

THE ECONOMIC CLUB

O F W A S H I N G T O N, D. C.

**Excerpts from the Signature Event featuring John S. Watson,
Chairman of the Board and Chief Executive Officer, Chevron
Corporation**

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You know, people think of the world and they think, well, it's fixed, and so it's axiomatic that there is a fixed amount of oil and gas out there. And I think that's true. . . . But over time, technology has advanced . . . So there is a lot of oil, and we keep finding more ways to get at it.

The world consumes about 97 million barrels of oil per day. And the U.S. consumes about 19 million barrels. All liquids account for roughly 12 ½ million barrels a day.

The markets are roughly in balance today. Inventories have grown in recent times. And there's debate, are we balanced or are we getting close to that balance? But give or take half-a-million barrels a day, the market's pretty balanced.

I think in aggregate we can produce as much energy as we consume for liquids for oil . . . I think it'll be difficult to get to the point where we're producing as much as we're consuming, that 19 million barrel a day number.

[shale oil production in the United States is] about 5 or 6 million barrels a day in that 97 million barrel a day market or of the 9 million barrels a day of crude oil or, say, 12, 13 million barrels a day of liquids.

Fracking . . . is not new. We've been doing it for 60 years. . . . What is new is the innovation and what has revolutionized the business is combining horizontal drilling with hydraulic fracturing, which is injecting water, sand, and trace detergents in a way into the rock to fracture the rock so that oil can move to the lower-pressure fractures and up through the well bore. It's not new and it's not complicated, we're just doing a lot of it. And in some cases, we're doing it in locations that aren't used to it.

[the United States seems to dominate the fracking world because] Part of it is in the innovation that takes place in our business. The other part that's underestimated is private property rights in this country. There's tremendous incentive and innovation in this country. Most countries around the world, the mineral rights are owned by government, and so the progress, the innovation may not be as fast. . . . There are shales elsewhere in the world. None of them have proven to be as productive as what we have here in North America yet, but perhaps in due course.

What happens in our business *[that causes volatility in oil prices]* is you tend to invest a lot of money and then you produce. And if the market collectively misgauges supply and demand and you wind up producing a little more or a little bit less, prices can fly up. And it takes time for supply and demand to equalize.

[The cause of the dramatic drop in oil prices in 2016 was that] the industry had invested and more production came online. We also saw a bit of a slowdown in the world economy so you had a little bit less demand growth. And then you did see several events that took place really at the same time. One is Saudi Arabia, for reasons of market share, chose to increase production into what was already a surplus market. . . . You saw sanctions take place on Russia. And with their currency devaluing, suddenly they were able to produce much more cheaply. And then you had the shales in the United States. And so you had a confluence of supply events at a time when the market wasn't growing as fast, and prices fell.

Oil fields decline with time, and so there is some natural decline that helps balance the markets. But what we've seen is the resiliency of the shale in the United States where, for example, Chevron's one of the largest acreage holders in the Permian Basin in Texas and New Mexico, and we have some 2 million acres. We're able to produce a little bit more at low prices. And so we're continuing to egg on that supply imbalance at a time when supply isn't needed. So our industry is able to contribute to hold markets in check.

World inventories [*of oil*] are at or close to an all-time high, and so oil is everywhere it can find a home around the world. And so one of the things that OPEC has stated that they want to do is to get inventories back to a more manageable level because they act as a buffer to any price increase.

[*The export of oil from the United States*] if you want to call it controversy or issue is really one of what I call economic efficiency. What's happened with all the shale oils being produced, it's very light and it doesn't fit in all our refineries. A lot of the refineries in the United States are built along coasts, and they were done because we need imported oil. So they're built for a different type of crude, a heavier crude oil. And so, literally, all the oil in the United States that's coming out of the shales can't be run in these refineries and turned into gasoline. So what we're doing now is we're exporting that light crude oil and it's going to refineries better suited for it elsewhere and we're importing heavy crude. So think of it as just the industry balancing out the type of crude oil that's available on the market with the manufacturing capabilities that we have here.

Electric cars are coming and they're going to fill a role. I think their evolution is going to take more time than people think. Right now, most electric cars are on the road because they're very heavily subsidized. We're paying people to buy them and we have very significant subsidies at the manufacturing level. So it will depend on whether they can evolve and meet consumer tastes and preferences. There are currently range issues and other factors. By the way, they still require electricity which requires fuel. And we provide that with natural gas.

When you talk about regulations, people's eyes glaze over. . . . But I'll tell you, when you talk to business, we can go down a list of regulations that are raising costs and I think they have contributed significantly to this economy underachieving. I would not have thought we could run up \$9 trillion in debt, which should be a stimulus, drive interest rates to zero, and never see 3 percent growth. And I think the regulations are a big part of that, not just in my industry, but in many industries.

In college I worked in a tomato cannery and that motivated me to work a lot harder and to get better grades. And I went straight from undergraduate to the University of Chicago to the business school. I was pretty young actually, didn't know very much. But I graduated from the business school at 23 and interviewed broadly. When I joined the company [*Chevron*], I just was glad to have a paycheck and thought about, gee, if I kept my nose clean maybe I could have one of those jobs [*an executive position*] someday. . . . I was happy as a clam as the chief financial officer of the company because that was what a finance guy from the University of Chicago might do someday. And then I was asked to run our international business, and so I

spent a lot of time around the world, spent the better part of three years on an airplane with all of our international businesses.

There are two areas that you worry about [*in the energy business*]. One is replacing resource over time. We are in a depleting resource business, so you always have to have an eye out many years. There was a lease sale yesterday in the Gulf of Mexico. We participated. There won't be any production from those leases for six, eight, ten years. We picked up a lease in Mexico. That requires exploration work. So we think about the long term from a resource point of view a great deal. And then I always think about making sure that our people go home safely every day.

You talked about Rex Tillerson [*Secretary of State*] earlier. One of the reasons I think he was selected is because our business is a diplomacy business. And it's mostly a quiet diplomacy business. If we're doing our job well, we may have a difference of opinion with a government, but we talk to them. So we do build relationships with governments at all levels.

Governments all have different priorities and they all want local content, They all want to build up the industry in their own country, they want jobs in their own country. So we do face those demands. In fact, they're a part of many of our agreements. And a lot of the social work that we do, we do much of it voluntarily, but they want development in their country. They want a better way of life. And they want more than just come in, extract, and leave. That was the model 50 years ago. That's not the model now.

What I would like to hear out of our elected officials is a positive statement about the role of private enterprise. I told you I went to the University of Chicago. And I would really love to hear about the virtues of competition, the virtues of free enterprise in this country. We remain a country that's very popular overseas. Many countries still look up to the United States. And I think we have to have a positive narrative for our own people in this country, to talk about all the things that we have going for us, and energy is just one of them. Around the world, they think we're the luckiest country in the world. They say you've got oil, you've got gas, now you've got this shale oil and shale gas, you've got vast agriculture, you have so much. And I think we could do a lot by unleashing that and making sure that we understand that what got us here is a very strong private sector.

We've been the largest producer of renewables amongst major oil companies, thanks to our geothermal business that's in Indonesia and the Philippines. We had difficulty growing that in recent years, but it's been a big business for us. And we've done a lot of work on advanced biofuels. And that's very hard. I don't think anyone feels corn ethanol is a solution. We've got 40 percent of our corn crop going to that, and it's a big land-use issue. But advanced biofuels have been tough. Wind and solar have their role. . . . I just think we ought to make sure that they can compete. And that instead of mandating volumes of wind and volumes of solar, we do a lot of that in this country, and what we're seeing is we're driving electricity prices up. It's ironic. In California, 60 percent of the electricity comes from natural gas, but utility rates are going up very quickly because we're pushing capacity that may not be needed because we have to hit a mandate into the system.

