THOMAS DEWHURST COMMEMORATIVE LECTURE ON THE THRESHOLD OF GROWTH: COMPETITIVE IMPERATIVES AND CRITICAL CHALLENGES FOR THE GLOBAL OIL INDUSTRY

Kenneth T. Derr, *Chairman of the Board and Chief Executive Officer Chevron Corporation*

It's a privilege to be here in Beijing to talk about our industry and to honor the memory of Thomas Dewhurst, the father of the World Petroleum Congress. Mr. Dewhurst passed away in 1973. So he never witnessed the Arab oil embargo of that year or what happened to oil prices in the years that followed. If he were with us today, I think he would be proud that our industry has spent the 1990s learning how to be successful without high oil prices—and proving we don't need high oil prices in order to grow the industry.

I'm proud of what we have achieved. But I'm just as proud of what we have contributed. Flat oil prices have provided tremendous counterinflationary benefits for people and businesses all over the world. And our industry, in turn, has been a beneficiary of the global economic expansion.

Ten years ago, my predecessor at Chevron, George Keller, told the World Petroleum Congress in Houston that he had 'never seen tougher times' in all his 39 years in the oil business. He observed that in early 1986, crude oil lost half its value, and spot-market prices for Arab light fell as low as $10 per barrel. And he suggested that the best thing for the future would be a period of oil-price stability—not too low and not too high.

I doubt that even George knew then how right he was about our industry's ability to respond to stable prices. And I think we can all agree: Even though the last 10 years were difficult, they have prepared us well for the next 20.

ON THE THRESHOLD OF GROWTH

We've all seen the numbers. Many experts are forecasting flat oil prices in real terms for the next 15 years, and they see oil demand growing to nearly 100 million barrels a day.

As a result, we all share an enormous anticipation for growth. We want growth in Canada and Kuwait, at Bombay High and in Bakersfield, at Kutubu and Malongo, around the Persian Gulf and in the Pearl River Mouth Basin. Growth is what we promise our customers, stockholders and governments.

Venezuela wants to double its oil production by 2006. Statoil wants to add 200 000 barrels per day outside Norway by 2005. By the year 2000, Petrobras seeks a 50 percent increase in crude production and Ecopetrol aims to boost production to 1 million barrels per day. Also by 2000, LUKoil plans to invest in new production at twice today's spending level. Meanwhile, BP wants to grow production 60 percent in the next 10 years.

China has new deals with Kazakhstan, Venezuela and Iraq—plus an alliance with Agip. They're also looking for onshore growth at home through ventures like the deep exploration project with Chevron at the Shengli Field. I think Petroleum Intelligence Weekly said it best when it called China 'a new star on the world oil stage.'

As this congress has shown, we are today more complex, dynamic and diverse than ever before. But more than anything else, we are more driven, because we have every reason to believe that we stand on the threshold of a great expansion.

In light of our present situation, I'd like to discuss now three priorities: First is global reputation, because the only acceptable growth—indeed, the only legitimate growth—for our industry will be responsible growth. Next, I'll look at technology, because sourcing technology has today become as valuable as inventing it. Finally, I'll discuss why we need to stay focused on building superior partnerships in today's very competitive—and possibly overheated—global oil industry.

REPUTATION MANAGEMENT AND THE AGENDA FOR GROWTH

In looking at our reputation, I think it's important first to recognize that it wasn't long ago that the energy debate was focused on replacing petroleum with alternatives. The big concern was 'running out of oil.' But now it's fairly well known that we're finding more than we're using and producing more of what we've already found. People still want alternatives, but they realize that the world's economy still depends on oil and gas.

Leaders in many nations still worry about energy security. But they also recognize that trade relationships provide better energy insurance than stockpiles. Customers still fear that oil demand and supply disruptions could drive prices up, just like in the 1970s. But both production and discoveries are expected to remain strong and geographically diverse.

'Governments everywhere understand that our industry is providing the fuel for the locomotive of global economic progress.'

People once placed the environment above all other priorities. Today, pollsters repeatedly tell us that people worldwide want both a healthy environment and economic growth. Governments everywhere understand that our industry is providing the fuel for the locomotive of global economic progress. Further, our customers want our products, they value them and the outlook says they'll want more.

Put all these factors together and a 20-year oil-industry expansion looks virtually certain. But this is no time to be overconfident, because our ability to grow depends heavily on the quality of our global reputation.

Major oil spills still make headlines worldwide whether they occur in Siberia, Tokyo Bay or the Gulf of Mexico. Every oiled bird and spoiled marsh is a loss of precious life and habitat, another smudge on our global reputation and another reason to view oil as a liability instead of an asset.

We've seen major environmental challenges to new oil and gas projects in the rain forests of South America. We've also seen a global network of environmentalists use the Internet to influence the media and stir the public to make the Brent Spar a negative symbol for our entire industry. The Spar never involved a spill, yet it has become the Valdez of the 1990s. And now Greenpeace has launched a campaign targeting oil exploration for extinction because it believes any new oil found will contribute to global climate change.

The *Oil & Gas Journal* recently reported that our industry is increasingly charged with 'pollution, greed, discrimination and disregard for any value other than profit.' It said we face an 'uphill battle to regain the respect and trust of the public' and suggested that reputation issues may well determine our survival.

I don't agree that our survival is at stake. We are not merely a supplier of fuels. We are a fixture in the global economy. Without us, nobody goes anywhere. We oversee perhaps the greatest alliance of public and private resources in the world. So survival is not the issue. Responsible growth is the issue.

'Our industry is a world citizen with a proud heritage of stewardship over vital resources. But we have to do more to demonstrate that we're worthy of that role.'

Our industry is a world citizen with a proud heritage of stewardship over vital resources. But we have to do more to demonstrate that we're worthy of that role. We have to extend full stewardship to the air, land, water and wildlife that are as important to all of us as energy.

We know our industry invests a lot of money protecting the environment. In offshore northern Europe alone last year, environmental spending was more than $1 billion. And we've clearly improved our environmental performance. In the United States, for example, auto emissions have fallen dramatically even as the economy and the number of cars have grown.

We would like our customers, leaders and critics to give us credit for our environmental efforts and spending. But mostly, they notice our mistakes and accidents. They notice when we harm or offend our neighbors. For that, we get strong criticism and increasingly harsh punishment, including costly lawsuits and regulations—and we get restrictions that inhibit growth.

We're doing a lot of things right to manage these risks, and I want to talk more about that—but first let me comment on the issue of global climate change.

Our industry has argued that the price of restricting energy use would be too high both for producers and consumers. But proponents of radical cutbacks in fossil fuels say we'll all pay a much higher price if those fuels disrupt the world's climate.

We know many scientists believe that greenhouse gases from industrial activity contribute to climate change. But the more we study this, the more uncertainties we find, and the less the predictions make sense. And yet, climate change is being marketed as an urgent reason to shift fossil-fuel use from 'overdrive' into 'reverse.'

We still don't know the costs of trying to reduce global energy consumption. But we know from the 1970s that arbitrarily raising the price of energy is bad for the economy and the world's standard of living.

Our industry should continue to support and participate in both the research and the dialogue. We need to know the facts—and we cannot prove our commitment to the environment without being involved in this issue, which is so worrisome to our customers. We don't have to agree with our critics, but we must respect their concern.

However, we also should recognize that no issue we face is more divisive or distorted. And nothing we do should encourage the world to start phasing out oil if there is no valid reason to do so. In many countries, oil and gas are not mere resources. They are the core assets in the national economy.

I hope our leaders will separate fact from speculation when they meet in Kyoto to decide on greenhouse-gas strategies. I hope they give us commitments for more research, policies that require scientific standards of the highest integrity and agreements that respect the needs of every nation north and south.

It's easy to see why the climate-change debate commands our attention. In one outcome, we grow toward the future. In the other, we shrink into the past. But we must not lose sight of our much larger and more real reputation issues—the ones we've continued to work on as climate change has taken center stage. Environmental protection, citizenship and better community relations are permanent success factors for all of us.

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Our daily environmental performance has a major influence on how world leaders view fossil fuels. And every mistake we make gives people another reason to believe our industry is not worthy of growth.

The consulting firm Arthur D. Little says we need something called 'Next-Generation Environmental Management' to place environmental performance alongside other strategic priorities such as service, product quality and cost management. It also says few of us are doing this. But there are significant signs of progress.

The ISO-14000 standard for environmental performance is an important milestone. The chemicals industry has set an outstanding example with its Responsible Care program. And rain forest projects from Papua New Guinea to Peru are setting new standards for responsible development and concern for neighbors.

In the downstream, cleaner gasolines in California, Italy and other countries continue to evolve. We talk a lot about alliances in our industry, but the successful alliance of cleaner fuels with cleaner cars may turn out to be the most important of all.

Meanwhile, many companies are implementing their own reputation policies. Chevron started this in 1992 by introducing our Policy 530, called 'Protecting People and the Environment.' We expect to have this policy's 102 specific management practices fully integrated into all our businesses by the end of this year.

We emphasize this approach with prospective partners, and other companies do the same—and this healthy competition in environmental performance helps all of us. But competition isn't the key in the area of reputation. Sharing is the path to the unified focus we need.

Shell has talked openly about being hit hard by political and environmental challenges. And after it conducted an intensive evaluation of its public image, the company shared its methodology with others in the industry. We need more of this kind of leadership, and we need to create more opportunities to exchange knowledge within partnerships, at industry forums such as the WPC and through organizations such as the International Petroleum Industry Environmental Conservation Association.

The world holds us to a higher standard. As we focus on expansion, we must sustain positive momentum for cleaner, safer operations and products. Just doing a good job won't be enough. We need continuous improvement, because the only path to optimum growth is through responsible growth. And frankly, that's my idea of sustainable development.

TECHNOLOGY: CAPTURE, ADAPT, APPLY

Last year, a report from Cambridge Energy Research attributed our industry's success in the past 10 years mainly to the global spread of information technology. I see their point, but my own view is that our determination to be profitable—whether for governments or for stockholders—was the real driver for success.

Technology of all kinds enabled us to achieve our business goals, and the examples are all around us. 3-D seismic has sharply decreased exploration and development risk. And 4-D seismic will help us manage reservoirs even more efficiently than today. Horizontal drilling continues to prove its tremendous value. Advances in enhanced oil recovery are keeping Indonesia's oldest fields young and pushing California's heavy-oil recovery rates toward 70 percent. Desktop computing capabilities are helping us shave costs of major capital projects.

And due mostly to deep-water technology, the International Energy Agency is forecasting 5 million barrels per day of new production from non-OPEC countries by the year 2000. Brazil opened this frontier. The U.S. Gulf of Mexico followed. And now Angola, Australia, Congo, Norway and Nigeria have high hopes for their deep-water areas as well.

'*Now our challenge is to harness technology to growth goals.*'

George Keller, in his 1987 speech, noted that the higher oil prices of the late 1970s stimulated investments in technology. We have learned since then that lower prices provide an even more powerful incentive for these investments. Now our challenge is to harness technology to growth goals.

Luis Giusti, president of PDVSA, has described technology as 'the cornerstone of future competitiveness.' Many of us would agree. We need it to help us meet new demand, to help keep prices attractive to customers and to help sustain the margins that our governments, partners and stockholders require.

Yet despite all those expectations, we have significantly reduced our investments in research and development (R&D) people and facilities. Across the industry, scientists and engineers have lost jobs due to the restructuring of R&D. Studies have documented a decline in oil-industry and government R&D spending on energy.

Meanwhile, an increasing share of R&D is being done by service companies. One U.S. study said that from 1991 through 1994, service-company R&D spending grew $44 million–but oil, gas and coal-company spending fell $600 million.

This year, the consulting firm Smith Rea Energy Associates began working on a study to find out if future upstream progress is possible alongside cost-cutting in technology. I think the answer lies in other questions that are defining our R&D sector today. And these are: What technology do we need to run our business both today and tomorrow—and what is the best way to get it?

The old view was: The more we spend on R&D, the greater its benefit to our business. R&D was seen as entitled to its budget. Spending more was progress. Spending less was viewed as foolish at best and a betrayal of the future at worst.

But the marketplace ultimately required us to abandon that old model, just as it required us to abandon the idea that three wells are better than one. The new model uses market mechanisms—particularly cost-benefit analysis and a focus on serving technology customers—to drive R&D spending. And it defines technology management by an external rather than internal focus.

These are very dramatic and positive changes. They show that we're learning not to judge today's R&D investments by yesterday's standards.

There are lots of success stories. Amoco, for example, has cut costs and broadened its research scope by sharing its drilling technology facilities in Oklahoma with other companies. And many more examples have been discussed at this congress.

At Chevron, we restructured our technology organizations first to gain efficiencies. Now we're looking for synergies—so we've combined our upstream, downstream, computer and communications technologies under one vice president. We believe the oil industry needs to be an eager customer for all technologies, not just an innovator for its own.

When the new computers and telecommunications tools became available in the 1980s, our industry needed them badly. Our people were open to them and they acted quickly—and this is the key to managing technology in the future.

'*None of us can afford to rely solely on internal invention in a global marketplace of external creativity.*'

In time, we will probably adapt tools from the disciplines of materials science and biotechnology, partly because of our base of talent in chemistry. We also can expect more payoffs as we continue to work on sensor technology. None of us can afford to rely solely on internal invention in a global marketplace of external creativity. Some of the new visualization technologies, for example, came not from oil-industry laboratories but from the entertainment industry!

So the most successful oil companies will dedicate themselves to the discipline of 'technology sourcing.' They will still sustain and promote their best proprietary technologies. But they also will acquire superior tools from others and find still more through alliances with business partners and cooperative R&D with universities and governments.

In time, technology alone will be secondary to technical capability—the process of capturing, adapting and applying technology. Our greatest gains may come from global application as we deploy better tools throughout operations worldwide.

KEEPING COOL IN AN OVERHEATED MARKETPLACE

We came to this congress to learn. But we also came to do business—so let me offer some perspectives now on partnership.

Never before have we seen so many players on such a broad playing field of opportunity. Petronas President Marican has observed that in years past, national oil companies were 'mere regulators and guardians of their petroleum reserves.' But as his company has shown, many have evolved into global competitors.

The pace of business in Kazakhstan and Azerbaijan has made headlines worldwide. Last year's sale of deep-water leases in the Gulf of Mexico drew $824 million in bids—the highest in 12 years. Brazil recently offered 150 prospects and attracted 68 companies. And this year's Venezuela auction drew $2 billion—twice the expected level. Meanwhile, government oil companies such as YPF, LUKoil, ENI, PetroPeru, Gazprom and SOCAR are using the equity and financial markets to move toward privatization.

I would like to add here that despite these positive global business trends, the U.S. government and others still attempt to impose sanctions against various countries. This seldom resolves political concerns, but often hurts the business relationships that form the bridge for positive interaction on those concerns. And I hope more leaders see that these relationships contribute far more to human progress than sanctions ever could.

As I look at our industry today, I'm reminded of another time in our history. Oil was overvalued—and so were the prospects and deals. The time was the late '70s and early '80s. Today, there are more of us in the game, and we believe higher production is critical to growing profits. The fundamentals are in place for an overheated market in oil and gas prospects.

'It's true that windows of opportunity open and close. But while petroleum might be a finite resource, opportunity itself is not.'

It's true that windows of opportunity open and close. But while petroleum might be a finite resource, opportunity itself is not. Technology proves the case in retrospect. Enhanced recovery methods, deep water, LNG and horizontal drilling all opened new windows. And soon Exxon, Sasol and others may give birth to the age of synthetic diesel made from natural gas.

Changing markets also create new opportunity, such as the new gas-and-power deals made by Enron and others to serve the rising global demand for electricity.

As closed countries have opened and offered new prospects in recent years, smart companies have jumped to compete. And yet, we can still expect opportunities to come as they always have as interest are bought, sold, swapped, farmed in and farmed out. Chevron, for example, recently traded U.K. assets for Norway prospects, and Mobil bought into Tengiz and Australia.

Opportunities arise also from new forms of partnership. In recent years, alliances have joined joint ventures, mergers and acquisitions as a new way to create new enterprises. Pemex, Schlumberger, NGC, Saudi Aramco and Texaco are just a few of the many companies taking advantage of the alliance trend.

However, we should probably heed the advice of David Reamer of Halliburton, who cites 17 success factors for alliances and says creating them takes 'tremendous time and effort.' Indeed, this is true for any kind of partnership. And yet, our industry seems to be making new deals as fast as we can in an atmosphere that's both anxious and crowded.

Clearly, choosing the right partners is more important than ever before. I understand the urgency for growth. But while oil and gas are commodities, long-term successful partnerships are not. Relationships in our business last for decades, and their enormous value and importance make them worthy of our most diligent consideration.

Superior partnerships work because both sides invest the necessary time and resources to ensure that the marriage is a good fit. They emphasize a long-term perspective for both the relationship and the management of the assets. They make the best of any price situation, and they share experience, people, training and technology.

Superior partnerships understand that even a small error in a major field can make a big difference. They take every opportunity to earn more money for the partnership. And because they are more attractive to other future partners, they have an edge on additional growth opportunities. Superior partnerships also have an upside: a built-in chance to expand the relationship into chemicals, power generation, research, shipping, refining or marketing.

'. . . *superior partnerships will do much more than reward the partners. They will become a primary mechanism to help the oil industry reinvent its public image.*'

Lastly, superior partnerships understand the long-term business value of a quality reputation. As they link technology to business goals, they will link it also to reputation by finding new ways to make their operations consistently safer for employees and neighbours—and to make their products steadily cleaner for customers.

By this process, superior partnerships will do much more than reward the partners. They will become a primary mechanism to help the oil industry reinvent its public image.

A FORECAST FOR PERFORMANCE

I'm certain that our industry's critics will continue to portray us as a 20th century institution destined for decline. But the reality is, we're a 21st century industry destined for growth. By managing our reputation, by taking maximum advantage of technology and by building superior partnerships, I believe we can overcome the challenges we face.

And when this congress convenes again three years from now, I believe we'll see more than an industry that's essential to the global economy, and more than an industry with a bright future. We'll see an industry that's performing better than at any time in its entire history.