcibly reduce the number of self-employed Americans and maximize the number subject to tax withholding. The IRS enforcement campaign is targeting businesses with less than $3 million in assets – in most cases, businesses without in-house counsel that cannot afford a lengthy court fight. The House Government Operations Committee concluded in a report in November that "IRS' enforcement activities [on independent contractors] present small business taxpayers with a veritable nightmare of problems and pitfalls that defy common sense."



Master and Servant

The IRS bases its classification decisions primarily on a list of 20 questions on the relationship between the employer and the contractor/employee. These questions are derived from common law precedents dating to the Middle Ages. An assistant U.S. Treasury secretary admitted in 1981 that the common law employment test was "developed centuries before the income tax to determine the rules of the doctrine that the master is liable for the torts of his servant." A 1991 Treasury Department report conceded that "the common law tests . . . lack precision and predictability" and in many cases do not "yield clear, consistent, or satisfactory answers."

Once an IRS agent announces that a company has misclassified its employees (as happens in nine audits), the company often faces a staggering tax bill – largely because the IRS intentionally forces businesses to double-pay taxes already paid by independent contractors. The House Government Operations Committee noted: "The assessments are based on the use of preset mandatory formulas which even the IRS admits result in double tax collections. These back tax assessments have been responsible for putting a number of those businesses out of business." IRS agents have assessed more than $360 million in penalties and back taxes since 1988 (averaging $65,000 per company) and forced businesses to reclassify over 400,000 independent contractors as employees. (The IRS is now "converting" almost 2,000 independent contractors into employees each week.)

These businesses, in most cases, have not broken any clear law or manifested any intent to dodge taxes. Harvey Eisman, counsel for the National Association of Computer Consultant Businesses, observed: "I have had grown men and women – 40 or 50 years old – cry on the phone to me, telling me that their marriage is threatened, they are seeking counseling, all because the business that they built up in the last 15 years of their lives – the house and other things they've earned from the fruits of their labor – is all threatened by this IRS employment classification audit. They ask me, 'What did I do wrong? Why am I being persecuted?' "

Many IRS officials threaten harsh penalties to coerce businesses to sign agreements promising not to use independent contractors in return for a reduction or waiver of the taxes and penalties. Such perpetual cease-and-desist orders may be appropriate when the government is dealing with wife-beaters or child molesters, but they are bizarre when it is seeking a pretext to permanently control the day-to-day operations of small businesses.

One industry that is especially hurt by the IRS crackdown is health care. Mark Cannada, president of the Private Care Association, an association of health-care agencies, accused the IRS of following a "search and destroy posture with respect to businesses that use independent contractors." Comprehensive Care Corp. was hit in 1991 with an IRS demand for $329.4 million in back taxes and penalties for treating psychologists and physicians as independent contractors.

John Bailey, a psychologist at the Family Therapy Center of Madison, Wis., complained to a congressional committee last August that his clinic "has come under attack. . . . The IRS methods have been too subjective, applied with ferocity and arbitrariness, and have caused untold grief for us and other well-meaning small businesses." Mr. Bailey reported that the IRS "attack has threatened the very survival" of several Wisconsin clinics.

The IRS tried to penalize several Pennsylvania corporations for paying dentists as independent contractors instead of employees. But the Pennsylvania Dental Board had warned the corporations that it would be illegal under state law for the corporations to hire dentists as employees, since the corporations themselves were not licensed to practice dentistry. A federal judge threw out the IRS's case in 1991.

The IRS enforcement campaign is targeting businesses with less than $3 million in assets—in most cases, businesses that cannot afford a lengthy court fight.

The IRS is launching a high-profile assault on the use of independent contractors in Hollywood. The IRS began a similar crackdown on the Minnesota film industry last year. One Minnesota film producer complained to a local magazine that IRS agents "want me to classify a lighting tech who works for two hours and who I never see again as a part-time [employee]. That's absurd."

In some regions, IRS officials have ordained that all United Methodist ministers must be reclassified as employees. The Rev. Robert McKibben of Alabama informed the House Ways and Means Committee that he was told by an IRS examiner that "all ministers" are "Treasury employees." Mr. McKibben informed the IRS agent of a U.S. Tax Court decision upholding the self-employment status of United Methodist ministers, but the IRS official said he was not bound by the ruling.

Mr. McKibben observed that the systematic misclassification of ministers "results in . . . the IRS dictating to the church the type of relationship they must have." Craig Hankins, counsel for the church, estimated that more than 1,000 Methodist clergymen have faced IRS audits over their employment status. (The IRS has not yet attempted to impose penalties on God for not withholding taxes from the ministers' pay.)

High-tech industries have probably been hit hardest by the IRS's crackdown. In 1978, Congress enacted a provision to prevent the IRS from penalizing companies that had a "reasonable basis" for classifying people as independent contractors. But in the 1986 tax act, Sen. Daniel Patrick Moynihan (D., N.Y.) slipped in an amendment – Section 1706 – that revealed the "reasonable basis" protection for engineers, computer programmers and other technical service professionals.

A 1987 Data Processing Managers Association survey found that 14% of firms decreased their contracts made directly with independent technical service consultants as a result of Section 1706. Rep. Major Owens (D., N.Y.) said last year that "many African-American computer programmers and analysts have had the door to self-employment slammed in their faces because of Section 1706."

IRS agents are often heavy-handed in how they carry out employment tax audits. IRS officials have encouraged private companies to secretly betray their competitors. At a 1990 meeting in Baltimore, an IRS agent distributed "snitch sheets" to business people and asked them to make allegations of illegal independent contractor use by other companies. The IRS agent told attendees to mail the completed snitch sheets to him in unmarked plain envelopes and promised to follow up all leads.

Tax Dodging

The IRS estimates that 3.4 million Americans now working as independent contractors should be reclassified as employees. The Small Business Administration says that there are roughly five million independent contractors. Thus, more than half of all the independent contractors in the U.S. could be forced to find a boss.

The IRS justifies its crackdown because some of the self-employed dodge taxes. But the Treasury Department concluded in a 1991 report on technical service workers: "Misclassification of employees as independent contractors increases tax revenues . . . and tends to offset the revenue loss from undercompliance by such individuals, because direct compensation to independent contractors is subsidized for tax-favored employee fringe benefits."

The IRS apparently believes that payroll tax withholding is more important than Americans' freedom of contract. Being self-employed and starting one's own business have long been part of the American Dream. But the IRS has apparently decided that it can no longer afford to permit others to pursue their dreams.

Mr. Bovard, an independent contractor, writes frequently on public policy.

March 9, 1994

CIPA Comments on
Marginal Production Credit

The members of the California Independent Petroleum Association (CIPA) strongly advocate a regional average price calculation to determine the proper phase-out of the proposed marginal production tax credit. It should be obvious that by using an average U.S. wellhead price, higher priced crudes benefit at the expense of lower priced crudes. A more equitable determination for the phase-out should be sought, without increasing the administrative burden. We therefore propose that the average wellhead price by Petroleum Administration Defense District or PADD be utilized. This requires a determination of only five regional average wellhead prices for U.S. production. While such a system is still not perfect, it should be simple to administer and will achieve a more equitable treatment for all U.S. marginal production.

Without the implementation of a more equitable method, California's heavy oil producers could be fully phased-out of the credit before the wellhead price for heavy crude oil even reaches the $14/bbl target of where the phase-out is to begin. Such potential inequity in the treatment of high-cost, low-priced heavy crude oil seems to defeat the intent of the credit.

As background information, the posted price on California heavy crude is currently $8.50/bbl and the avarage price differential between California heavy and WTI crudes has been in excess of $7.00/bbl since the Gulf war. With such low crude prices, California is at risk of losing over 650,000 barrels per day of heavy oil production or approximately 10% of total U.S. production. The ongoing viable production of heavy crude oil is very questionable at such depressed crude prices. Thus, CIPA certainly supports the proposed marginal production tax credit, but also strongly believes a more equitable approach with regard to the credit phase-out is in order.

Please contact me at (805)769-8811 or Fax (805)769-8960 if you have questions or wish to discuss further.

Respectfully,

Ralph S. Goehring
Chairman, California Independent Petroleum Association
Economic Policy and Taxation Committee

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"Producing for California"

IPAMS
Independent Petroleum Association of Mountain States
280 Denver Club Building 518 17th Street Denver, Colorado 80202-4167 303-623-0987 FAX 303-893-0709

IPAMS DOMESTIC ENERGY POLICY STATEMENT

The Domestic Oil Industry is in a CRISIS because it is unable to compete with low crude oil prices set by OPEC and other exporting nations. The independent producer in this country will be put out of business if these artificially low prices continue for any extended period of time. As Senator Boren stated, "Cheap oil today means dependence on very expensive foreign oil tomorrow."

Most of the 453,000 stripper wells producing an average of 2.3 barrels of oil per day are uneconomical at today's price of $12 to $14 per barrel at the wellhead. Many of these wells have been shut-in and will be plugged and abandoned before the end of this year if prices remain at current levels.

The Clinton Energy Initiative fails to address the PRICE the producer receives at the wellhead. The energy policy of this country has been, and continues to be, subsidizing foreign countries through financial aid, including the use of our military to protect and enforce the delivery of cheap foreign oil. No comprehensive energy policy has ever been developed in this country to insure the continued well-being of an industry vital from both economic and security standpoints.

IPAMS is an organization of 700 independent producers representing thirteen producing states in the Rocky Mountain region. On February 4, 1994, the IPAMS Executive Committee approved an energy plan for this country that will stabilize the price and allow our domestic industry to fairly compete with other exporting countries:

The IPAMS Energy Plan

- a floor price of $20 per barrel WTI to provide the stability necessary for long-term capital commitments
- an import, or variable rate import, fee on imported oil to offset the difference in the cost of production of domestic crude versus foreign crude
- a limit on total imports to 50 percent of total consumption for national security reasons
- a requirement that all tankers delivering foreign oil to U. S. ports be registered and operated as U. S. flagships for environmental reasons
- continued emphasis on the effect low crude oil prices have on employment and the subsequent loss of income to the federal government and oil producing states
- the ability to deduct geological and geophysical costs
- the elimination of percentage depletion limitation against net income
- a production tax credit against AMT applicable to all drilling costs

* *2/4/94 adopted by IPAMS Executive Committee*

INTERSTATE OIL AND GAS COMPACT COMMISSION
900 Northeast 23rd Street ■ P.O. Box 53127 ■ Oklahoma City, Oklahoma 73152-3127 ■ Phone: 405/525-3556 ■ Fax: 405/525-3592

RESOLUTION
Pertaining to a Current National Crisis in Crude Oil Production and Price Stability

Whereas, the 29 member and 6 associate member states of the Interstate Oil and Gas Compact Commission have the responsibility of providing crude oil for this country's energy needs while preventing waste and protecting correlative rights; and

Whereas, the national security of the United States of America is threatened by the ever-increasing reliance on imported offshore crude oil and the sharp decline in domestic production within the producing states; and

Whereas, the United State's annual energy import bill is about $55 billion and projected to be over $100 billion by the year 2000, creating a huge negative balance of trade; and

Whereas, conservation of America's finite oil resources is dependent on our oil producers receiving a fair price; and

Whereas, along with the current national crisis relating to crude oil production throughout the United States, as a result of current devastating crude oil price decrease, the infrastructure consisting of drilling rigs, equipment, and jobs relating directly to the industry is quickly disappearing and is no longer readily available; and

Whereas, the employment in the U. S. oil and gas exploration and production industry has decreased fifty percent over the past half dozen years, from 700,000 to 350,000 today; and

Whereas, increasing regulation by the federal and individual state governments is contributing to this national crisis in crude oil production by mandating implementation of new and expanded regulations and shifting the cost of these regulations to domestic operators; and

Whereas, failure by national, state and congressional political leadership to take corrective action to stimulate crude oil production and insure price stability with tax incentives, minimum price guarantees, or other appropriate means has, is, and will continue to allow the domestic oil producing industry to collapse to the point where the industry will no longer be a viable national industry able to contribute to the well-being of its citizens; and

Whereas, any program designed to conserve and maximize the production of domestic oil reserves must be in the national interest and not simply a transfer of wealth from one area of the country to another;

Now, Therefore; be it Resolved that, the Interstate Oil and Gas Compact Commission, convened at its annual meeting in Santa Fe, New Mexico, December 7, 1993, recognizes the seriousness of the current national crisis in domestic crude oil production in the United States of America and recommends that the following action be taken immediately to preserve this important segment of the economy:

1) Urge the 35 member states and the federal government to take immediate action to relieve domestic crude oil producers of excessive and regressive taxes and regulations, the result of which will encourage domestic production; and

2) Urge the President of the United States and the U. S. Congress to take immediate action to enact energy tax initiatives, credits and deductions that will reward and stimulate private investment in increased exploration, drilling and production of domestic crude oil, including but not limited to:

    a) Full deductibility for federal income tax purposes of actual exploration, drilling and completion costs; and

    b) Income tax credit for all crude oil produced from new field discovery wells, and enhanced recovery projects.

3) Urge the President of the United States and the U. S. Department of Energy to focus national attention on this precipitous decline in domestic crude oil production and price; and

4) Urge the U. S. Congress to use restraint in instituting new regulatory initiatives that restrict and penalize and which charge the cost thereof to the domestic oil produced; and

5) Urge the U. S. Congress and the President of the United States, in the strongest possible terms to adopt without delay one or more of the following measures to stimulate new, domestic exploration, drilling, and production, and to prevent premature abandonment of many thousands of existing stripper oil wells, and the irretrievable loss of reserves otherwise recoverable from those wells as follows:

a) A federal import tariff or a federal transportation tax on all non-North American crude oil and refined products imported into the United States of a sufficient size to insure that producers receive the minimum fair price required to ensure optimum conservation while protecting the interests of the consuming public. Such import tariff or tax should only be activated when the price of non-North American crude oil drops below the minimum fair price and the tariff or tax would only reflect the price differential between domestic and non-North American crude. All proceeds of this tariff should be used exclusively for reduction of the federal deficit; and

b) A federal tax credit or transferable voucher payable to producers of domestic crude oil of sufficient size to ensure that domestic producers receive an amount equal to the differential between imported and domestic crude oil to ensure the greatest benefit to the energy consumer.

And be it Further Resolved, that a copy of this resolution be sent to the President of the United States; and the Vice President; the Secretary of the U. S. Department of Energy; all members of the U. S. Congress; and the Governors of the states participating in the Interstate Oil and Gas Compact Commission.

CIPA Position on Expansion of Section 43
Enhanced Oil Recovery Credit

The California Independent Petroleum Association (CIPA) members are extremely concerned that a significant portion of the domestic oil industry may not survive the current price crash. Currently, in California, heavy oil producers are receiving a dismal $8.50/bbl. Thousands of wells have been shut-in and thousands of employee jobs are at risk. While price is obviously the number one problem, the second continuing problem is that of cost recovery. In addressing the inadequate cost recovery situation, CIPA recommends the following expansion of Section 43 - Enhanced Oil Recovery Tax Credits.

CIPA applauds this tax credit designed to stimulate investment in new or significantly expanded EOR projects, however, to maximize the effectiveness of the credit, it must be expanded to existing EOR projects.

While CIPA remains in favor of other programs to allow for cost recovery, i.e., percentage depletion for all marginal production, etc., this paper focuses only on the EOR tax credit mechanism.

Most, if not all, EOR production is being threatened by this extremely low price. The EOR credit if properly expanded can be a valuable weapon to assist in maintaining marginal production in the United States. The estimated cost of the credit in California for our existing EOR production would be approximately $55,000,000 annually. By including existing production as eligible for the EOR credit, the producer will receive the credit on ongoing operating costs and a minor part of facilities work. Remember, the producer has already drilled and equipped the wells and installed steam lines, steam generators, etc., thus, the only real cost of existing production is the tertiary injectant (i.e., steam) costs. Estimated cost is as follows:

Total steam-injected production	500,000 bpd
Times bbl's steam injected per bbl oil produced (est. avg.)	2.5
Bbl's of steam injected	1,250,000 bpd
Average cost per bbl of steam	$1.20
Total cost of steam injection	$ 1,500,000
Times credit percentage (net)	10%
Daily net credit	$ 150,000
	x 365
Estimated annual net credit	$54,750,000

CIPA believes that the EOR credit should remain as such and that secondary recovery costs, if incorporated into Section 43, should receive a lesser credit than the established EOR costs. Again, to maximize production of marginal producing wells, the EOR credit should be expanded to existing production and increased (CIPA recommends to 30%) and secondary recovery added, but as secondary recovery to IRC Section 43. It is not appropriate to mix long-standing industry definitions such as EOR and secondary recovery. We also believe that produced water disposal costs should also be included in any expansion of the credit since this cost is increasing rapidly.

It is absolutely imperative that the IRC Section 43 credit can be 100% creditable against the Alternative Minimum Tax (AMT), otherwise the credit is of very limited use since it does not translate into cash flow in the year of activity.

Please contact me at (805)769-8811 or Fax (805)769-8960 if you have questions or wish to discuss further.

Respectfully,

Ralph J. Goehring

PREPARED STATEMENT OF JAMES E. NUGENT, MARY SCOTT NABERS, AND BARRY WILLIAMSON

We come before you today more concerned than ever before about the health of the oil and gas industry and the energy resources that will be available for this nation in the 21st century. The demise of our domestic oil and gas industry has tremendous economic and national security ramifications.

In Texas, oil and gas production pumps over a billion dollars annually into state tax revenues. Billions more flow into the state economy as the industry finds and produces this nation's energy resources. Since Texas produces 25 percent of America's energy supply, what happens within our borders has broad national implications.

We are in a global competition for oil and gas investment money. Unfortunately, we are losing that competition for a myriad of reasons—among them: depressed oil and gas prices, and higher regulatory and environmental compliance costs. Increasingly, we witness the departure of major integrated energy industries as they race overseas to secure a share of the new, open, global investment climate. These companies take with them their brightest and best employees, research and exploration dollars and considerable technical expertise, leaving behind custodians to watch our oilfields pump their way slowly into extinction.

This is an alarming trend. We at the Commission recognize that Texas must compete on an international level for oil and gas investment money. To do that, we have attempted to develop a healthy energy investment climate in Texas by offering to industry tax incentive packages that benefit not only the industry, but the state as well.

ENHANCING OIL RECOVERY IN TEXAS

Texas' first tax incentive plan was approved in 1989 to address enhanced oil recovery. The legislation provided for a 50 percent severance tax exemption on all oil produced from *new* secondary and tertiary recovery projects. The tax break lasts for 10 years and companies must actually produce additional oil from the new projects before a tax exemption is granted. In 1991, additional legislation was passed to extend a 50 percent tax break to incremental production from expansion of existing enhanced recovery projects. Both programs result in increased production from old fields that might otherwise not be recovered. Again, operators must prove they are actually recovering additional oil before the tax exemption kicks in.

Naysayers said Texas would lose more in severance tax revenue than it would ever bring in through added production. They were wrong. This past year we went to the legislature and got the law renewed for four more years. When legislators saw the numbers, they were happy to do it. To date, 743 enhanced oil recovery projects have been approved, which we expect will produce over 945 million additional barrels of oil. Wellhead value of that additional oil should exceed $14 billion (at $15 per barrel). The total positive economic impact back to the state is estimated at $41 billion.

Consider that the strategic petroleum reserve now contains some 600 million barrels of oil, purchased by the taxpayer at an average of $32 per barrel. Our incentive is adding a recoverable quantity of oil 50 percent larger than the entire strategic petroleum reserve at virtually no cost to Texas taxpayers.

BRINGING ABANDONED WELLS BACK ON LINE IN TEXAS

We also focused on the 80,000 inactive wells in Texas. Our research showed that the longer a well is inactive, the smaller the chance it will ever return to production. In 1992, only 368 wells were brought back to life after being inactive for at least three years. Given the proper economic climate, we felt many of these 80,000 wells could provide important production and a small profit to operators. We were successful in working with the legislature to craft a tax incentive. Now, any operator bringing back into production a well that has been inactive for at least three years, receives a 10-year, total exemption from state severance taxes for all oil or gas produced. We even went so far as to identify all the eligible wells by computer and sent a letter to operators encouraging them to take advantage of the incentive program. Some 57,800 letters went out last November.

The legislation took effect September 1 1993. Operators must apply to the Commission and bring their wells back into production before August 31, 1995. The program has been an unqualified success. During the first six months of the incentive, 1,063 of the targeted wells have been returned to production—over three times the number for all of 1992. True, we lost some potential severance tax revenue. But the rejuvenated wells are expected to produce more than $126 million of oil and gas val-

ued at the wellhead. By the time that value ripples through the state's economy, the total economic value will exceed $366 million. Sales tax revenue alone on that value is estimated at $7.3 million. The environmental benefits on inactive wells likely to cause pollution and plugging problems in the future should also be factored into the economic equation.

ENCONRAGING NEW DRILLING IN TEXAS

As effective as these incentive programs have been, we realize that we had still done nothing to reverse the decline in discoveries of new oil and gas fields in Texas. There were 1,552 new field discoveries in Texas in 1984. By 1992, that number had dropped to 421. This year, we launched a one-year program to turn the trend around by offering tax credits based on certain levels of new discoveries.

If 521 qualifying discoveries are made in 1994, the operator of each well will receive a $10,000 tax credit applied to the production from *any* of the operator's wells. If 721 discoveries are made during the year, each of the discoverers will receive a total of $25,000 in tax credits. If new discoveries reach 842 statewide, operators receive the $25,000 severance tax credit plus an additional $25,000 tax credit for each well drilled and produced in that field for the 10 years following the spudding of the original discovery well.

This incentive program has no down side for state revenue, only positive revenue gains as the number of discoveries increases. No tax revenues are lost until the discovery total reaches 521. At that point the state would lose $5 .2 million in tax credits. However, the net tax revenue flowing from the fields' oil and gas production would be up almost $40 million, which in turn would have created $1.5 billion in additional wealth. We conservatively estimate that each new field discovery represents an average economic stimulus of $15 million over time.

PRODUCING HIGH COST GAS IN TEXAS

We have also expanded the incentive umbrella to cover natural gas produced from certain reservoirs which require costly withdrawal of high volumes of water. Such co-production projects have been cost-prohibitive, leaving valuable gas reserves languishing in the ground. With the incentive, high-cost gas produced from a well spudded before September 1, 1996 will be exempt from severance taxes until August 31, 2001. Oil produced from co-production projects will be eligible to receive the same reduced tax rate as enhanced recovery projects for 10 years.

PROMOTING ALTERNATIVE FUELS IN TEXAS

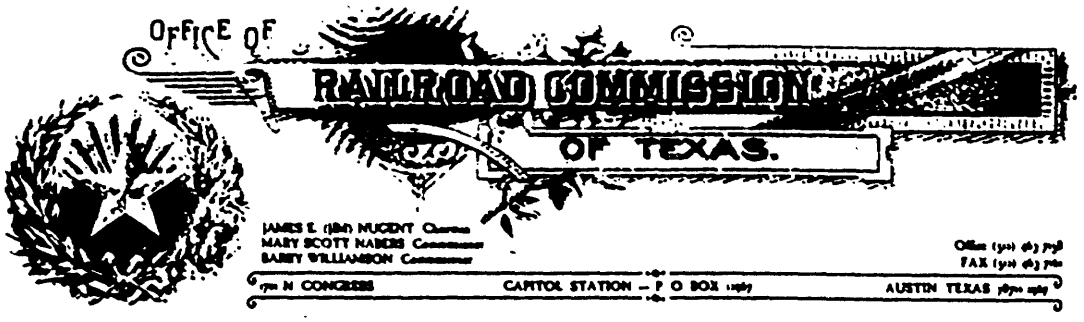
Finally, we felt an incentive was needed to address the economic and environmental benefits to be derived from Texas' abundant natural gas reserves. Our Texas legislature has mandated conversion of designated state and municipal vehicles to burn alternative fuels and has created an Alternative Fuels Council, composed of the three Railroad Commissioners and other state agency heads, to consolidate, promote, and coordinate state alternative fuels policy. We will oversee efforts to help state agencies come into compliance with alternative fuels regulations, and we will provide one-stop shopping for businesses seeking conversion information.

Approximately $5.5 million in Oil Overcharge funds will be appropriated to the Council and up to $50 million in revenue bonds will be issued by the Texas Public Finance Authority for distribution to school districts, state agencies, counties, cities, mass transit authorities, and some private businesses. The funds are designed to cover the costs of installing refueling systems, modifying engines, and purchasing new vehicles that run on alternative fuels.

Texans now have incentives to make the switch to cleaner-burning fuels, which in turn helps open new markets and improves demand for Texas natural gas and derivatives such as propane.

We appreciate the opportunity to participate in this hearing and describe some of the initiatives that are working well in Texas. Will drilling and production incentives and market-stimulation programs work at the national level? We firmly believe they will. We will be happy to provide you additional details on any and all of these ,programs that are bringing positive benefits to both the industry and the taxpayers of Texas.

Attachment.



April 6, 1994

The Honorable David L. Boren
United States Senate
SR-453
Russell Senate Office Building
Washington, DC 20510-3601

Dear Senator Boren,

Attached please find the details of the Texas oil and gas incentive package that we outlined for your committee on March 14. We have addressed the two major questions asked by committee members: Have the Texas incentives increased revenue for the state? How can the Texas tax incentive concept be applied at the federal level?

Tax incentives have proven to be a powerful stimulus in Texas, encouraging the discovery of new fields with their additional oil and gas reserves, the addition of millions of barrels of reserves through enhanced recovery, and the return to production of hundreds of wells facing extinction. A similar incentive package at the federal level, designed to work in concert with state incentives, would compound the benefits to the industry while improving national and state economies. We look forward to working with you in this endeavor.

Please let us know if there is any other information we can provide.

Sincerely,

James E. (Jim) Nugent, Chairman

Mary Scott Nabers, Commissioner

Barry Williamson, Commissioner

THE TEXAS INCENTIVE PACKAGE
Railroad Commission of Texas

Texas has over 7,000 companies with active oil wells. Some 3,300 of these companies (47%) produce less than one barrel a day from each well. Each of these companies makes less than $40,000 a year from all the oil produced from all their wells. These small producers are vital to Texas. Of the state's 184,000 producing oil wells, over 130,000 produce less than 10 barrels of oil a day.

I. Economic Calculations and Definition of Terms.

A. All examples in this package assume a price of $15 per barrel of oil and $2 per thousand cubic feet (Mcf) of natural gas.

B. **Wellhead value** equals the volume of oil or gas produced by a well times the value of the commodity. Thus, an oil well producing 10 barrels a day would produce $150 per day in wellhead value.

C. **Severance taxes** are collected on wellhead value. In Texas, severance taxes are 4.6% of the wellhead value of oil and 7.5% of the value of gas. For an oil well producing 10 barrels a day, the severance tax on its production would be $6.90 a day, or $.69 a barrel. NOTE: Operators pay roughly $2-3 per barrel of Texas oil and $.30 per Mcf of gas to the federal government in income taxes.

D. **Economic value** of oil and gas is calculated by applying an economic multiplier of 2.91 to the wellhead value. Economists at the Texas Comptroller's office have developed this multiplier to calculate the impact of oil and gas production on the state's economy. Our sample 10 barrel-per-day well would provide economic value of $436.50 a day, or $159,322 a year.

E. **Sales tax** revenue accrues to the state from the economic value of oil and gas produced. The amount of tax can be roughly estimated by multiplying the wellhead value of production by 2%. Our example oil well that generates $6.90 in severance tax daily also creates economic value that generates $8.73 in sales tax each day, or $3,186 annually. Sales tax collections on the economic value created should exceed severance tax collections no matter what the price of oil or natural gas.

F. **Ad valorem** local property taxes are also levied on Texas oil and gas production. To estimate the net revenue from a well, we multiply the wellhead value by .667. The ad valorem tax generally is 8 to 10% of the net well revenue. Our example well would pay $8 a day in ad valorem taxes, or $2,920 annually.

II. Incentive for Enhanced Oil Recovery.

A. **Description.** The first Texas incentive legislation, approved in 1989, provided a 10-year, 50% severance tax exemption for all oil produced from new secondary and tertiary recovery projects. To encourage rapid development, new projects had to be approved by December 31, 1993. Before the tax break is granted, an operator must prove the rate of production under a new EOR project exceeds that which could have been expected without the project. In 1991, the legislature expanded the incentive to include a 50% severance tax break for incremental production from old projects that were enhanced or modified to produce additional oil. As before, the increased production rate must be proven.

B. **Results.** To date, 743 projects have been approved which are expected to produce over 945 million additional barrels of oil over their lifetimes.

C. **Tax and revenue implications.** Although we cannot say exactly how many projects would have been undertaken without this incentive, we can say that:

1. Savings to industry from the tax reduction will be $322 million over the lifetime of the projects.

2. Texas will collect a matching $322 million in severance taxes, much of which might not otherwise have been collected without the incentive.

3. Approximate sales tax collections from the economic value of the additional oil will be $820 million. Ad valorem taxes at the local level will increase by $736 million.

D. **Application at the federal level.** Federal tax incentives for secondary and tertiary recovery projects are already in place. However, definitions in the tax code should be broadened to include the advanced geological and geophysical recovery technology being used by industry today. Since each level of recovery gets progressively more expensive, increasing the depletion allowance from one level of recovery to the next would serve as a federal tax incentive for new projects.

III. Incentive for Inactive Wells.

A. **Description.** This Railroad Commission incentive targets the 80,000 inactive wells in Texas. Computer analysis shows the longer a well is inactive, the greater the probability it will never produce again. In 1992, only 368 of the 80,000 wells were brought back into production after more than three years of inactivity. Under the incentive, operators are offered a 100% severance tax exemption for 10 years on production from wells that have been inactive for more than three years. Wells must be certified between September 1, 1993 and August 31, 1995. This two-year certification period prevents operators from deliberately shutting-in wells to qualify for the incentive.

B. **Results.** The results of this incentive program have been spectacular. In just the first six months, 1,464 wells have been reactivated - almost quadruple the pre-incentive number for all of 1992. Going beyond the economic benefits discussed below, every well we return to production means one less well that might cause pollution and plugging problems.

C. **Tax and revenue implications.** Table 1 shows the overall economic benefits from the first six months of this incentive program. Although the state forgoes $2.3 million in net severance tax revenue, the net sales tax gain of $7.2 million more than compensates because the economic value of the additional production results in taxable purchases. Further, local taxing entities receive a net ad valorem tax gain of $6.6 million and the state benefits from a net economic gain of $359.4 million.

There's an important lesson to be learned from this and other tax incentives. In the past, legislators may not have looked beyond the front-end severance tax loss and may have killed the incentive. Today, however, the Texas legislature recognizes that the $359.4 million in economic benefits to be gained from the wells in this program is more important to the state's economy as a whole. Legislators also recognize that the net gain in sales tax collections on the wealth created more than compensates for the severance tax loss. Besides, most of these wells would have remained inactive without the incentive, generating no tax revenue at any level.

Table 1

TEXAS INCENTIVE FOR INACTIVES		
	1992 (Before Tax Incentive)	1993-1994 (First 6 Months of Incentive)
Wells Returning to Production		
Oil	286	1,114
Gas	82	350
Total	368	1,464
Total Annual Wellhead Value for		
Oil Wells	$23,717,408	$92,381,792
Gas Wells	$16,781,751	$71,629,425
Total Value	$40,499,159	$164,011,217
Severance Tax Collected	$2,483,345	$185,110
	Net Severance Tax Loss	$2.3 Million
	Net Wellhead Gain	$123.5 Million
Total Annual Economic Value for		
Oil Wells	$69,017,657	$268,831,015
Gas Wells	$48,834,895	$208,441,627
Total Economic Value	$117,852,552	$477,272,642
Sales Tax Collected	$2,357,051	$9,545,453
Ad Valorem Tax Collected	$2,161,035	$8,751,638
	Net Sales Tax Gain	$7.2 Million
	Net Ad Valorem Tax Gain	$6.6 Million
	Net Economic Gain	$359.4 Million
Total Annual Production/Well (Assumed same for 1992 & 1993-94)		
	Oil	Casinghead
Oil Wells	11.6 BBL/DAY	26.6 MCF/DAY
	Gas	Condensate
Gas Wells	264.6 MCF/DAY	2.1 BBLS/DAY

(revised 3/25/94)

D. **Application at the federal level.** Projecting Texas figures to the national level, there may be as may as 300,000 inactive wells across the country. Probably very few of them will return to production without an incentive. Therefore, the potential federal revenue loss from a tax incentive would be small. On the positive side, removing federal taxes on production from currently inactive wells would be a tremendous incentive. The estimated federal relief would be $2 a barrel, almost triple the successful Texas incentive of about $.69 a barrel.

Table 2 shows potential response to such a federal incentive. Some 17,568 wells would return to production. Oil from these wells would generate a net economic gain of $5.3 billion and a net indirect tax gain of $525 million. Remember, the potential income tax loss will be limited to the tax collections from the small population of pre-incentive inactive wells that would have returned to production on their own.

Table 2

SAMPLE FEDERAL INCENTIVE FOR INACTIVES		
	Pre-Incentive (based on 1992 Texas data)	**With Incentive** (based on Texas' 1st 6 months)
Wells Returning to Production		
Oil	1,144	4,456
Gas	328	1,400
Total	1,472	5,856
Direct Income Tax for		
1,472 base wells	**Net Direct Tax Loss**	$23 Million
Total Annual Wellhead Value for		
Oil Wells	$94,869,632	$369,527,168
Gas Wells	$67,127,004	$286,517,700
Total Value	$161,996,636	$656,044,868
	Net Wellhead Gain	$494 Million
Total Annual Economic Value for		
Oil Wells	$276,070,628	$1,075,324,060
Gas Wells	$195,339,580	$833,766,508
Total Economic Value	$471,410,208	$1,909,090,568
	Net Economic Gain	$1.4 Billion
Indirect Income Tax		
	Net Indirect Tax Gain	$175 Million

We recognize that federal budget constraints may cause legislators to focus on the small tax revenue reduction and discount the larger revenue increase from the greater indirect income tax base created by the incentive. Therefore, we offer the following alternative incentive program. While not as powerful, it does ensure the federal government would not lose money.

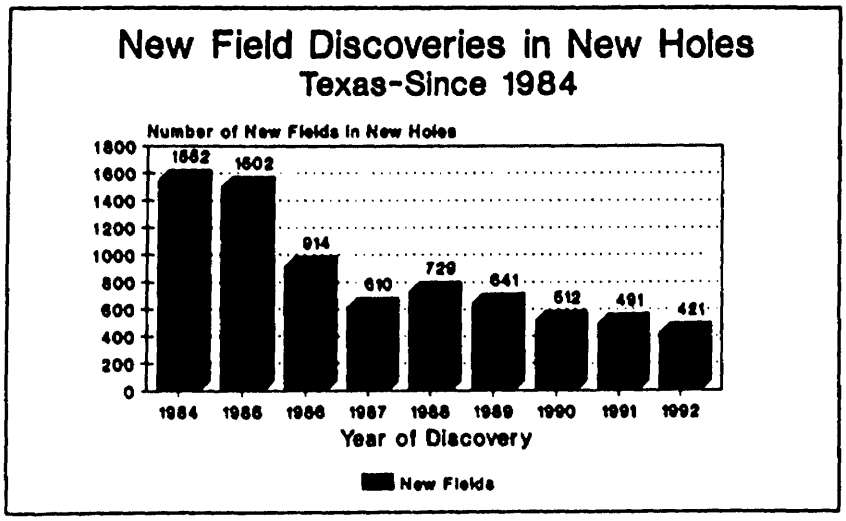
This program sets a threshold level of returning inactive wells. No producers would receive a tax break until the threshold is reached. The approach insures a net revenue gain to the treasury while still providing an incentive. Here's how it would work. Assume that 1,250 of the 300,000 inactive wells would come back on their own without any incentive program. Set the tax incentive at a threshold level of double that amount - 2,500 wells. When that level is reached, federal taxes on the oil production would be cut 45%. Because the tax base has increased 50%, there is a net increase in federal revenue of 5%. Other thresholds could be structured so that additional wells increase the benefit. At 5,000 wells returned to production, the net revenue from the production might be 98% exempt from tax; or, the wells might be given a 98% depletion allowance for 10 years.

Again, the first threshold is set sufficiently high to ensure federal tax revenue will not be lost. Additional thresholds encourage more production, more economic gain, and more indirect tax gain.

IV. Incentive for New Field Discoveries.

A. **Background.** Chart 1 shows the decline in new field discoveries in Texas since 1984. Chart 2 shows the economic effect of the sustained decline. Note that the drop from 1,552 to 421 new field discoveries represents an economic loss of almost $17 billion for the year 1992 alone. The total Texas economic loss over the last eight years is almost $99 billion.

Chart 1



PREPARED STATEMENT OF WILLIAM H. WHITE

Mr. Chairman and members of the committee. I am Bill White, Deputy Secretary of the Department of Energy. I am pleased to appear before you to discuss the present state of the domestic natural gas and oil industry. The U.S. oil and gas industry is a mature industry. Because of this and because the U.S. places a high priority on environmental protection, the cost of producing and refining domestic oil is high when compared to the cost of producing and refining oil for many foreign sources. We in the Administration recognize the strategic importance of the industry to the country and the necessity of a strong, viable domestic industry now and for the future. I am here this morning to discuss with you why we think this industry is important and to provide you with our perspective on the state of the domestic gas and oil industry.

I. THE GAS AND OIL INDUSTRY IS STRATEGICALLY IMPORTANT TO THE NATION

Energy is the life blood of the nation. The availability of energy at reasonable cost is critical to the economic activity of the country. Despite our efforts to move energy supply in a different direction in the future, natural gas and oil will remain critical components of energy supply in our nation, and in every nation, for the foreseeable future. In 1990, U.S. consumers spent about $500 billion on energy (8% of gross domestic product-GDP) with over $300 billion spent on natural gas and oil-5.5 percent of GDP.

The domestic industry remains an important source of capital formation, technological development, and employment in the American economy. In 1990, the industry invested $21 billion in infrastructure. And the industry's reliance upon advanced technology, in which American firms traditionally have led the world, has been the driving force behind numerous innovations. In fact, modern natural gas and oil production represents the quintessential "high tech" industry.

The continued deployment and development of this high technology can ameliorate the natural decline in domestic production through enhanced recovery in existing fields and increasing the ability to find new sources. This can also create high-wage jobs in domestic companies marketing the new technologies to our trading partners abroad. Viewed on a global scale the increased productivity of the U.S. natural gas and oil industry can create jobs for Americans. The natural gas and oil industry, including the associated service industries, accounts for nearly 380,000 American jobs. Though this number represents a relatively small fraction of the total U.S. work force, these jobs pay wages 30 percent above those of the average U.S. worker. These are the types of high-skill, high-value jobs this Nation needs.

The importance of energy to the Nation, the importance of gas and oil in the energy mix, the development of cutting edge technology, and the creation of high-skill high-value jobs, make the gas and oil industry very important to our country. With this background, I would like to turn to the state of the industry today and why we are concerned about the health of this strategically important industry.

II. IMPORTANCE OF NEW GAS WELL COMPLETIONS

This Administration has stressed many times the importance of increasing our utilization of natural gas. Inasmuch as we will remain reliant upon fossil fuels for the foreseeable future, there are two attributes of natural gas that make it a valuable fuel. It is abundant domestically and it is more environmentally benign than other fossil fuels.

Natural gas is abundant within our country and in neighboring countries. The National Petroleum Council completed an analysis in 1992 that showed total resources of 1295 trillion cubic feet (Tcf) (Table 1). These resources could provide gas at our present rate of consumption well into the 21st century (68 years). Other estimates from the Potential Gas Committee, the Gas Research Institute, and the DOE all fall within the same range (909 to 1208 Tcf). Moreover, our North American Free Trade Agreement partners, Canada and Mexico, also have large supplies of natural gas that are readily available at economic prices. Canada alone has a resource base of at least 232 Tcf. With such large domestic and other North American supplies readily available, we can reduce the growth in imports of oil from unstable sources.

The use of natural gas is also less environmentally harmful than use of other fossil fuels. Natural gas is a cornerstone of the Administration's Climate Change Action Plan. As one of the measures to achieve the Plan's goal of returning greenhouse gas emissions by 2000 to 1990 levels we will be displacing use of other fossil fuels with natural gas.

Table 1.—DOMESTIC NATURAL GAS RESOURCE ESTIMATE

Proved Reserves:	160 Tcf
Conventional Resources:	
Reserve Growth:	203
New Fields:	413
Unconventional Resources	
Tight Gas Sands:	349
Coalbed Methane:	98
Shales:	57
Other:	15
Total Assessed Resource:	1135
Total Resources:	1295 Tcf

Source: National Petroleum Council, *The Potential for Natural Gas in the United States.*

With these attributes so readily apparent, natural gas utilization has increased in the last 6 years by 17% and is expected to continue to increase into the foreseeable future. We are targeting the utilization of natural gas to reach 24 trillion cubic feet (Tcf) by the year 2010. This is a substantial increase over present consumption of 18 Tcf. While we are taking steps to encourage natural gas use in the transportation, residential, commercial, and industrial sectors, a major portion of the 6 Tcf increase is expected to be in gas use for electric power generation. A principal impediment to increasing utility market penetration by natural gas is the concern of utilities about reliable distribution of supply.

In order to allay this concern and reach this target, it is important that our nation's resources become reserves in those areas that are suitable for development. Reserve increases will come only if we increase drilling both onshore and offshore. In recent years, our production of oil and gas has outstripped our reserve replacement. This is a concern because it means that production cannot be maintained unless reserve to production rations are reversed and begin to increase again. We must increase reserve replacement through drilling and enhanced recovery, so that we can maintain and increase production, while continuing to protect the environment.

Reserve replacement will occur only if we increase our domestic drilling activity. There is a need to increase the number of seismic crews, increase the number of drilling permits issued, number of rigs operating, and enhanced recovery activity.

The primary motivator for increased drilling activity is price. As natural gas prices rebounded from their lows two years ago, we have seen drilling activity increase. Natural gas well completions increased by 3% over the last two years and output per well has also been increasing, a positive reflection of the improved economic environment we are operating in.

Since price is set by the market, the best opportunity to improve the economics associated with increased activity is by lowering costs. There are a variety of ways to lower costs, including increased use of advanced technology, relief from state and federal taxes and other payments (royalties), and lowering operating costs through regulatory relief. Over the past several years a number of assistance mechanisms including tax benefits in the Omnibus Budget Reconciliation Acts of 1989 and 1990, the Energy Policy Act of 1992, and reduced royalty rates have been extended to the domestic industry.

Reserves will also be replaced if we provide access to those areas where the greatest resource potential exists such as the Central and Western Gulf of Mexico. With advanced technologies and careful production practices, our stewardship obligations for these resources can be consistent with production. However, we need to create appropriate incentives to ensure that drilling does take place, even in the present economic environment. More importantly we must move towards our goals of meeting future natural gas and oil needs with the support of the American public.

III. THE ROLE OF MARGINAL OIL WELLS

Even as we move forward to develop our enormous natural gas resources, we must not let our existing oil production base languish or disappear. Keeping our present oil production is crucial to maintaining a healthy and viable industry. A substantial portion of our domestic oil industry is made up of marginal wells. It is important to understand the role of marginal wells in our domestic industry.

Most marginal wells are stripper wells, those producing 10 barrels per day or less. The tax code defines marginal wells as 15 barrels per day or less; however, most statistics are available for 10 barrels a day or less and we will focus on that definition of marginal wells. The average stripper well produces only 2.23 barrels per day.

In 1992, we had about 453,000 stripper wells in the country, producing about 368,000,000 barrels of oil or about 14% of 1992 domestic production. (Total production comes from about 594,000 wells.) The stripper well production was valued at over $6.5 billion and had a total impact on the economy of about $10 billion. Stripper production is responsible for over $646 million in earnings within the gas and oil industry and over $1.3 billion in earnings overall. Approximately 2 7,000 jobs in the gas and oil industry are directly dependent on stripper wells, along with another 33,000 jobs outside of the gas and oil industry, totalling about 60,000 jobs. Stripper wells are located in 28 states, with the largest numbers in Texas, Oklahoma, Kansas, Illinois, Ohio, and California: The largest stripper well production comes from Texas, Oklahoma, Kansas, California, Illinois, and New Mexico. As the price of crude oil has fallen, stripper well and other marginal well operators have been facing immense challenges in covering their costs. The National Petroleum Council has been asked to complete a study this summer on the costs and benefits of tax incentives for maintaining production from marginal and stripper wells.

Stripper wells are an important source of state revenue, since in 1992 these wells paid over $261 million in state severance taxes. Moreover, these wells also pay state property taxes, and it has been estimated that state property taxes are in the same range as state severance taxes. Thus, the total state revenue impact in 1992 was over $500 million.

While stripper well abandonments are an integral part of the exploration and production cycle, stripper well abandonments have been escalating. In 1992, we lost over 16,000 wells, or about 3 percent of all the wells producing in the U.S. The total value of oil production lost due to abandonments was about $273 million. The lost severance tax revenue from stripper well abandonments in 1992 was about $10 million. Since 1986, the year that oil prices dropped significantly, we have lost over 122,000 wells, an average of almost 17,500 wells abandoned each year.

Production from stripper wells is declining. We are producing less today from stripper wells than any time in the last 20 years and the average produced from each well is lower than any time in the last 20 years. This trend is likely to accelerate. We can expect more wells to be plugged and abandoned as the economics associated with marginal production deteriorate. We can expect production from marginal wells to decrease even faster. Once these wells are abandoned, it is usually prohibitively costly to activate them again. Most likely they remain abandoned and America has lost a valuable resource.

An equally disturbing trend is the number of idle wells in the country. Our latest data indicate that in 1992 there were about 215,000 idle wells in the U.S. Idle wells can provide access to potentially substantial volumes of oil and gas left in a reservoir through application of conventional or enhanced recovery methods, as well as provide later access to reservoirs with resources unrecoverable at current prices or with existing technologies. They can provide an important future source of revenues to states and the federal government. Finally, there is serious concern about the potential liabilities associated with idle wells, particularly any liability that may be incurred for well plugging and abandonment.

In addition to the economic benefits associated with marginal wells that we already have indicated, these wells are the key to low-cost enhanced oil recovery. A significant portion of our estimated enhanced oil recovery potential presupposes that existing wells will be available for later use in advanced recovery processes. But with lower oil prices and declining rates of production due to the maturity of the lower-48 States resource base, the wells that currently provide access to the remaining resource base are being abandoned. For environmental and economic reasons, when a well is abandoned, all economically salvageable equipment is removed, cement plugs are placed in the well, and the land is restored as close to its natural state as possible. These well abandonments reduce the economic viability of future advanced recovery projects that could use these wells as points of reservoir access for testing, fluid injection, and production. A DOE report recently found that wells that allowed access to 30 percent of the discovered resource base in the nine largest oil producing states already had been abandoned. This number of wells could rise to over 75 percent by 2005.

IV. PRODUCTION FROM FEDERAL LANDS

Production of oil and gas from Federal lands is an important component of the domestic resource. The offshore component is important since over 25 percent of nat-

ural gas production and about 13 percent of oil production come from the Federal OCS. Onshore production from federal lands accounts for another 3-4 percent. Furthermore, from a reserve perspective, the federal offshore has about 17 percent of proved gas reserves and 11 percent of our proved oil reserves.

We need to maintain access to Federal lands where development can occur in an environmentally-sound manner. We have begun efforts to bring all stakeholders to the table to ensure that these activities do not get in front of the public will.

Appropriate financial terms to explore and develop high-cost areas, such as the deep water Gulf of Mexico, should be considered if we are to have this important resource available for future domestic needs. Any proposal must strike a balance between providing an appropriate incentive for industry and ensuring the public receives a fair return for the development of its resources. We understand and support the objectives of Senator Johnston's bill, *S. 318* proposing Outer Continental Shelf Deep Water Royalty Relief. DOE and the Department of the Interior have worked with and will continue to work with the Senate Energy Committee in an effort to ensure that S. 318 accomplishes its purposes of encouraging economic development which would otherwise not have occurred. We expect to reach an agreement with Interior by early April.

V. COST OF OIL IMPORTS TO OUR ECONOMY

The Nation is increasingly dependent upon imported oil. Department of Energy data indicate that in 1993, 44% of our domestic consumption came from imports. Projections show that imports will continue to increase, reaching 60% in 2010, assuming crude oil prices are $28 per barrel: Of course, a continuation of current low prices would mean greater increases in imports. We recognize that to the extent that these sources of supply are secure the U.S. economy is strengthened by reliance on low cost oil. Low energy prices contribute to a low inflation rate, which increases real disposable income available to consumers. It also provides lower business costs which translate to more investment spending. However, for the last 20 years, the cost of imported oil has amounted to more than 60 percent of our trade deficit. Between 1980 and 1992, the U.S. paid $742 billion (1987 dollars) to other countries to purchase imported crude oil and petroleum products. In comparison, over the same period Americans paid $498 billion for imported automobiles.

Our dependence upon imported oil has made us vulnerable to supply disruptions. Our experience with oil disruptions in the 1970s led us to build the Strategic Petroleum Reserve (SPR) so that we would have a secure stock of oil to use in the event of future disruptions. Building and maintaining the SPR has been costly. Since the inception of the SPR program, we have spent about $21 billion. If we were to replace these facilities in today's dollars, it would cost us about $24 billion. The yearly operating and carrying costs of the SPR amount to about $1 billion per year. The American public has paid for this security through general taxes and general revenues. As part of the Domestic Natural Gas and Oil Initiative an interagency group will assess the near- and long-term economic, environmental, and security implications of rising U.S. dependence on oil imports and the role of the Federal Government in addressing the situation.

VI. THE DOMESTIC REFINING INDUSTRY

The domestic refining industry is undergoing a major transition as it adjusts to the costs associated with new environmental regulations. To the extent that this transition results in a more environmentally benign industry, it is beneficial. As of January 1, 1993, there were 187 U.S. refineries with 15.1 million barrels per day of refining capacity. As recently as 1990 the number of refineries was 205. The Clean Air Act Amendments of 1990 require controlling a variety of air emissions, as well as a new slate of products to meet future ambient air quality standards. While the industry has already met requirements for oxygenated-gasoline and low-sulfur diesel fuel, additional requirements will have further major impact upon the domestic refining industry.

In 1993, the National Petroleum Council completed a study analyzing the economic impact of these new environmental regulations. Through the remainder of this decade, the NPC estimated that the domestic industry will have to spend more than $37 billion on capital improvements to meet new environmental regulations. This investment exceeds the current book value of the domestic refining industry now estimated to be $31 billion. By the year 2000, it is estimated that these new requirements would cost an average of 10 cents per gallon, or $4.20 per barrel. The costs imposed upon the domestic industry are even higher if operating and maintenance costs of $46 billion are considered, bringing total costs to about $152 billion by 2010.

Moreover, the NPC concluded that foreign refiners do not have the same cost structure based upon existing health, safety, and environmental costs. To the extent that foreign governments raise their environmental and safety regulations to a level comparable to those of the U.S., and as foreign refiners expand capacity to meet increased demand, costs to foreign refiners may be comparable to those of the domestic refining industry. Of course, if foreign governments do not raise environmental and safety requirements, costs to foreign refiners will not rise as much and domestic refiners will be at a competitive disadvantage.

Under EIA demand projections net imports of refined product imports increase from 450,000 barrels per day in 1992 to 3.9 million in 2010. Other projections, based on less optimistic demand assumptions, project that near term (through the year 2000) imports will decline, and then accelerate through the year 2000.

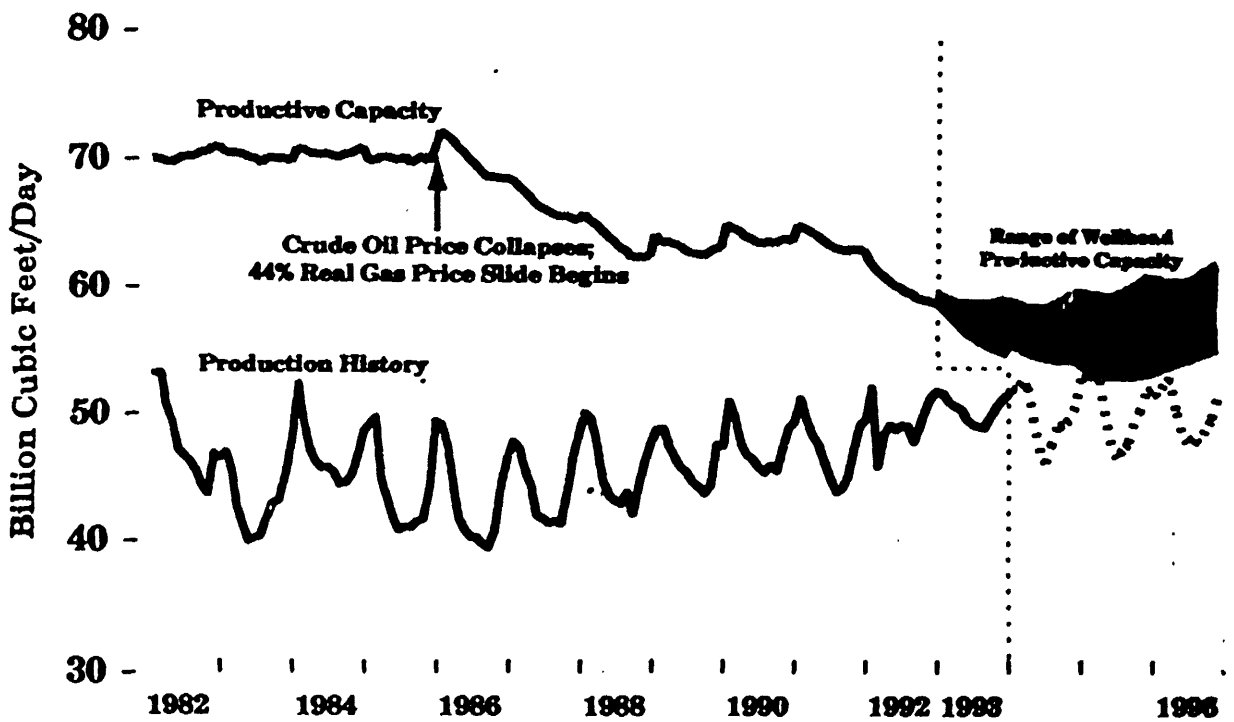
There is also an important environmental component to our increasing dependence upon imported oil. We enacted the Oil Pollution Act of 1990 with the goal of safeguarding our coastal waters from oil spills. Congress and the environmental community recognized the dangers associated with tanker traffic into and through our waters. As we increase our imports, we increase our tanker traffic, and we increase the possibility of another major oil spill. Of course, this risk must be weighed with the risk of environmental damage caused by domestic production and transportation activities.

VII. CONCLUSION

The state of the domestic gas and oil industry is not rosy in the current oil price environment. While there are bright spots, especially with the natural gas segment, the overall industry is troubled due to the low oil prices we are now experiencing. While we recognize the economic benefits associated with low oil prices, we also recognize that a continuation of these low prices will spell trouble for the domestic oil industry. The large companies will further increase their overseas investments at the expense of domestic investment. But the smaller companies do not necessarily have the financial wherewithal to engage in overseas activities.

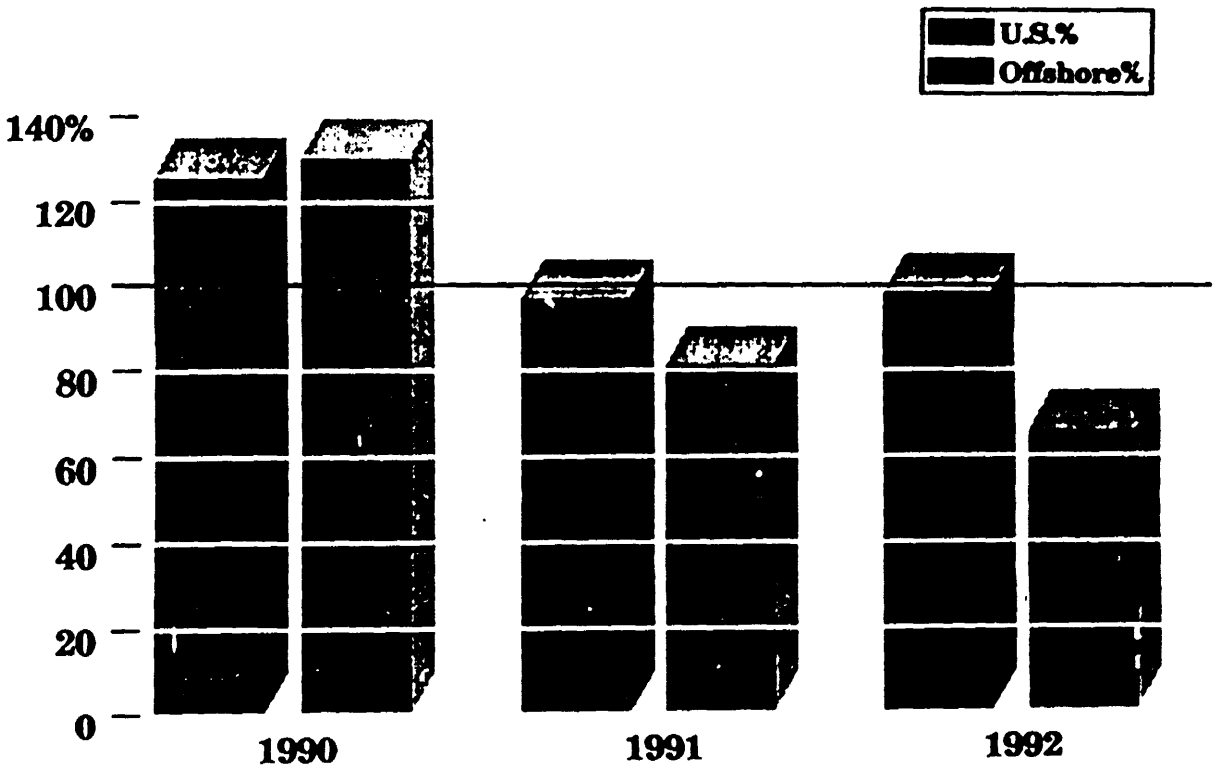
The oil and gas industry is too important to our nation to let it founder. It means contributions to our GDP, to jobs, to technological leadership, to environmental security. We pledge our cooperation in working with you and other members of Congress to seek out acceptable solutions for the both the short-term and long-term health of the oil and gas industry.

U.S. Dry Gas Production Rate and Productive Capacity

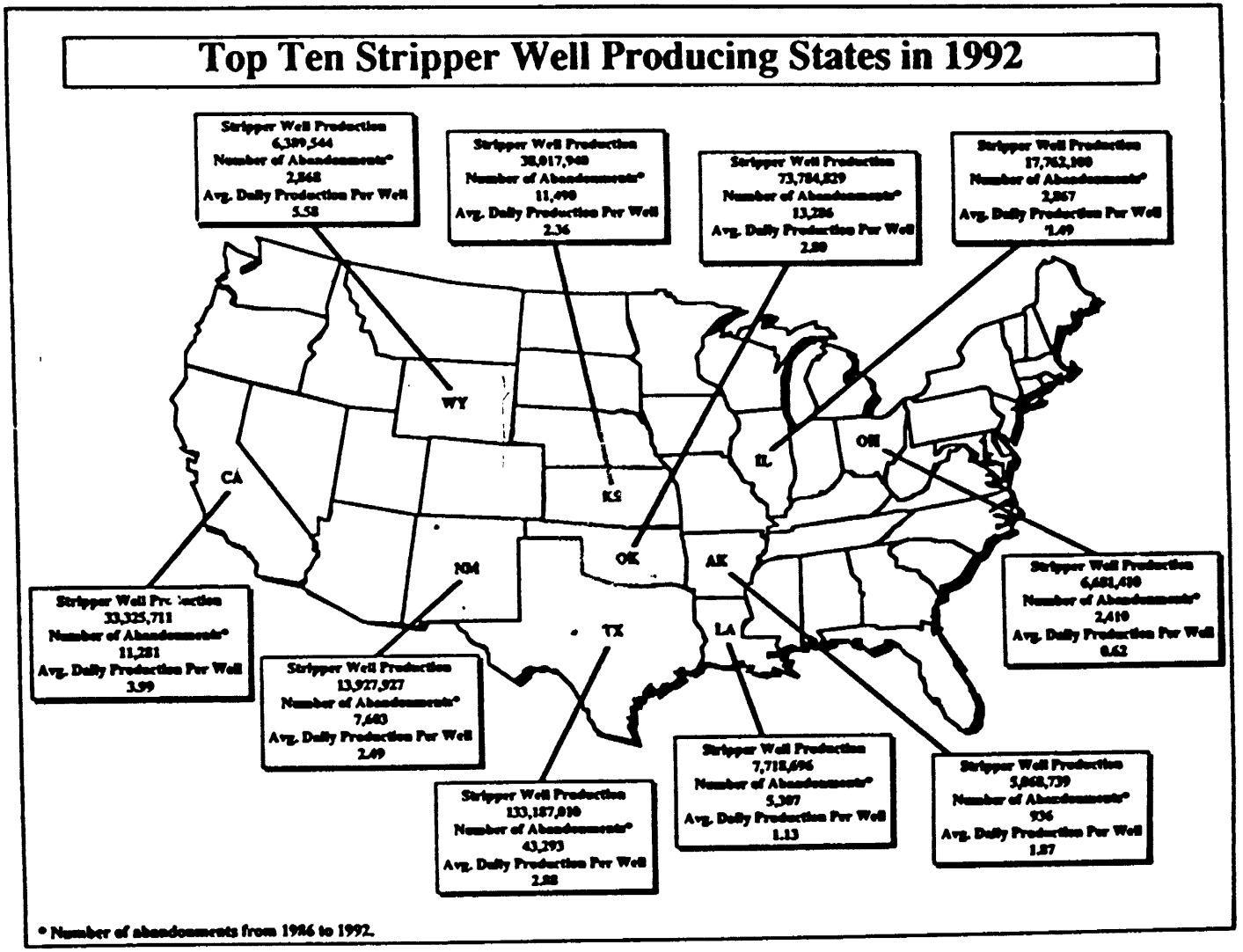


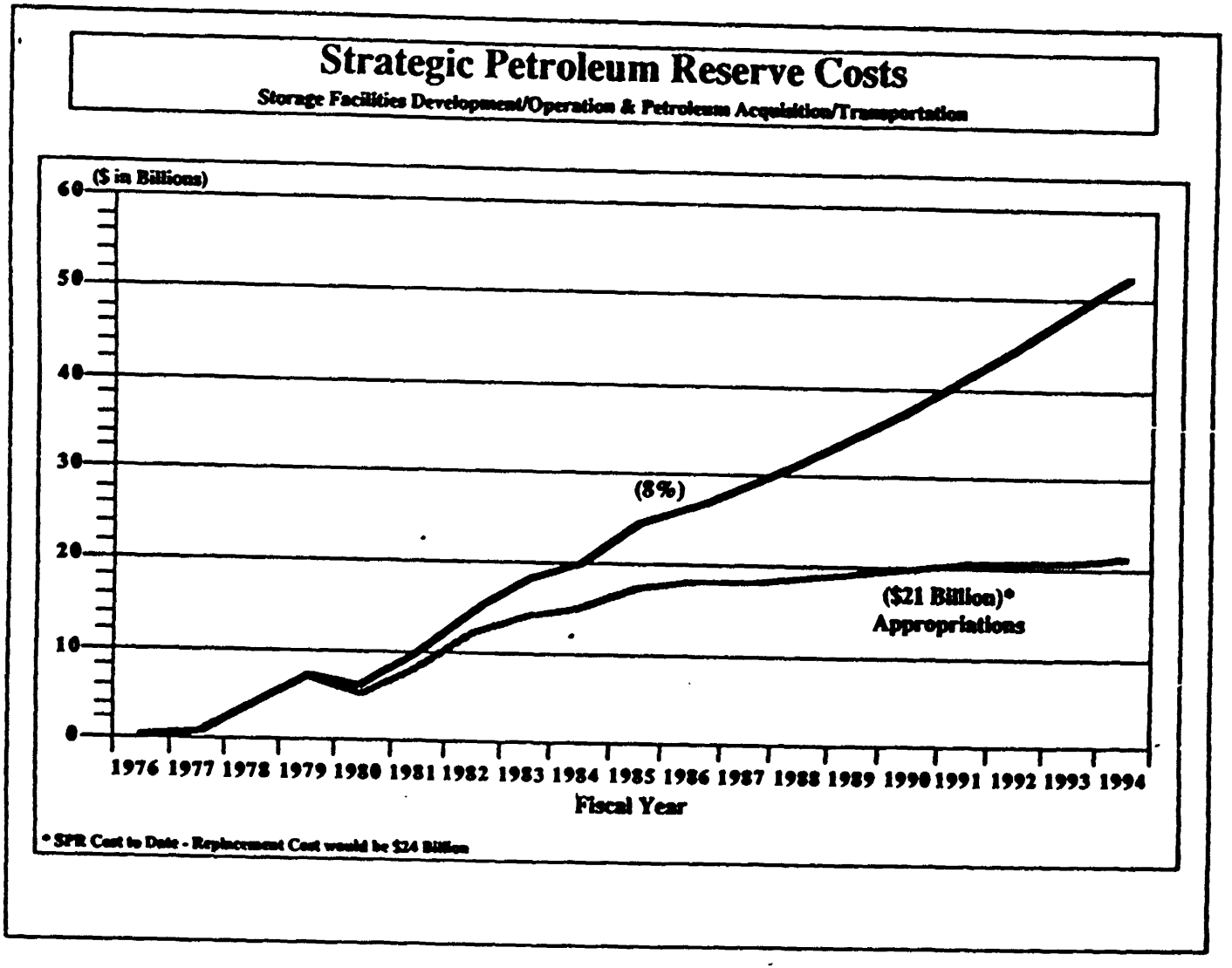
Source: Energy Information Administration

Natural Gas Reserves Replacement

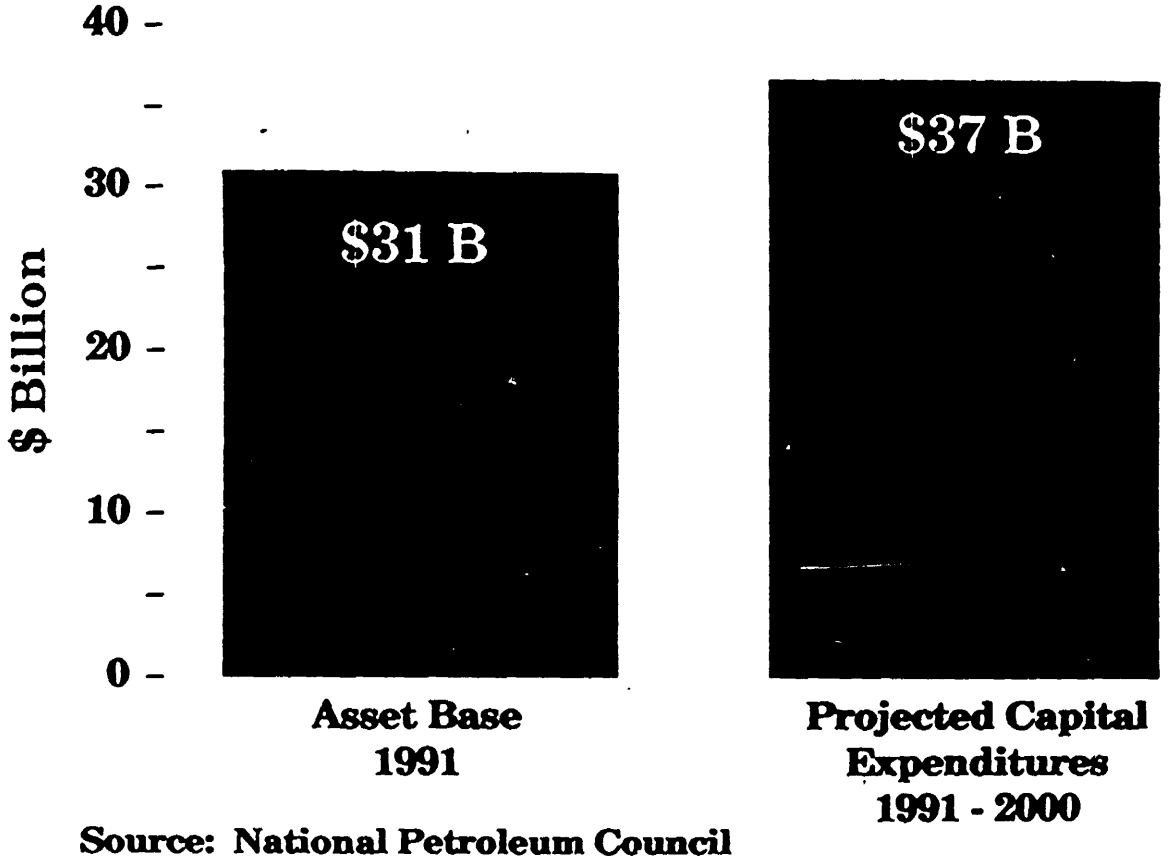


Source: Energy Information Administration


Top Ten Stripper Well Producing States in 1992
Stripper Well Production
6,389,544
Number of Abandonments*
2,868
Avg. Daily Production Per Well
5.58
Stripper Well Production
38,017,948
Number of Abandonments*
11,490
Avg. Daily Production Per Well
2.36
Stripper Well Production
73,784,829
Number of Abandonments*
13,286
Avg. Daily Production Per Well
2.80
Stripper Well Production
17,762,100
Number of Abandonments*
2,867
Avg. Daily Production Per Well
1.69
WY
CA
KS
NM
OK
AK
IL
OH
TX
LA
Stripper Well Production
33,325,711
Number of Abandonments*
11,281
Avg. Daily Production Per Well
3.99
Stripper Well Production
13,927,927
Number of Abandonments*
7,683
Avg. Daily Production Per Well
2.49
Stripper Well Production
133,187,890
Number of Abandonments*
43,293
Avg. Daily Production Per Well
2.88
Stripper Well Production
7,718,696
Number of Abandonments*
5,307
Avg. Daily Production Per Well
1.13
Stripper Well Production
5,868,739
Number of Abandonments*
936
Avg. Daily Production Per Well
1.87
Stripper Well Production
6,681,490
Number of Abandonments*
2,410
Avg. Daily Production Per Well
0.62
* Number of abandonments from 1986 to 1992.


Strategic Petroleum Reserve Costs
Storage Facilities Development/Operation & Petroleum Acquisition/Transportation
($ in Billions)
60
50
40
30
20
10
0
(8%)
($21 Billion)*
Appropriations
1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994
Fiscal Year
* SPR Cost to Date - Replacement Cost would be $24 Billion

U.S. Refinery Asset Base 1991 and Projected Capital Expenditures, 1991 - 2000



Source: National Petroleum Council

COMMUNICATIONS

STATEMENT OF EVAN BAYH, GOVERNOR OF INDIANA

I am pleased to present comments to the Senate Finance Committee and appreciate an opportunity to discuss reasons that Federal incentives for marginal oil production will benefit state economies. I am presenting these comments not only as the Governor of Indiana, but as a representative of the twenty-nine states which make up the Interstate Oil and Gas Compact Commission (IOGCC). The fact that there are 29 oil and gas producing states in the Compact gives you a true scope of oil production in this country. It is not only a lucky handful of states that have oil resources, it is an important small business to many states.

SMALL BUSINESSES

The focus of the report I will be submitting for your review primarily addresses the life blood of these small businesses. Marginal oil wells are those producing less than 10 barrels of oil each day and the oil has to be coaxed to the surface—it does not come in any dramatic gushes suitable for an episode of "Dallas." The operators of these wells are similar to family farmers. In some states, the marginal wells were once much larger producers. However, as production dwindled, the major oil companies sold these small wells to independent producers. In some states, such as Indiana where oil was first produced in 1886, the marginal wells may have been marginal for generations.

To many people, this analogy of oil producers to farmers may seem foreign. However, a typical company in Indiana is a family oriented business with strong ties to the community. The owner drives a pick-up truck, not a Cadillac, and is a geologist or engineer who is more likely to be working at the well site than to be behind a desk. When he or she is behind the desk, you will find them hunched over a computer analyzing well performance and cost control.

There is a well owner in Indiana who got his start in the business like many others. He started with a large oil company as a geologist in the mid 1970's. When that company decided to sell their Indiana wells, he was given the opportunity to buy the wells and experience the independence and satisfaction of owning his own business. In addition to being president of his company of 15 employees, he is also the geologist, engineer, field supervisor, and occasionally well tender. He not only cares about his business, but he also understands the need to protect the environment. When asked about his company's maintenance standards for wells he replied, "I give my employees one clear rule, the wellhead equipment must be maintained so that no oil touches the ground." This progressive, professional small businessman is the type of well owner Indiana wishes to encourage to stay in business.

Indiana is the home of a unique niche in the petroleum business which illustrates the linkage between farmers and oil producers.

In southwest Indiana, the largest buyer of Illinois Basin crude oil is the Farm Bureau Oil Company, part of the well known farmer's co-op (now Countrymark Cooperative Inc.). Farm Bureau refines crude oil to make primarily specialty fuels for the agricultural market. In Indiana, crude oil is produced from marginal wells, refined by Farm Bureau, and used by farmers to raise crops next to the wells from which it was produced. In fact, oil produced from those marginal wells is used to make agricultural fuel for farmers throughout the midwest.

ECONOMIC VALUE

There are powerful incentives for keeping these wells working. The IOGCC economic study titled "Marginal Oil: Fuel for Economic Growth" demonstrates that for each $1 million of marginal oil produced, nine jobs are generated. The study establishes that for every dollar of production, an additional 51 cents of economic activity

is created in a state. These may not be the flashy figures of the Mercedes Benz plant that many states were competing for last year, but they are the solid figures of small business. A key difference between these figures and those wishful ones generated by attracting some big industrial plant, is that these small businesses already exist in states. The analysis in the IOGCC report is of the economic benefit realized by keeping them in operation. The results are identical to those for the big industrial plant—jobs and revenue.

Taken singularly, the production from these marginal wells may seem unimportant. However, every marginal well which remains in operation has a direct, positive impact on the economy of Indiana, as well as the economy of the nation. Nationally, marginal wells account for 60,000 jobs and an economic impact of $9.9 billion, or $18 million in production each day. A bit closer to home, Indiana finds marginal oil operations directly responsible for more than 3000 jobs. Unfortunately, Indiana has lost over 2000 jobs since 1985. Marginal wells produce 3,015,891 barrels of oil annually in Indiana, or 98 percent of all oil produced in my state. We have nearly 6000 operating marginal wells in Indiana, according to the most recent IOGCC report.

MARGINAL WELLS

The nation's marginal oil wells represent the ultimate in conservation. The United States is the only country in the world which produces its marginal wells on a significant basis. We are the only country in the world where the oil business is a small business—as well as a big business. The IOGCC study documents that the nation's 453,000 marginal wells contributed about 14 percent of total domestic production. The average well produced 2.23 barrels of oil per day.

Marginal production has dropped steadily from the 1984 high of 463 million barrels to 368 million barrels in 1992. Over that same period, an average of more than 16,000 wells a year—or nearly 44 wells per day—were abandoned, according to the IOGCC National Stripper Well Survey which has been published each year by the states since 1943.

Marginal wells are being abandoned annually at increasing rates. When they are plugged, the production they represent is lost forever. The industry uses the word "plugged" to' mean "sealed permanently." This isn't like plugging a cork in a bottle that you can easily open when you want another drink. These permanent seals are done under the supervision of oil and gas agencies in every' state and protect the environment from any accidental future migration of oil. The only way to recover the oil left at the bottom of that well bore once it is plugged is to drill another well. No one would think of incurring such an expense for a reward of less than ten barrels of oil a day.

Reversing this trend by bringing some of the 215,000 idled wells in the U.S. back to life represents a multi-billion dollar tool for economic development. The IOGCC, in cooperation with U.S. Department of Energy, produced a national study of idle wells in 1992. I am submitting this study to the Senate Finance Committee as part of my testimony. These idle wells are the ones not yet permanently sealed; they are simply not operating. States have differing regulatory standards for the length of time a well may be idle before it must be plugged.

THE FUTURE

The factors which have forced many of these small wells to be idled or sealed are still at work—low world oil price and high operating costs. Controlling world oil price is unfortunately not in the hands of this committee, but incentives which might mitigate the high operating costs can be addressed. These marginal operators work with razor-thin profit margins, but still remain solid, small businesses. The challenge for all of us is to: first, keep working wells flowing; and then to look at those idled wells with incentives to get them back into operation. We must keep squeezing as much oil from the ground as possible. To settle for less is a tragic waste of a precious resource.

Although, many sectors of the U.S. and Indiana economy are currently benefitting from low oil prices due to the oversupply both within and outside of the OPEC nations, the low prices threaten the stripper wells. Also threatened are a large segment of jobs and earnings that are dependent on marginal wells. The shock of an approximately 35% drop in oil prices in less than a year has devastated these small company's balance sheets.

This country's ever increasing reliance on imported oil, which reached an all time high of 49.5% in 1993, is a threat to our national security. Keeping these marginal well operators in business preserves a valuable and significant scientific and indus-

trial infrastructure. In fact, should the U.S. be unable to obtain cheap and plentiful supplies of foreign oil in the future, this infrastructure will be invaluable.

This first ever IOGCC economic study establishes the clear benefit of marginal wells to the nation, as well as to individual producing states. The study was conducted by the respected Big 8 accounting firm of Coopers and Lybrand, using production numbers from the IOGCC annual report (numbers which come straight from state agencies) and uses the appropriate multiples from the U.S. Department of Commerce.

I am submitting the IOGCC report "Marginal Oil: Fuel For Economic Growth. " I ask that you carefully consider the value of this nation's marginal wells and develop appropriate incentives to promote the conservation of our oil and gas resources. These incentives should be structured to encourage energy stability and should benefit both energy consuming and producing states.

B & S WELDING, INC.
PHONE 504/787-2901 · 504/524-5725
POST OFFICE BOX 945
GRAND ISLE, LOUISIANA 70358

March 24, 1994

THE HONORABLE DAVID L. BOREN
Chariman, Subcommittee on Taxation
Committee on Finance
SD-205 Dirksen Building
Washington, D.C. 20510-6200

Dear Mr. Chairman:

My name is James Bourne. I am the President of B & S WELDING, INC. located in Grand Isle, Louisiana. I appreciate this opportunity to express the need for incentives to encourage exploration and development in the Gulf of Mexico.

As you are well aware, the domestic petroleum industry continues to face significant economic challenges. Depressed product prices, increased regulatory costs and restrictions on access to Federal lands have all contributed to our industry's burden.

I urge you and the subcommittee to expand it's consideration to deep water and EOR tax incentives.

Sincerely Yours,

James Bourne
President

C & D WIRELINE SERVICE, INC.
Post Office Box 945
GRAND ISLE, LOUISIANA 70358
Phone: 787-2300
524-4174

March 24, 1994

THE HONORABLE DAVID L. BOREN
Chariman, Subcommittee on Taxation
Committee on Finance
SD-205 Dirksen Building
Washington, D.C. 20510-6200

Dear Mr. Chairman:

My name is Charles Crosby, Sr. I am the President of C & D WIRELINE SEVICE, INC. located in Grand Isle, Louisiana. I appreciate this opportunity to express the need for incentives to encourage exploration and development in the Gulf of Mexico.

As you are well aware, the domestic petroleum industry continues to face significant economic challenges. Depressed product prices, increased regulatory costs and restrictions on access to Federal lands have all contributed to our industry's burden.

I urge you and the subcommittee to expand it's consideration to deep water and EOR tax incentives.

Sincerely Yours,

Charles Crosby, Sr.
President

STATEMENT OF CONTINENTAL RESOURCES, INC.

Chairman Boren, members of the Subcommittee on Taxation, members of the Senate Finance Committee, colleagues, and friends: My name is Harold Hamm, president, founder, and owner of Continental Resources, Inc. ("Continental"), a mid-sized independent exploration and production company headquartered in Enid, Oklahoma. I have been in the oil and gas industry for 25 years as an oil and gas producer, drilling contractor, oil well service contractor and owner of other oilfield service entities which currently employ 500 people. Continental owns and operates 800 medium depth oil and gas wells in Oklahoma, Texas, Montana, and North Dakota. The average well production of Continental is 5.7 BOPD and 40.7 MCF gas per day. Continental is a company focused on exploration which most recently discovered an oil productive ancient meteorite crater underlying the mature Sooner Trend Fields of northwestern Oklahoma.

Before outlining my proposal, I would like to address three popular misconceptions or unreal paradigms held by many Americans and Governmental leaders. Those misconceptions are: (1) that most oil companies are run by flamboyant characters such as J. R. Ewing of the long-running TV show, Dallas; (2) that major oil company fat cats dominate United States Exploration and Production; and (3) that the United States is running out of oil and gas and the industry is all but finished. The truth of these matters is that this industry did attract undesirables in the boom cycle of the 80's due to the nature of this risk/reward business. But they were not astute businessmen which have long been gone and the survivors do not fit the typical J. R. Ewing stereotype. Mr. Chairman, you have known me for 25 years. How do I fit that mold? Is George Kaiser or Raymond Plank anything like that? I should think not. Independent oil and gas companies produce 51½% of America's petroleum energy and that number is increasing evermore as major oil companies are being driven overseas where a potential profit exists of proportionate size to be of significance to their bottom line. The United States exploration and production industry is becoming an industry of independent producers through a transition of property acquisitions and production enhancement. The myth that the United States is running out of oil and gas is the oldest myth of all having been around since the early 1900's. The recent Independent Petroleum Association of America report confirms that abundant resources of oil and gas remain in the United States—more than 62 years for oil and 68 years for natural gas at current reserve/production ratios. No, I do not believe we should take extreme measures to try to become energy dependent on our own oil resources, but I do believe that due to the high cost of importation, we have no choice but to sufficiently find and develop our natural gas reserves to supply United States energy needs. I do not believe that our energy resources are finite, but in fact, that they are very dynamic and expanding along with new technology for both finding and recovering reserves.

I have not come to you today with a frustrated anti-government attitude, but rather, with a very real and logical solution to the problem at hand and a great confidence that you will share my vision and accept and adopt the important and necessary measures that I propose.

My mission today is (1) to dispel certain persisting popular myths; (2) to present to you the changed domestic exploration and production industry as I know it; and (3) to outline a program that takes a long-term approach to our current problems instead of yet more management by crisis. This industry has been driven over the past dozen years to the brink of collapse which negatively impacts on national energy security. Unless a significant program of change is adopted, more drastic emergency energy measures will be needed in the future.

Gentlemen, unless your work here is tremendously successful, the United States must prepare itself for a natural gas shortage of major proportion within the next three years. United States demand for natural gas is growing by 3.5% annually, while supply reserves of natural gas are declining by 2% annually. The gas bubble is gone. This winter's cold weather has proven that our supply is nip and tuck with demand right now. While we may be able to refill gas storage during the summer months this year, the ability of the industry to do so in subsequent years is more uncertain. Unlike the OPEC Oil Embargo caused oil shortage of the 1970's, the coming supply shortage of natural gas will be real, not political, and it will take time, capital, and knowledgeable professionals to correct. We should not wait until we are short of supply and in a national crisis to address this imminent problem.

Unlike the regulation induced natural gas shortage of the late 1970's, this recovery will take 5–7 years assuming adequate financial, capital, and personnel resources. Due to the past 10 years of economic ruin, the oil and gas industry infrastructure is severely damaged. The United States domestic exploration and production industry has shrunk from 800,000 professional and skilled workers in 1981 to

approximately 380,000 today. Employment losses for less than these in the automotive industry resulted in Governmental intervention. We are all familiar with the bailout of Chrysler. Today the industry is still shrinking in capital and skilled workers. As a result of low oil prices due to unrestrained OPEC production the available capital for exploration is at an all-time low.

The industry is not asking for a bailout, but rather, only relief from lingering archaic and punitive governmental barriers from the late 1970's and early 1980's. While these barriers were directed at the major oil companies, they have blocked the paths of independent exploration and production companies. Positive change in this governmental policy must occur. You, gentlemen, are the only bright spot on the horizon for exploration and production companies like mine. Political policy rules our industry. The recent relief from the alternative minimum tax has allowed my company's exploration budget to be expanded three-fold.

I need to add a little clarity right here. Too many people mistakenly take a shotgun aim at the energy industry because they do not understand it properly. Today's problem is not that the major oil company located on the corner is not selling enough gasoline. As a matter of fact, the corner station is selling more gasoline than ever before. The problem stems from the fact that United States exploration and production companies cannot raise capital in the current political environment to support a drilling program sufficient to replace produced reserves of oil and gas. It is obvious that this administration, whose platform is centered around change, is different from those in the past who penalized this industry indiscriminately through price controls, windfall profit taxes, and the elimination of most of the percentage depletion allowance. We have reached the time for change.

The second portion of my mission today is to describe for you the new shape of the changed exploration and production industry. I have witnessed the hardship of the past several years as 50% of Oklahoma's oil and gas operators were merged, sold, consolidated, or simply ceased to exist. My drilling company was forced to idle 80% of its rigs and lay off 80% of its employees. I observed all of the conventional sources of capital dry up and go away as certain provisions of the tax act of 1986 sealed the fate of the last of the investors from the private sector. I have seen the transition made by the major oil companies as they sold off their properties and moved their personnel overseas. At present, approximately 80% of Oklahoma's oil and gas is produced by independent oil companies and 20% by major oil companies. I have seen a reduction in the service sector by 75% as company after company declined, consolidated, or went broke. And most recently, I have witnessed most oil and gas operators grapple with the decision of whether to plug out uneconomic leases due to the low oil price, or to continue to produce for negative dollars.

And so you may ask "What is left?" The United States energy production industry (our industry) is the most efficient in the world. During 1992, we produced 8.8MM BOPD, or 13% of the world's supply, while we only have 3.2% of the world's oil reserves. We produced 49 BCFD or 25% of the world's total natural gas production while we only have 3.4% of the world's natural gas reserves. We are a very efficient and lean industry that has been starved for capital.

I applaud President Clinton who said recently in a conversation with Hedrick Smith on PBS that new tax laws must be written which would bring private capital back into industry once again. This proposal will do just that.

The program that I have submitted for your acceptance is designed as a Long-Term synergetic performance plan to recapitalize this segment of the industry at no significant loss of revenue to the treasury. If the industry does not perform and produce, it costs the treasury nothing. Certain provisions are included which will "prime the pump" but pertain only to funds spent on the exploration of oil and gas.

Most importantly this program removes restrictions on capital investments from the private sector. The capital must be made available for our predominantly independent industry to be able to drill the number and type of wildcat exploratory wells needed for reserve replacement. Since the major oil companies have focused the exploration efforts elsewhere, this responsibility now falls on the shoulders of the independents.

My plan contains two "Technology Triggers" which will set off activity and provide stimulus for research development and education through increased usage in certain high tech areas.

The first is horizontal drilling. In 1991 the Canadian Government granted a tax and royalty holiday for the first 75,000 B.O. produced from a horizontally drilled well. This tax incentive spurred the usage of this new technology and took its use from experimental to widespread, thereby creating an employment boom in Saskatchewan and Manitoba. For 1994 Canada is projecting a 20.6% increase in exploration budgets compared to 4.1% in the United States. The Williston Basin producing province extends across the United States/Canada border with two-thirds of it

in the United States. Last year, of the 240 horizontal wells drilled in the Williston Basin, 230 of them were drilled on the Canadian side. As a result, 5% of the wells in Saskatchewan are horizontal and now account for 23% of its oil production.

The second "Technology Trigger" would apply to non-conventional sources such as tight gas and coalbed methane. As late as the mid-1980's gas from tight sands and coalbeds was considered "unconventional" and little, if any, was included in resource estimates. Today it forms a major part of the existing resource base, a good part of the reserve base of many companies, and a major part of the economies of several states. The technology has been partially self-sustaining on its own economic merits as the Section 29 tax credit proved to be the "Technology Trigger" needed to start the development of this resource. Partial restoration of this tax credit should be adopted to develop the needed reserve of natural gas for our country's future use.

Complete restoration of the Percentage Depletion Allowance will round out this Long-Term approach. Our nation and the exploration and production industry was served well by this provision for more than 43 years. By replacing the original rate and effectiveness of this measure, our industry will be able to survive periods of economic hardship and OPEC maneuvering by providing the long-term economic impetus necessary to allow the industry to replenish our reserves and maintain our exploration programs through good and bad times. Adoption of this measure displaces the need for revolving crisis management measures.

I ask each of you to look to the future to focus only on today's existing conditions in the exploration and production sector of our industry, and adopt a plan to allow producers like myself to continue producing America's energy needs. This program will result in a positive impact on the United States economy by adding hundreds of thousands of highly paid jobs while generating the stability and support necessary to allow the industry to replace its reserves.

But most importantly, you will proclaim to all of the world that the United States will have a viable domestic energy policy well into the future.

Cooper Industries
P.O. Box 4446
Houston, Texas 77210

Michael J. Sebastian
Executive Vice President

COOPER

March 25, 1994

The Honorable David L Boren
Chairman, Subcommittee on Taxation
Committee on Finance
SD-205 Dirksen Building
Washington, D.C. 20510-6200

Dear Senator Boren:

I would like first to commend you and the Senate Finance Subcommittee for making a serious attempt at addressing the problems of the domestic oil and gas industry.

The proposed incentives for marginal wells are positive steps which will benefit many areas of the industry and avoid abandonment of some marginal production. If new production and jobs are generated from the current proposal, then we should give immediate consideration to this initiative. However, since this proposal is likely to generate small amounts of new production and jobs, we are requesting your added support for Senator Breaux's proposed five dollar ($5.00) per barrel tax credit for deep water Gulf of Mexico production which would give companies the incentive to find and produce new discoveries.

The proposal has particular merit for a number of reasons. I would like to highlight a few. First, it will create jobs. An analysis of S.403 done by DRI/McGraw Hill concluded that it would create over 100,000 jobs in the U.S. Support for increasing recovery through enhanced processes from the large resource base in existing fields inland and offshore should also be considered.

The jobs created by oil and gas exploration are skilled, good paying jobs. These are not short term jobs, either. Because of the perceived magnitude of the reserves in deep water locations, DRI projects that 80,000 of these jobs would be sustained beyond 2017.

The expenses and risks associated with finding and developing these reserves are formidable. To date, little to no infrastructure exists in deep water Gulf of Mexico, so development is moving slowly and only for the very largest discoveries. Senator Breaux's proposal will improve this situation.

In my view, there is no negative side effects for our economy from Senator Breaux's SB.403. The downside of not enacting this proposal will be the continued loss of domestic energy-sector jobs and increased reliance on imported product.

I urge you and the Subcommittee to expand your consideration to include deep water tax incentives. And I would also like to thank you for your leadership in addressing the crucial state of the domestic oil and gas industry.

Cooper Industries is a substantial supplier of equipment to the oil and gas industry with significant assets, including both people and plants in Oklahoma, Texas, Louisiana and Ohio and believe these issues are critical to this vital industry and its support infrastructure.

Sincerely,

Michael Sebastian

Quality Oil Field Contractors
[illegible]
P.O. Box [illegible]
[illegible], LA 70373
Phone [illegible]
Fax 504 [illegible]

DANOS & CUROLE

March 24, 1994

United States Senate
Committee on Finance
Washington, D.C. 20510-6200

RE: SB 403

As a resident and contractor of a coastal Louisiana community, I support a responsible approach to the use and development of our natural resources. We need jobs, we need a healthy petroleum industry and we need to protect our sensitive environment. I believe incentives such as the deep water production tax credit $5 per barrel contained in Senator Breaux's bill SB 403 can create a significant economic benefit.

I believe that our domestic petroleum industry should be encouraged to discover and develop new reserves while being held accountable to protect our environment. One method that should be considered is tax incentives as proposed by Senator Breaux's bill 403.

Thank you for your interest and concern in this matter.

Yours truly,

Hank Danos
President
Danos & Curole Marine Contractors, Inc.

HD/jgl

FMC Corporation

Wellhead Equipment Division
1777 Gears Road
Box 3091
Houston Texas 77253
713 448 0211

FMC

March 24, 1994

United States Senate
Committee on Finance
Washington, D.C. 20510-6200

I applaud the Senate Finance Subcommittee on Taxation efforts to examine the state of the petroleum industry and what assistance might be provided. The proposals being advanced are a very positive step benefitting many areas of the industry. However, FMC believes consideration should be given to broadening this initiative since the current proposal is likely to generate relatively small amounts of new production or jobs, both of which are vitally needed by the nation.

Two areas offer the most potential for substantial new production: development of new fields in deepwater offshore–fields that are sizable but costly; and increasing recovery through enhanced processes from the large resource base in existing fields inland and offshore. Effective incentives could substantially increase economic activity, create new jobs, and increase government revenues. One proposal is SB 403, sponsored by Senator Breaux, which would provide a $5 per barrel tax credit for deepwater Gulf of Mexico production. A similar incentive can be constructed for enhanced oil recovery projects.

Incentives of this nature have an additional characteristic that is very favorable. They can be structured so that they do not have a tax cost, and therefore require no increase in other government revenues to finance them. Since the tax credit incentives would apply only to new production, they have the effect of generating incremental government revenue.

I hope you will seriously consider my comments on this subject.

Sincerely,

Peter D. Kinnear
Division Manager

STATEMENT OF FRIENDS OF THE EARTH

OVERVIEW

Mr. Chairman and Members of the Subcommittee, Friends of the Earth wishes to thank the subcommittee for the opportunity to present our views on the status of the U.S. oil and gas industry. We commend the Chairman and this subcommittee for initiating these important hearings. We recognize that for some parts of the industry today, these are very difficult times. Yet, these are also times of opportunity and for examining this industry through a new lens.

If there is one message we would like to leave in this hearing record, it is this: the U.S. oil and gas industry should re-tool and re-build its infrastructure around total system energy efficiency, maximum environmental responsibility, and inherently safe technology. Doing so, we believe, will increase energy security, reduce the trade deficit, create jobs, advance technology, stimulate investment, protect the environment, and improve U.S. competitiveness.

Congress, for its part, should look very carefully at the *total effect* of its policies on the overall performance, efficiency, and societal costs of oil and gas operations. All too frequently, Congress moves down specialized policy pathways—be it tax, federal lands policy, royalty treatment, or environmental regulation—without consulting other committees, or considering what each of these seemingly separate policies means in the aggregate, for industry and nation.

Tax policies, for example, have been very generous to oil and gas production. But how well has tax policy encouraged energy efficiency throughout the oil and gas system? How well has oil and gas tax policy fostered environmental responsibility, pollution prevention, or the conservation of fossil energy?

Environmental regulation, on the other hand, is viewed as excessive by the oil and gas industry, when in actual fact, there are at least nine federal environmental laws that have specific exemptions or other special allowances for oil and gas operations.

Today, as a new round of oil and gas tax proposals are advanced, it is the position of Friends of the Earth that no new tax incentives or credits be adopted until the considerable inefficiencies, lax environmental regulation, and existing clean-up liabilities now imposed on American taxpayers by oil and gas industry practices—past and present—are addressed. Some of these are noted in our recently published study, *Crude Awakening*, a copy of which is submitted with this testimony, and is described in more detail below.

OIL & GAS TAX POLICY

The list of tax incentives and/or subsidies currently enjoyed by the oil and gas industry is quite long. Direct oil and gas tax incentives are already more generous than those enjoyed by any other American industry and most taxpayers. They include:

- deductions for the purchases of capital assets, known as intangible drilling costs, from taxable income. Independents can deduct immediate purchases; integrated oils can deduct over 5 years;
- intangible drilling costs—which are used to figure capital deductions, are not subject to the uniform capitalization rules that govern most other industries;
- percentage depletion allowances—independents can deduct 15%-25% of annual gross income from oil and gas producing properties, which over time can exceed the value paid for the property itself;
- nonconventional fuels production tax credit,[1] available to all companies through the year 2007 (credits are deducted directly from tax owed versus income subject to taxation);
- enhanced oil recovery tax credit equal to 15% of certain costs under nine eligible recovery methods, open to all companies;
- special treatment for independent oil producers and royalty owners under the Alternative Minimum Tax;[2]
- passive investment exception for oil and gas properties allows investors to offset income with losses in oil and gas operations.

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[1] Equal to $3/bbl. for oil produced from shale and tar sands, gas produced from geopressurized brine. Devonian shale coal seams, tight formations, or biomass, and liquid, gaseous or solid synthetic fuels produced from coal.

[2] In general, costs such as intangible drilling costs cannot be expensed under the Alternative Minimum Tax (AMT), nor can they be expensed so as to reduce their earning calculation under the AMT. For independent producers and royalty owners however, neither one of these limitations apply. In addition, independents can use the percentage depletion method, rather than the less generous cost depletion method, in computing their earnings under the AMT.

These existing tax advantages, when coupled with other allowances, such as exemptions from certain environmental regulations, may encourage current tax shelters for wealthy investors in oil and gas activities which are damaging to the environment, energy inefficient, and/or damaging to other resources such as groundwater, and may also create future clean up costs for taxpayers.

Moreover, existing allowances under the tax laws for expensing oil spill clean-up costs, property damage, and certain legal expenses,[3] contribute to a "cost-of-doing-business" standard in the industry that actually rewards poor environmental performance, while passing on environmental costs and clean up expenses to taxpayers.

Today, the oil and gas industry seeks further tax relief and government favor, including: a fee on oil imports; a tax credit for marginal and new production triggered by falling oil or gas prices; additional percentage depletion subsidies; expensing of geological and geophysical costs; additional Alternative Minimum Tax relief; an import fee only on imported gasoline and blending stocks; a 30% tax credit for all costs associated with horizontal drilling; an allowance for limited partnerships to qualify for passive oil and gas investments; elimination of the year 2007 sunset on the non-conventional fuels production credit; a 10% investment tax credit for production on federal and tribal lands; and a deep-water production tax credit.

As a nation, it is important that we take a long, hard look at a full spectrum of environmental, public health, and safety issues now facing the oil and gas industry before putting in place any additional incentives that may in fact encourage oil and gas development that is wasteful, energy or financially inefficient,[4] environmentally damaging, and/or in direct contravention of the nation's long-term energy security.

WASTE, POLLUTION & INEFFICIENCY

In our recently published report, Crude Awakening, Friends of the Earth has found energy waste and pollution in the oil and gas industry on a scale that is hard to believe: an annual energy loss—through spills, emissions, evaporative loss, venting & flaring, waste generation, inefficient processing, pipeline and storage tank leaks—that is equivalent to 1,000 Exxon Valdez oil spills every year, roughly equal to Australia's annual petroleum consumption (i.e, more than 262 million barrels of oil, or 11 billion gallons). We calculated those losses and inefficiencies as illustrated in the table below.

ANNUAL ENERGY WASTE & INEFFICIENCY IN THE U.S. OIL INDUSTRY

[Millions BOE [1]]

I. Leakage and Waste:	
Oilfield Spills	1.050
Leaking Wells	3.650
"Oil & Grease"—Pits & Produced Water	1.200
Aboveground Tanks—Leaks/Spills	63.875
Existing Plumes	1.200
Pipeline Leaks & Spills	0.714
Leaking Underground Storage Tanks	5.200
Refinery Waste	24.200
Used Motor Oil	14.000

[3] Under current tax law, companies that pollute the environment, whether by spilling or dumping toxic wastes illegally, are allowed to deduct all the costs associated with pollution as ordinary and necessary business expenses. In the 1991 Exxon Valdez $1.025 billion oil spill settlement with the Federal government and the State of Alaska, Exxon was allowed to use $1 billion of that amount—clean-up costs, legal fees, damages, and even the 11 million gallons of spilled oil—in figuring its tax deductions. As a result, Exxon was able to reduce its federal and state tax liability between $279 million and $298 million. See, A. Eriksson, R. Hertzog, J. Tiley, D. Williams, F. von Zezchwitz, *Taxation for Environmental Protection: A Multinational Legal Study*, eds. S.E. Gaines and R.A. Westin (Westport. CT: Quorum Books. 1991), pp. 187–189.

[4] A 1990 GAO analysis reviewing oil and gas tax incentive proposals similar to some of those now being proposed. noted: . . . [R]ecent studies of effective tax rates for new investments show that additional incentives would further contribute to a federal tax system that already favors petroleum production investments over those in most other industries. Some proposed incentives would also further favor certain types of petroleum production investment and categories of producers over others. The favorable tax treatments received by the industry as a whole and by certain activities within the industry both provide incentives for relatively inefficient investments within the industry. U.S. General Accounting Office, Report to the Chairman, Subcommittee on Energy and Power, Committee on Energy and Commerce, House of Representatives, *Tax Policy: Additional Petroleum Production Tax Incentives Are of Questionable Merit*, July 1990, GAO/GGD–90–75, p. 3.

ANNUAL ENERGY WASTE & INEFFICIENCY IN THE U.S. OIL INDUSTRY—Continued

[Millions BOE [1]]

Spills to Water	1.095
"Oil & Grease"—Offshore & Rivers	0.090
Operational Discharge—Tankers/Barges	0.178
Volatile Hydrocarbons—System-wide	18.428
Natural Gas—Leakage/Venting/Flaring	102.000
	236.880
II. Inefficient Energy Use:	
Oil Refining	10.400
Oil & Gas Extraction	5.400
Pipelines	2.900
Tankers	0.640
Petrochemical Plants	5.000
High-Octane Waste	30.000
	54.340
Grand total	291.220

NOTE: [1] BOE = barrel of oil equivalent. For an explanation of how each line item was calculated, see Crude Awakening, Chapter 19, "Reclaiming America," pp 230–235.

America's oil and gas infrastructure, in fact, is deteriorating badly. According to the American Petroleum Institute, "free product"—i.e., floating gasoline or other petroleum hydrocarbon leaked into the ground—is being pumped from groundwater at 64 refineries, 217 marketing terminals, and 75 transportation-related hubs or terminals.[5]

In Oklahoma, where state officials acknowledge "hydrocarbon contamination" beneath every refinery in the state, there are millions of gallons of leaked oil and gasoline beneath sites in Tulsa, Enid, Ardmore, and Wynnewood.[6] In Washington state there are more than 30 bulk storage facilities—including some owned by ARCO, Chevron, Mobil, Shell, Texaco and Unocal—with confirmed soil and/or groundwater contamination.

In mid-January this year, a pipeline owned by Clark Refining Company ruptured, spilling 122,000 gallons of gasoline near St. Louis, some entering the Mississippi River. Last April, an ARCO pipeline subsidiary spilled 260,000 gallons of light crude near Bakersfield, California, some of which spilled over Interstate 5 and into a small creek. A crack in a pipe caused the rupture, resulting in a $3 million clean up. The Congressional General Accounting Office has reported that between 1980 and 1989 pipelines experienced, "on average, more than one water polluting spill per day."[7] In Appendix C of *Crude Awakening*, nearly 400 pipeline spills and leaks are enumerated by company, date, location, amount spilled, and environmental and property damage.

Between 1983 and 1992, fires and explosions at U.S. oil refineries and petrochemical plants killed more than 80 workers, injured 900, and caused thousands to be evacuated from nearby communities. The Oil, Chemical and Atomic Worker charged that many of the accidents were "linked by drastic reductions in the resources devoted to plant maintenance." Shell and Phillips, among other companies, were cited by the U.S. Occupational Safety and Health Administration (OSHA) for inadequate maintenance in fatal explosions during 1988–89. Congressional hearings last summer revealed that the Alyeska Pipeline Service Company—the consortium of oil

[5] American Petroleum Institute, "Hydrocarbon Recovery Results." December 1990 survey, published, December 18, 1992. See also, Lois N. Epstein, *LAST But Not Least: Leaking Aboveground Storage Tanks—Threats, Costs and Answers*, Environmental Defense Fund, Washington, D.C., February 1993.

[6] See, for example, Sonja Colberg, "Refineries Deny Claims About Underground Oil Spill," *The Tulsa World*, July 26, 1990, p. A–1 Michael Kerrigan, "State Pushes Sun on Plan: Underground Hydrocarbon Pool Causes Concern," *The Tulsa Tribune*, July 25, 1990, p. A–1 Case Studies #7 and #10 in Crude Awakening; and, Charolette Anne Smith and Paul Hoverstein, "Perils in Petroleum's Shadow," *USA Today*, May 17, 1993, p.8–A.

[7] U.S. General Accounting Office, *Pollution From Pipelines: DOT Lacks Prevention Program and Information for Timely Response*, GAO/RECD–91–60, January 1991, p.3.

companies that owns and operates the Trans Alaska Pipeline—kept blacklists of inspectors who complained about corrosion and safety problems.[8]

Recent incidents, in fact, appear to further confirm the findings in *Crude Awakening:*

- last week, on March 24th, a huge natural gas pipeline explosion occurred in Edison, NJ, killing at least one person, injuring 100, and leaving nearly 2,000 people homeless. The explosion of the 36-inch interstate line created a fireball visible in three states, demolished 8 apartment buildings, incinerated nearby automobiles, and left a huge 65-foot deep crate in the area. The ⅜rds inch-thick, steel pipeline, originally installed in 1961, is owned by the Panhandle Eastern Corporation. A U.S. National Transportation Safety Board investigation is underway.[9]
- last week, on March 21st, a 420,000 gallon tank filled with oily wastewater sludge caught fire and exploded at the Sun Company's Marcus Hook, PA refinery, lifting the huge tank off the ground, injuring 18 workers (11 of whom were hospitalized), and releasing contaminants into the Delaware River. An OSHA investigation is underway.[10]
- two weeks ago, Unocal agreed to pay at least $5.5 million to settle California criminal charges and clean up underground pollution from its large Guadalupe oilfield near San Louis Obispo, CA. Unocal was convicted on three criminal misdemeanor charges of illegally discharging and failing to report massive leaks of a diesel-like chemical used to dilute the field's heavy crude since the 1 950s. The company's own estimates indicate that millions of gallons of the diluent leaked out of storage tanks and pipelines and contaminated groundwater in 28 separate plumes, totalling an estimated 8.5 million gallons.[11]
- several weeks ago, after a 1993 suit filed by EPA, Texaco, Conoco, Eighty-Eight Oil Co., True Oil Co., and Phillips Petroleum have agreed with the U.S. Justice Department to pay a combined $300,000 civil penalty for alleged violations of EPA administrative orders under the Resource Conservation and Recovery Act. Sludge pits at the site—known as Powder River Crude Processors or Big Muddy Oil Processors near Glenrock, WY—have killed birds, and there were also leaking tanks, seeps and spills. Cleaning up the site will cost an estimated $4.8 million to $8.9 million.[12]
- last New Year's eve, diesel oil "fell like rain" at Exit 13 on the New Jersey Turnpike near Linden. Seventeen toll-booth workers and two firemen were taken to area hospitals after inhaling an oil and steam mixture that spewed into the air from the Tosco Corp.'s nearby Bayway Refinery. The interchange, a portion of 1-278, and the ramps between the Goethals Bridge and the turnpike were all closed for two-and-a-half hours. A malfunctioning safety vent at the refinery was the cause.
- on Christmas Day 1993 near Oxnard, California, an eight-inch underground pipeline on Berry Petroleum's West Montalvo lease, ruptured spilling 84,000 gallons of crude oil, some of which leaked into a creek, a lake, local wetlands, and the Pacific Ocean. The U.S. Coast Guard said corrosion caused the 30-to-40-year-old pipeline to rupture.[13]
- last May, an Ashland Oil Co. refinery in Catlettsburg, KY exploded, killing one worker. Two huge clouds of combustible hydrocarbons drifted away from the plant, and local officials closed U.S. route 23 for more than and hour and half,

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[8] See, for example, Chapter 14 in *Crude Awakening*, "Skimping on Safety," and Robert A. Rosenblatt, "Ex-Inspectors on Alaska Pipeline Warn of Dangers," *The Los Angeles Times*, July 15, 1993, p. B–5.

[9] Joseph Silha, Reuter, "U.S. Natural Gas Pipeline Blast Raises Safety Concerns," March 24, 1994; Matthew L. Wald, "Seeking Clues in New Jersey," *The New York Times*, March 27, 1994, p. 2–E; and, Annette John-Hall, Gwen Florio, and Larry Lewis, "Fracture is Found in J.J. Gas Pipe," *The Philadelphia Inquirer*, March 23, 1994, p. B–1.

[10] See, for example Claire Furia, "Tank Blast At Sun Co. Injures 17," *The Philadelphia Inquirer*, March 22, 1994, p. B–1, and, Claire Furia, "Delaware River Shows Petroleum From Blast," *The Philadelphia Inquirer*, March 23, 1994, p. B–6.

[11] See for example, California Regional Water Quality Control Board, Central Coast Region, "Referral of Unocal Corporation—Guadalupe Oil Field, Petroleum Product Spill/Leak Case to the State of California's Attorney General for Possible Civil Penalties Under Water Code Section 13350 for Discharging Petroleum Products to Groundwater in the Guadalupe oil Field," September 10, 1993, 6 pp with attachments; Richard C. Paddock, "Exposing State's Largest Oil Spill," *The Los Angeles Times*, March 21, 1994, p. B–1; and, "Unocal Corp. Agrees to Clean Up Pollution Linked to Oil Field," *The Wall Street Journal*, March 17, 1994, p. A–10.

[12] "Five Companies Agree To Cleanup At Wyoming Site," *Oil and Gas Journal*, March 14, 1994, p. 35.

[13] "Pipeline Spills Over 84,000 Gallons of Crude on Christmas Day in California," *Oil Spill Intelligence Report* (Arlington, MA). January 6, 1994, p. 1.

warned local residents to stay indoors, and evacuated several hundred workers from the plant site.[14]

- last December, the U.S. Justice Department brought suit against Quaker State alleging hazardous waste violations at the company's Newell, West Virginia refinery. Four surface impoundments there—some in use sine 1972—lack proper liners, leachate collection systems, and groundwater monitoring wells. More than a foot of petroleum has been found floating on groundwater beneath the site. The Ohio River and Congo Run flow adjacent to the refinery, and residential drinking wells are within 300 feet of the plant boundary.[15]
- last December, 16,000 gallons of oil spilled from a ruptured ARCO pipeline at a drillsite in the Prudhoe Bay field in Alaska. The spill went undetected for a period because an alarm system had been turned off.
- in August last year, a fire in Exxon's Baton Rouge refinery on Scenic Highway killed three workers. The failure of a pipe fitting made of the wrong type of steel caused the fire, according to a notice sent to Exxon employees several weeks later.[16]
- in Minnesota last October, state senator Kevin Chandler queried state regulators about progress in cleaning up a 3-to-4 million gallon oil leak beneath an Ashland Oil Company refinery in St. Paul. The mixed hydrocarbon plume floating on groundwater there, has been releasing contamination into the Mississippi River for the last two years, at least. A few local residents have been put on city water, and at least one resident has a lawsuit pending against Ashland.[17]
- last May, a failed gasket on an Ashland pipeline near Patoka, IL resulted in 210,000-gallon oil spill and $300,000 in property damage.
- in Pennsylvania, just north of the town of New Hope, 50 residents in Solebury Township were contacted by Exxon last November (1993) seeking permission to test their water. Exxon has acknowledged that a former pipeline it operated in the mid-1950s leaked, oil in the area and Exxon is now trying to determine if contamination found there is linked to its old line.[18]

DOWNSIZING & SELLING OFF ASSETS

U.S. oil companies have been "downsizing" and "streamlining" operations since the mid-1980s; selling off production fields, shutting down refineries, and laying off workers. More than 500,000 oil jobs have been cut since 1982, at least 130 oil refineries have closed, and an estimated $20 billion worth of oil property will come on the market in the next years.[19]

According to *Oil Daily*, "massive cost-cutting" enabled "most oil companies" to increase earnings in 1993. An *Oil Daily* survey of 23 major oil companies found a 91% rise in net income.[20] While massive cost cutting and personnel reductions may be cheered by Wall Street, the industry's environmental and safety performance in the field do not appear to be improving as a result of these cuts.

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[14] "Ashland Oil Explosion Kills 1," *The Herald-Dispatch* (Huntington, WV), May 18, 1993, p. A-1, and Roger Alford, "Blast Heightens Concerns of AOI Neighbors," *The Daily Independent* (Ashland, KY), May 18, 1993. p.1.

[15] "Environmental violations Cited at W. Va. Refinery," *Oil and Gas Journal*, December 20, 1993, p. 27.

[16] Steve Wheeler, "One Still Missing In Exxon Fire: Family Member Identifies Victim," *The Advocate* (Baton Rouge. LA), August 4, 1993, p. 1-A, and, Melissa Moore, "Pipe Fitting Made of Wrong Material Cited in Exxon Deaths," *The Advocate*, September 16, 1993. p. 8-B.

[17] "State Senator Charges Minnesota Failed To Inform Citizens About Oil Spill." *Oil Spill Intelligence Report*, October 21, 1993, p. 2.

[18] Kay Lazar, "Exxon Plans To Test Water That Smells Like Petroleum," *The Philadelphia Inquirer*, November 2, 1993, p. B-3.

[19] Last year, for example, Mobil closed 10 product storage terminals east of the Rocky Mountains, sold four pipeline systems in the East and Southwest, and cut its U.S. marine fleet by one third. Chevron is selling off what it calls "marginal" oil and gas properties, hundreds of which were acquired in the 1984 takeover of Gulf Oil. In all. some 1,200 oil and gas properties are planned to be sold by 1995, properties that one senior Chevron official called "garbage." Chevron is also selling one-third of its U.S. refining capacity and more than 800 gas stations, using the proceeds to help pay for its overseas operations, such as its joint venture with Kazakhstan. ARCO, too, has sold oil- and gas-producing properties in the western U.S. targeting some of its proceeds for new discoveries in China and Indonesia, as well as existing Alaskan operations. Unocal has sold some $225 million in geothermal assets in California, earmarking part of the money for Indonesia. Exxon, which has sold $1.1 billion worth of U.S. assets in the last two years, sold its 75 year-old Bayway, New Jersey refinery to Tosco "for a song" at $175 million, according to *Financial World*.

[20] W. Lyon Garner, "Massive Cost Cutting Pays Off In Oil Company Profits," *The Oil Daily*, February 7, 1994. p. 5.

At a time when the entire oil system is corroding and leaking millions of barrels of oil, gasoline and other petroleum and petrochemical products into the environment, it is our view that further labor cuts, the use of untrained contract labor, and skimping on maintenance, is not in the public's or the industry's best interests.

U.S. OIL COMPANIES HEADING ABROAD

The U.S. oil industry, in fact, now spends more on exploration and production abroad than it does at home. Companies such as Amoco, Chevron and Phillips were earmarking 60-to-75 percent of their exploration and production budgets for operations abroad.

In Russia, U.S. oil companies are receiving U.S. aid to produce oil. In September, the Overseas Private Investment Corporation (OPIC), a federal agency, approved loan guarantees and insurance worth $28 million to Texaco. Last May, Conoco received aid from OPIC for a smaller project. "Texaco and all these other companies have on line projects that will cost multibillion dollars," explained an OPIC spokesman. The administration has decided it's important for the U.S. to provide assistance to U.S. companies to help the former Soviet Union become a developed economy."

Meanwhile at home, the foreign-owned share of U.S. oil assets is rising. In 1980, about 11 percent of U.S. refining capacity was foreign owned. Today, it's nearly one-third. In addition to British Petroleum and Royal Dutch Shell, the national oil companies of Venezuela, Saudi Arabia, China and Mexico have become owners or part-owners in U.S. refineries, pipelines, storage terminals and gasoline outlets. Citgo—the nation's largest gas station chain, now with more than 11,300 U.S. locations—is owned by Petroleos de Venezuela, S.A., or PDVSA, the national oil company of Venezuela, member of OPEC. PDVSA also owns 4 U.S. refineries.

THE LIABILITY LEFT BEHIND

As major U.S. oil companies head abroad, however, they are leaving behind enormous environmental problems, the cost of which is becoming more apparent every day:

- the U.S. Environmental Protection Agency (EPA) estimates the cost of cleaning up petroleum-contaminated groundwater will run about $790 million a year.[21]
- the Inspector General of the U.S. Department of the Interior has estimated that the cost of plugging 22,500 abandoned wells on the public lands will exceed $300 million.[22]
- in Wellsville, NY, one EPA-approved plan to clean up an abandoned Sinclair refinery (now owned by ARCO) will cost $15.5 million.[23]
- North Carolina officials estimate that the costs for cleaning up one site where petroleum tank farm wastes were buried could run as high as $1.5 million.[24]
- Texas auditors estimate the cost of cleaning up leaking underground storage tanks in the state will be about $2.5 billion and could take 38 years at current funding levels.[25]
- since February 1994, Pennsylvania consumers are now paying 2 cents more for every gallon of gasoline they buy to help pay the costs of cleaning up leaking underground storage tanks across the state. The fund will amount to $122 million annually to help dealers clean up leaks and install new tanks.[26]
- New York officials say well-plugging liability in their state is between $35 million and $100 million.[27]

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[21] ABB Environmental Services, "The OPA Liner Study," Washington, D.C. for U.S. EPA, January 24, 1993, p. 57.

[22] U.S. Department of Interior, Office of the Inspector General, Audit Report, *Inspection and Enforcement Program and Selected Activities, Bureau Of Land Management*, Report No. 90–18, November 1989.

[23] "More Work on Sinclair Oil Superfund Site in Allegheny County, New York To Start at End of Month," *EPA News*, October 19, 1990, and, "EPA Proposes $15.5 Million Clean-Up Remedy for Superfund Site in Wellsville," *EPA News*, October 1, 1991.

[24] North Carolina Department of Environment, Health and Natural Resources, Superfund Section, Division of Solid Waste Management, *Inactive Hazardous Sites Program*, Annual Report to the North Carolina General Assembly, February 1992, pp. VI–3 & 4.

[25] "Underground Pollution Cleanup Can't Keep Up With State's Cases," *Austin-American Statesman*, June 16, 1992.

[26] Bucky Gleason, Associated Press, "Gas To Rise 2 Cents To Pay For Cleanups," *The Philadelphia Inquirer*, January 13, 1994, p. B–3.

[27] "Well-Plugging Solution Eludes New York," *E & P Environment*, April 5, 1991. p. 7.

These costs,[28] of course, do not include imported oil, now running at more than $40 billion annually. In 1993, oil imports climbed to a record 49.5% of U.S. consumption. By 2010, according to the U.S. Department of Energy, imports will comprise 65% of total oil use. Over the last 20 years, the U.S. has run a cumulative trade deficit of $1.3 trillion for imported oil.

Public health costs, too, are typically left out of petroleum's benefit/cost calculus. Yet, increasingly, more and more Americans are being exposed to oil's ill effects.

In Austin, Texas, state authorities have found groundwater beneath a gasoline tank farm contaminated with benzene, toluene and xylene. Some nearby wells have yielded concentrations of benzene 200 times the maximum safe federal drinking water standard (5 parts per billion).

In North Carolina last April, state cancer experts reported a leukemia rate double the normal level among residents of the Paw Creek community near Charlotte. A gasoline tank farm, with some 20 large storage tanks, has leaked or spilled at least 600,000 gallons into the ground over the years. Some 17 wells in the area have been contaminated.[29]

LAX ENVIRONMENTAL REGULATION

In rural America, where oil and gas are extracted, more than 2 billion tons of liquid and solid wastes are generated each year—the single largest source of waste in the United States; more than all other categories of municipal, agricultural, and industrial waste put together. Although much of this waste contains hazardous substances and/or radioactivity, only a small portion of it is regulated as hazardous. Congress exempted the rest under the Resources Conservation and Recovery Act (RCRA).

In fact, "petroleum exclusions," or other special oil and gas provisions, can be found in the Superfund law, the Clean Water Act, Clean Air Act, the Safe Drinking Water Act, the Hazardous Liquid Pipeline Safety Act, the Oil Pollution Act, and the Emergency Planning & Community Right-To-Know Act.

Petroleum pipelines are not strictly regulated for environmental protection. Barges are exempt from the double hull requirement set for tankers under the Oil Pollution Act (OPA). Aboveground storage tanks (ASTs) have only recently come to the attention of federal agencies, and a new bill to regulate them has been tied up in Congress since 1987. Petroleum contaminated wastes are also exempt from hazardous waste export regulation.

Yet, today in the U.S., pipelines are leaking, tank farms are seeping, and two-thirds of the oil ever discovered here is still in the ground. In fact, there is more oil to be extracted and discovered in the domestic U.S. onshore—more than twice as much under some scenarios of price and technology—than there is in the entire U.S. offshore and Alaskan regions combined. And fixing the leaks and capturing the inefficiencies in the U.S. oil system today would exceed the energy equivalent of Australia's annual petroleum consumption—about 263 million barrels.

PETROLEUM POLLUTION IS PREVENTABLE

Much of the pollution and endangerment found in the U.S. oil industry today is preventable. Pollution, energy waste, and accident-prone refineries all have their origin, in some measure, in the lack of efficiency—i.e., capturing waste before it becomes an environmental hazard; maintaining a catalytic cracker before it spews emissions into the community or endangers workers in the plant.[30]

Corrosion and mechanical wear and tear are predictable occurrences, remedied by timely maintenance and capital replacement. Fumes, emissions, oily wastes, and

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[28] There is also property damage from oil spills and refinery explosions; loss in property value; worker injury and loss of life due to oil and gas accidents; public health costs from pollution; environmental cleanup costs; disruption costs when a spill or leak has to be cleaned up; and opportunity costs—meaning the opportunities of lost capital and productivity which have been diverted to pay for spill investigations, refinery explosions, and oil pollution cleanup. When all of these costs are figured, we estimate conservatively that the U.S. oil industry is costing the nation a least $10 billion annually in pollution, property damage, public health and other costs.

[29] John Hechinger and May Elizabeth DeAngelis, "Leaked Gasoline Shadows Neighbors' Lives," and, "People Fear Cancers Are Linked To Gas Leaks," *The Charlotte Observer*, A Special Report: Paw Creek's Cancer Scare, pp. 1-A, 8-A, 9-A.

[30] A few industry leaders have discovered that the necessary changes need not be all that earth-shaking and can have multiple benefits for company and nation. " . . . (W)e set out to improve stationary combustion safety at our refineries," reported British Petroleum's James Ross in a 1991 speech to petroleum analysts in Toronto. "The solution was to develop a new burner. This new burner not only increased safety, it also reduced nitrogen dioxide and particulate emissions—and it provided a material improvement in efficiency. We now also provide that technology to our customers."

evaporative losses can be captured, and in fact, often re-used within the refining and petrochemical processes.

Some industrial hazard analysts, such as Nicholas Ashford at M.I.T., point out that existing accident prevention systems are grounded in "secondary prevention"—measures that reduce the probability of accidents but do not really change the inherent risks associated with those technologies or processes. Ashford and others suggest that industry should move to a new level of safety and plant design—known as "primary prevention" or "inherently safe technology," also applicable to the prevention of leaks, spills, and emissions.

REBUILD, RETOOL, REINVEST

At a minimum, there is a need to retool and rebuild the entire U.S. petrochemical complex; to build it new and leakproof, and make refineries and chemical plants models of clean, safe and efficient processing. In this process, the U.S. oil and gas industry could become a global leader in capital goods innovation—in designing and installing "inherently safe" technologies that prevent pollution and accidents and reap greater efficiencies in production and processing.

Petroleum and petrochemicals will obviously continue to be important components in economic growth. Oil has been king of industrial substances for the longest time; it has created jobs, new businesses, and whole new industries. But today, the oil and petrochemical products around us are all too frequently public health, safety, or environmental threats. Also when burned, vented, leaked or spilled, oil and natural gas contribute directly and indirectly to the major dilemma facing all societies now using fossil energy: global warming.

Certainly in America—which now purports to lead the world in stabilizing greenhouse gases—oil and gas profligacy must end in all forms. A new era of maximizing hydrocarbon efficiency must begin, and Congress must lead the way by turning away from the old "production-only" model. Tax incentives that encourage reckless and wasteful oil and gas production without adequate environmental safeguards are only future costs disguised in economic growth jargon. They do not really "net" the nation any economic advantage, as the costs enumerated earlier in this statement indicate.

There has never been a sustained, well-coordinated program aimed at improving industrial energy efficiency throughout the entire oil and petrochemical complex. There has been no industry-wide initiative that has systematically and assiduously attacked the opportunities for improved energy performance from oil well to corner gas station; from feedstock to end use.

Now is the time to initiate such a program. The oil and gas industry should be charged with investing in their own "energy house" for the good of the U.S. economy and the environment. They should be pushed to initiate major processing and refining improvements—to "mine" existing wells, transport, and refining operations for every possible increment of efficiency—and to "push the envelope" on energy R&D and new recovery technologies. The emphasis, however, must be on efficiency—not on grandiose production schemes or new synthetic fuels projects. And existing resources must be developed under strict environmental compliance.

In any case, the long rule of hydrocarbon waste and inefficiency must end; a new era of efficiency, improved environmental performance, and economic renewal must begin. And national policies—including national tax policies—must begin to reflect that shift in emphasis"

Thank you for the opportunity to submit this testimony.

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GARY L. KOTT
PRESIDENT AND C.O.O.

22 March 1994

The Honorable David L. Boren
United States Senate
Washington, DC 20510-3601

Dear Senator Boren:

The case for increasing oil and gas production onshore and offshore within the United States is overwhelming ... jobs, balance of payments, more energy self reliance, etc., etc. We have an opportunity to make a giant leap forward in this regard by passing SB 403, which provides for a $5 per barrel tax credit for deepwater Gulf of Mexico production. Similar incentives might be put forward for enhanced oil recovery projects.

I have personally watched the Gulf of Mexico activity ebb and flow over the last 23 years because of a wide swing in both oil and gas prices. The deepwater activity is the most volatile of all, but is very prospective. An incentive as mentioned above would provide some economic basis to proceed, thereby creating much benefit to our industry and country.

Thank you for your support.

Sincerely,

Gary L. Kott

GLK:lmf

cc: Senator John B. Breaux, United States Senate
Mr. Wayne Hosier, Committee on Finance
Ms. Lindy Paull, Committee on Finance

Dale P. Jones
President

March 28, 1994

The Honorable David Boren
United States Senate
453 Russell Senate Office Building
Washington, D.C. 20510-3601

Dear Senator Boren:

We at Halliburton Company applaud your effort to obtain needed incentives for investment in U.S. natural gas and oil production. We have examined the proposal suggested for dealing with marginal production wells, with royalties collected from OCS lessees in deep water and frontier areas, and with tax credits for deep water OCS production. We appreciate that politics is the art of the possible, and that must be your judgement as to what is possible to obtain from the federal treasury for this important investment in America's energy future. We have admired your sound judgement in the past and continue to seek your council on what is obtainable from Congress.

Our analysis is that the deep water production tax credits would have the highest beneficial impact on jobs in our sector of the U.S. petroleum market, and the greatest investment return for the federal tax payer in terms of increment of increased production. There would be economic and production effects on the marginal wells tax credits and the deep water royalty reduction that are incrementally better than the status quo, however. We believe the real issue is what is reasonable to obtain, considering the political landscape, and the troubling continuing federal budget deficit. That is the expertise of you and your Congressional colleagues.

We admire your initiative and success in obtaining the bi-partisan endorsement of your colleagues in both chambers of the Legislative branch, and hope you are as successful in obtaining the support of President Clinton.

Please advise us how we can help obtain a measure of sound investment in the energy future of America.

Sincerely,

Dale P. Jones

L & L SANDBLASTING, INC.

P. O. BOX 689 EUNICE, LOUISIANA 70535 318-457-4209

23 March 1994

United States Senate
Committee on Finance
Washington, DC 20510-6200

First of all, I would like to commend you for addressing the problems of the domestic oil and gas industry. I would also like to applaud the Senate Finance Subcommittee in their effort to examine the state of the petroleum industry and what assistance might be provided, including incentives for marginal wells. The proposals being introduced are positive steps which will benefit many areas of the industry and avoids abandonment of some marginal production. If new production or jobs are generated from the current proposal, then we should give immense consideration to enhance this initiative.

For instance, the five dollar ($5.00) per barrel tax credit for deep water Gulf of Mexico production allows Louisiana gas companies incentive to produce, which in turn, causes a trickle down affect to all service companies (the backbone of South Louisiana).

Marginal tax credits would stabilize employment in such a volatile industry. The government would benefit from increased or sustained payrolls that produce dollars for coffers. Not to mention, how small service companies are able to keep their concerns going, which is the true foundation of rural America.

The way I look at it, there is no negative side effects for government from Senator Breaux's SB 403. The downside is loss of jobs and large budgets of larger companies being shifted overseas rather that staying domestic.

In conclusion, I urge you and the Subcommittee to expand your consideration to deep water and EOR tax incentives. And I would also like to thank you for your leadership in addressing the crucial state of the domestic oil and gas industry.

Sincerely,

Richard D. LeDoux
President

NOBLE DRILLING CORPORATION
10370 RICHMOND AVE., SUITE 400 • HOUSTON, TEXAS 77042 • 713 974-3131

March 25, 1994

The Honorable David L. Boren
Chairman, Subcommittee on Taxation
United States Senate
SD-205 Dirkesn Building-Committe on Finance
Washington, DC 20510-6200

Dear Senator Boren:

It certainly goes without saying, that your efforts to focus on the problems of the oil and gas industry in the US are most commendable. You are among a very few in Washington that are fully cognizant of what has happened to the industry in general, relative to the loss of jobs and the continued decline in production.

I would add my voice to the proposals that have been put forth by many in our industry, as it relates to instituting a tax incentive to induce domestic drilling. I believe this inducement should not only consider marginal producing areas, but also should apply to enhance recovery efforts, as well as deep water drilling in the Gulf.

Further, couple incentives, with a thorough review of overly restrictive operating regulations, will go a long way in mitigating this country's ever increasing dependence on foreign sources of oil.

Certainly, I am cognizant of the budget deficit, but firmly believe that this effort can be structured in such a fashion that will have a neutral impact on the government's operation.

Thank you for your efforts on behalf of the Industry.

Best regards,

James C. Day

OTTO CANDIES, INC.

MARINE TRANSPORTATION AND TOWING

March 28, 1994

Mr. Wayne Hosier
United States Senate
Washington, D.C. 20510-6200

Dear Mr. Hosier

Domestic oil and gas activity continues to face significant economic challenges as depressed product prices, increased regulations, and restrictions on access to federal lands continue to squeeze the life-blood from America's petroleum industry. Those of us who have much to fear from these challenges applaud the incentives proposed in the HR 1282, the Outer Continental Shelf Enhanced Exploration and Deepwater Incentives Act.

While HR 1282 would benefit deepwater developments, alone it would not be sufficient to address the problems of our industry. Additional incentives, such as the deepwater production tax credit of $5/OEB contained in Senator Breaux's SB 403, are necessary to encourage substantial additional development and exploration activity in the near future.

The combined effects of these proposed bills would benefit the industry and the nation both immediately and in the longer term.

The recent DRI/McGraw-Hill study commissioned by an industry working group on deepwater GOM incentives, supports the $5/OEB production tax credit, as it shows that by 1998 56,000 - 105,000 new jobs would be created, cumulative federal revenues would increase by $6-10 billion, and the foreign trade imbalance would be imposed.

We concur with industry representatives and individual production company representatives that HR 1282 and SB 403 must be passed in their current forms. We urge you to continue your efforts to provide non-discriminatory incentives which are structured to reward successful efforts and which apply to new production from existing and new deepwater leases.

We appreciate the opportunity to comment on these proposals. We are confident that results-based incentives have significant potential to benefit the petroleum industry and the nation as a whole.

Respectfully,

OTTO CANDIES, INC.

Paul Candies
President

PC/sma

cc: The Honorable John Breaux
The Honorable David L. Boren
The Honorable J. Bennett Johnston
Ms. Lindy Paull

SMITH INTERNATIONAL, INC.

March 24, 1994

The Honorable David L. Boren
Chairman, Subcommittee on Taxation
Committee on Finance
SD-205 Dirksen Building
Washington, D.C. 20510-6200

Dear Senator Boren:

I would like to express my appreciation to you for initiating an effort to address the problems of the domestic oil and gas industry. As you requested, this letter transmits a consensus proposal that I believe the entire industry can support.

The proposal is in two parts: first, a tax incentive which I believe will help maintain domestic production; and second, a list of regulatory actions that the Administration could take without the need for Congressional action.

In agreeing on the tax incentive, I adhered to two general principles. First, industry should not be required to pay for any incentive through a tax on the industry or its products. Second, the solution must not discriminate between members of the industry on the basis of size or any other factor; it should benefit the whole industry, not just one part.

The regulatory list provides a number of specific actions that could bring needed relief to the industry. In addition, we would urge that as a matter of general principle, no new costs should be imposed on the industry by administrative or regulatory actions, and every effort should be made to reduce regulatory costs and to make regulatory compliance less expensive. The Administration should ensure that any new regulatory proposals are subjected to thorough risk assessment, cost benefit analysis, peer-review science and economic impact statements.

I want to thank you for your leadership in addressing the urgent plight of the domestic oil and gas industry, and look forward to continuing to work with you.

Sincerely,

Sonat Offshore Drilling Inc.
Post Office Box 2765
Houston TX 77252 2765
713 871 7500
Telecopy 713 850 3818
Telex 775139

W Dennis Heagney
President

SONAT OFFSHORE DRILLING

March 24, 1994

The Honorable David L. Boren
United States Senate
453 Russell Senate Office Building
Washington, D.C. 20510

Dear Senator Boren:

We strongly support Senator Breaux's SB 403 proposal providing a $5 per barrel tax credit for deepwater production. Inclusion of this in your proposal could help create American jobs and added oil and gas production. A dramatic effect upon U.S. employment as well as the balance of payments deficit could result.

Please consider this provision especially since it involves no cost to the U.S. Treasury. Your support is important to all U.S. contractors, including Sonat Offshore.

Very truly yours,

W. Dennis Heagney

WDH/bjj

WESTERN ATLAS

Western Geophysical

March 23, 1994

Western Atlas
International, Inc.
10001 Richmond Avenue
Houston, Texas
77042-4299
Tel 713 963 2500
Fax 713 963 2525

Orval F. Brannan
President

The Honorable David L. Boren
Chairman, Subcommittee on Taxation
Committee on Finance
SD-205 Dirksen Building
Washington, D.C. 20510-6200

Dear Senator Boren:

On behalf of the more than five thousand employees of Western Geophysical Company I would like to express our appreciation for your efforts to strengthen the domestic oil and gas industry. Western Geophysical Company is the largest U.S. seismic exploration company. The health of our business is directly dependent upon the health of the domestic oil and gas business. Even though many of your proposals will not directly apply to us, they will help to strengthen our customers and in turn benefit our employees and their families.

Many of the proposals that have been discussed have been directed to production from marginal and stripper wells, and to small independent producers. These kinds of government policies are clearly needed and we wholeheartedly support your efforts to implement them. But we would also strongly encourage you and your colleagues to continue to push for legislation and policies directed to the energy industry as a whole, rather than to a limited segment of the industry.

In particular, we would encourage your support for tax and royalty incentives for deep water exploration in the Gulf of Mexico. There is sound evidence that substantial energy supplies are available in the deep water Gulf, but the costs and risks of exploration and production in that environment make economical development difficult. The policies and incentives adopted by the Federal government can play a major role in making these energy resources available to the nation, and create substantial jobs in the offshore and related industries as well.

Similarly, tax incentives directed at new wells can be the critical catalyst driving an expansion of domestic energy resources. Such incentives should be made available on a non-discriminatory basis to those who are willing to take the risks and make the investments necessary to find and produce domestic energy sources.

The seismic exploration industry would directly benefit from the proposal to allow geological and geophysical costs to be expensed in the year incurred. We believe this proposal, if enacted, would provide a tremendous incentive to both large and small producers to step-up their exploration activity in the United States, and help to stem the exodus of that activity to foreign markets.

We are aware that our industry has never been a "political favorite" despite the vital services and products we provide to the nation. For that reason, our employees and their families are especially grateful to you and your colleagues who have had the political courage to speak up for them.

Sincerely,

Orval F. Brannan

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