Twilight in the Desert: an interview on peak oil with Matthew Simmons

Sandra Ward

Twilight in the Desert: an interview on peak oil with Matthew Simmons

By Sandra Ward

Barrons, the weekly magazine for investors published by Dow Jones (publisher of the Wall Street Journal), is a pillar of the American business elite. So when Barrons runs a lengthy article on the "twilight for oil," take it as a strong signal that the issue has parked itself squarely in the mindset of the global investor class.

Of course, it has been obvious for several months that investors' hot money was in part driving oil prices upwards. Some of them raked in large profits by taking advantage of escalating concerns over the adequacy of oil and gas supplies, especially as the effects of hurricanes, the continuing war in Iraq, disruptions in Nigeria and elsewhere, and other threatening news regularly appeared on the front pages of the global media.

But this particular article is at best tangentially about how to make yet more money from the continuing energy crisis. Rather, it's well worth a close read because it presents the views of oil analyst Matthew Simmons, one of the most respected exponents of the thesis that we face a catastrophe of immense proportions unless we start taking our collective energy predicament seriously.

Simmons' argument is detailed in his June 2005 book "Twilight in the Desert". Drawing on hundreds of technical papers and other resources, he demonstrates that Saudi Arabia's oil output will soon peak. Their big fields, in his view, are mature and en route to gradually declining levels of output. Note that he doesn't argue that the Saudis are running out of oil. They clearly have large reserves, though the immensity of the volume is a matter of debate. Simmons does argue that the Saudis are confronting the limits of their ability to ramp up production and thus keep one step ahead of ever-increasing global demand.

This assertion – coming from a ranking insider in the oil business – has sent low-frequency shock waves around the world. Simmons describes the criticism as well as activism that have followed the publication of his book. We will not recap it here. One of the several

items he does not mention, however, is that in mid-December of last year, Swedish PM Göran Persson appointed a committee to study peak oil and energy alternatives. The aim is to become completely independent of oil by 2020. (http://www.energybulletin.net/11759.html)

Why the steadily growing concern? The short answer is that if Saudi Arabia – the linchpin producer – can't come up with a lot of extra supply, in the face of rapidly growing world oil demand, then we are in deep trouble. Set aside for a moment the climatic threat we are leaving our children and especially their to confront. Energy shortages and their dire effects are threats we face in the present. Not only does the developed world consume increasing amounts of fossil fuels, but much of the rest of the world – and especially the 2.5 billion people in China and India – are making strides to achieve similar lifestyles. Production is at present running neck and neck with this escalating consumption, forcing prices up to an average of US$ 57 in 2005, US$ 15 over the average of 2004. As Simmons points out, this price escalation has not dampened demand or the economic growth that drives it.

So if the Saudis can't keep pace, and if there are no other substantial untapped resources that can swiftly expand production, prices will skyrocket and the world will have to learn very quickly how to conserve energy, exploit alternatives and so forth. It is hardly likely to be a smooth transition.

We see a foreshadowing of the politics of energy scarcity in the Russian gas pressure on the Ukraine (with its obvious and deliberate signal to Europe). The Putin regime is using natural gas and oil reserves to rebuild Russia as a superpower of state capitalism that can reclaim its position of primacy over Eastern Europe, and indeed, makes its weight felt in Western Europe as well, as the primary provider of natural gas.

At the same time, with Iraq producing only approximately half of prewar oil, the Bush regime clings desperately to its hold on Iraqi reserves while justifying the war in ways that scrupulously exclude any mention of oil. As the world contemplates the approach of the tipping point on global oil production, power is shifting to producers, especially those concentrated in the Middle East, the most unstable region in the world. This only adds to the incentives to fight over the spoils.

In the midst of all this, Japan under the Koizumi regime appears to be virtually sleepwalking. Japan imports virtually all its oil. It is the world's third largest importer, and about 80 percent of its oil comes from the Middle East. Yet the country is well behind the curve on seeing the emerging problems. Only recently has Japan begun pushing its major oil firms (puny by global standards) to combine. Japan is shifting towards a strategy of securing supplies, as opposed to complacently waiting for imports, confident in the power of the yen to ensure them. As Simmons points out, however, the concern over peak oil has reached the highest political circles in the US. This suggests that the Koizumi regime, too, might be shocked out of its complacency and into seeking to play a leadership role on energy alternatives. This, rather than Koizumi's housebound troops in Iraq or

fueling US ships in the Persian Gulf, would be a real contribution to the global community -- even if the dire scenarios that Simmons and others sketch are only partially correct. AD

Twilight for Oil?

Sandra Ward interviews Matthew Simmons, Chairman, Simmons & Co. International

Since publishing Twilight in the Desert: the Coming Saudi Oil Shock and the World Economy this past summer, and touching off one of the great debates of the early 21st century, energy banker Simmons has been squarely in the spotlight. Simmons argues that Saudi oil fields, contrary to reports, have been in decline for some time, and he views skeptically Saudi claims that it can adequately boost supply to meet accelerating demand. Simmons, who has headed the Houston-based energy investment banking firm Simmons & Co. International for 30 years, is no stranger to bold calls and controversy. His vision of higher energy prices through much of the 'Nineties never really materialized, for instance. For why it's different this time and oil could be headed to $200 a barrel by 2010, give a read.

Barron's: *The premise of Twilight in the Desert is that Saudi Arabian oil reserves aren't enough to meet demand and oil prices are going to skyrocket. How did you reach that conclusion, and any second thoughts since you wrote the book?*

Simmons: In about the second week in May I made the last changes to the book. I wondered if I could have made a mistake, and yet I felt as confident as if I was a lawyer and had just submitted my papers to the Supreme Court that I couldn't have made a mistake. The data was too compelling and it was the Saudis' data, and judging from the unbelievable knee-jerk negative reaction, I clearly hit a chord.

But your position has been controversial.

The very best criticism -- the most detailed and the best written -- was called "Another Day in the Desert" and was written by a very highly regarded firm in Calgary. But where they went wrong was their assertion that my claim is Saudi Arabia's oil is about to go into a sudden and irreversible production collapse. That's wrong. The summary of my book is the myth that the oil fields could grow forever is false. There is a lot of evidence that each of these key oil fields are very mature and we should start to expect their decline. An analysis of papers from the Society of Petroleum Engineers form the basis of the book. They provided a massive paper trail over three decades of how these oil fields were getting more and more mature and having a tougher and tougher time.

People don't dispute we have reached peak oil production in Saudi Arabia. But they disagree

that it is a crisis because advances in technology and other countries' reserves will offset any decline there.

It is a great thesis but there is no data to support it. The book actually is full of praise for the fact they are using the single best technology known to man to fight these problems. It is just that the problems are bigger than the technology. It was the basic understanding of modern oil-field technology that led me into becoming such a worrier about the decline in rates we were creating through the technology. I've taken big issue with the major oil companies, who have talked for the past five to seven years about how they were going to finally start growing their production. They weren't looking at their own numbers. The technology is basically making oil and gas come out of the ground far faster than we could ever do before, and it's creating decline rates of 30% a year when it used to be 3% a year, and it is not recovering vast amounts of additional oil.

The Saudis' response to your concerns has changed, hasn't it?

They have dropped what was a very loud critical campaign. As recently as May they said they could produce 15 million barrels a day for 50 to 75 years. Now the claim is we can develop 12-to-12½ million barrels a day by 2009 by doing five new projects. But the projects won't happen for several more years because they can't get access to enough drilling rigs. The projects they are talking about are very technically demanding projects. They are coming to the end of the very, very highly productive parts of these fields, and they are turning to parts of the fields where the oil comes from rocks that are far tighter and where you need a lot more intense drilling and a lot more intense water injection. They are just starting to go out to bid on the most ambitious of the new projects, the Khurais Field, which is a field that is potentially going to produce 1.2 million barrels a day in 2009, half their new supply. The new cost estimates are $11 billion, and one of the big costs are two massive parallel pipelines coming from the Persian Gulf to inject about seven million barrels of sea water a day into the field to get 1.2 million barrels of oil out. So it gives you a pretty good snapshot of the intensity of these new projects. The risk they don't produce that much is high.

Can the Saudis keep their current production where it is for quite a while?

That is certainly a likelihood. But there is a real but unquantifiable risk that it starts into the same type of decline we've seen in the North Sea. It is utterly obvious the North Sea oil peaked in 1999. In 1995, after a few hours of analysis, I made a presentation in Aberdeen saying with almost total certainty the North Sea would peak between 1998 and 2000. Yet the 10 major oil companies

operating in the North Sea were confident the North Sea would not peak until 2010. They estimated by 2000 the U.K. and Norway would be producing 7.3 million barrels a day: the U.K. at 3.6 million and Norway at 3.7. It turns out in 1999 the U.K. and Norway produced just under 6.1 millions barrels a day, and by this summer they are estimated to be down to about 3.5 million barrels a day. You are talking about the most technically advanced oil companies in the world looking at their own fields and getting mesmerized by modern oil-field technology, and the mesmerization turns out to be a myth.

Yes, but does that hold true for other areas such as, say, Nigeria?

It holds true for every area with the exception of heavy oil and unconventional oil. It takes a lot more to refine them, and also they just don't come out of the ground very fast. There's less of a likelihood of production declines with heavy oil because you can't get it out of the ground fast enough to have a production decline. A perfect example of a really heavy oil field is one of the top 10 fields in the United States: the Midway-Sunset Field in Kern County, Calif. It was discovered in 1888 and is producing about 100,000 barrels a day, and it probably will for about another hundred years. But it is a massive steam-injection mining program.

What about the argument that demand will adjust to meet supply?

The likelihood of demand stopping is zero, unless we have a bird-flu pandemic. Demand is still accelerating. For the top 25 emerging markets, GDP [gross domestic product] change year-over-year is averaging up 5.5% for 25 countries. Argentina is 10.1%. Chile is 5.2%. China is 9.4%. Hong Kong, 8.2%. India, 8%. Indonesia, 5.3%. Malaysia is 5.3%. The Philippines is 4.1%. Singapore is 6%. Embedded in that is a continuation of an inexhaustible increase in the use of oil, particularly in the countries where they are barely using any oil. The wealthier they get, the faster they start using oil. The idea that $60 oil is really hurting the emerging economies is a myth. It doesn't seem to be affecting them at all. The Energy Information Administration numbers that came out recently showed the U.S. crossed 22 million barrels a day of petroleum use, a brand new record. So it is not stopping the U.S., either. To everyone's surprise, the economy grew by 4% in the third quarter, even with the hurricanes.

That was when we had almost $65 oil.

But oil supply isn't going to grow. As we move into the brutal brunt of the winter, we could easily have 45-to-60 days where demand is basically two-to-four million barrels a day higher than supply. Then we will test how robust our inventories are, because we've never experienced that kind of a stock draw before. In the United States, in some areas we must be down to hours of spare inventory on a days-use basis,

particularly in diesel fuel. When 85% of the things in Wal-Mart we buy come from China, the implications for trucks on the highway system is profound. Those trucks are chugging along getting three-to-six miles per gallon, which is why we are setting an all-time record in the use of diesel fuel. I was in Toronto a few weeks ago and there was a front-page story in the Globe and Mail about a tire shortage. The tires are massive -- 13 feet high and six feet wide -- that are used in strip-mining coal and in the oil sands. These tires have a short shelf life because they are used so intensively. We are in the middle of a rubber shortage, so there is a tire shortage. We are not going to have big growth in oil-sands production if we can't expand. We are starting to bump into capacity limitations in the funniest places: tires on big trucks, rigs, people, refineries, pipelines, tankers, well-head capacity.

What do you say to people who view you as an investment banker talking his book? That somehow your thesis on oil will help you get more business?

I'm going smack against and totally opposite from what the major oil companies are saying. So if I'm trying to get more business by disagreeing with them, that's a clever ploy. And if I turn out to be wrong, then I basically have destroyed my career. I would never take the business risk in the hope it would make me a penny an hour selling books.

Are you sticking with your forecast for $200 oil?

Thanks to John Tierney of the New York Times I've placed a $5,000 bet that oil prices will average $200 a barrel in 2010. I don't have any idea where oil prices are headed but they could easily be above $200 a barrel. At $65 a barrel, or 10 cents a cup, we are still grossly underpricing oil, which is why it doesn't have any impact on demand. As the markets get tighter, sooner or later we are going to have shortages. And the two times we ha ve ever had shortages in North America within 90 days, the price of oil went up threefold.

Your critics call you an alarmist. Do you see yourself as an alarmist?

I'm absolutely an alarmist. I'm giving as many speeches as I can because if we don't understand this it will be the single worst event of the 21st century.

What will be the consequences?

We could start fighting over oil and natural gas because we don't have enough. Look at some of the abhorrent individual behavior in the 'Seventies when people were in gas lines; people stole gas and people became violent. We could start to see regional competition, and sooner or later we have country competition and we are in the middle of a really ugly energy war.

So if reducing demand isn't an option, what do we do?

Let's actually assume there is a reasonable chance this awful peak oil and peak natural gas is real and do something about it, so that if it turns out to be real it isn't a show stopper and if we did something and it turns out it wasn't real, we bought ourselves an insurance policy. We could do something on a global basis that has the intensity of the way we tackled the Marshall Plan when we rebuilt Japan and Europe after World War II. We have to figure out how to make a massive change in the way we use oil so that if it turns out by 2020 we only have 60 million barrels a day versus 120 million barrels a day we can cope. We need to make a major shift in the way we distribute goods over long distances. Go for zero tolerance in shipping goods by trucks over long distances and get the goods on a rail bed till you get them to water and then send them on water to as close as possible to where they will be delivered. By making that transformation, we take a huge chunk out of the energy intensity of shipping goods and we also get trucks off the road system, which saves lives and has a major material impact on traffic congestion. Traffic congestion is Public Enemy No. 1 through 5 on our current fleet of passenger cars. So you probably end up getting greater passenger-car efficiency, then a huge program of new CAFE [Corporate Average Fuel Economy] standards that takes about 25 years to implement. Then we encourage business leaders to start liberating their workforce and let workers work any place they would like to and pay them by productivity versus the system we have in place. Productivity improves as does worker satisfaction. Then we re-engineer how we grow and distribute food and get away from this ridiculous system we have today of creating ornamental food that looks good all year long but doesn't taste very good because it comes from too far away. Have you ever had blueberries from Chile? To have food taste good it has to be grown locally. We are going to end up going back to bottling and canning.

What?

Do you ever cook pasta? Do you cook tomato sauce? Have you ever used local tomatoes?

Yes. Yes. Yes.

Tomatoes by can are fabulous tomatoes because they have been canned at the peak of the tomato season, and that process is still as good today as it was when I was growing up. Then we have to take a page out of Whole Foods, one of the most successful food models ever, by having a stringer system of organic farms within 20 miles of their stores. Organic farms are just victory gardens. Making all of those changes at the same time will leave our economies in better shape. One of the things we have to do to make that plan work is to

dredge all of our ports, all of our river systems, and rebuild all of our railroad systems. That will create the biggest construction activity the world has ever seen. It will also create such a shortage of blue-collar workers that the blue-collar workforce will be more prosperous than it has ever been so it won't mind paying $10 a gallon or more for gasoline.

People make the point you are close to members of the Bush administration. Yet the Bush administration doesn't seem to be acknowledging there is much of an energy problem.

Most people in Washington listen to the American Petroleum Institute and to the major oil companies. They lobby, I don't. But in Washington in October there was a two-day workshop at the International Academy of Science & Engineering on peak oil. A few weeks ago there was the first hearing in the history of the Congress on peak oil. A few months ago Energy Secretary Samuel Bodman sent a letter to ExxonMobil's Lee Raymond in his capacity as chairman of the National Petroleum Council and requested the NPC roll up its sleeves and do an intensive study of all issues related to peak oil. In the last couple of months Congressman Tom Udall and Congressman Roscoe Bartlett, one a Democrat, one a Republican, formed the Peak Oil Caucus, and around 13 or 14 congressmen have signed on. For an issue that didn't have any traction, it is gaining big momentum.

What do you say to those who say this is about the umpteenth time we've heard we're running out of oil?

Most of those now most vocal that peak oil is a silly issue or decades away are the same folks who were equally as dismissive of the naysayers who warned the U.S. natural-gas supply was in decline three-to-five years ago. They were contemptuous of a handful of us pessimists that were warning in 1999 through 2002 that we had a massive natural-gas crisis on our hands because we built almost 30% of our generation capacity for electricity and all growth from here on out on gas-powered power plants thinking we had an abundant amount of natural gas. Natural gas has peaked and we are in decline. Recently there was a pretty frightening article in The Wall Street Journal that the energy leadership of New England realizes if we have a really cold winter we could have electricity blackouts this winter. That's dangerous. If we have an electricity blackout of any intensity in the winter, we'll then have an enormous rush to rent power generators and we'll drain the diesel pool and have diesel shortages. It will begin the great American nightmare.

This is Barron's, so how do people profit from this?

If oil prices don't collapse, energy will be the best place to invest in 2006.

Even though the stocks have had such a run-up?

Yes. Maybe they will be only up 1% and everything else will be down 10%, but I doubt that. The current prices we have for energy stocks are finally high enough to start some really significant spending on badly needed projects that have been ignored for a long, long time. The major oil companies can't spend money fast enough. The average E&P budget this coming year is up 35% to 50%. The problem is there are no more drilling rigs. So the backlog in the petroleum-equipment sector is starting to build.

What kinds of companies will benefit?

Engineering. Valve companies. Flange companies. Pipe companies. Construction companies. The oil-service industry. Recently our analysts were updating our year-end earnings models. There were about three instances in a row in which earnings were expected to go from $2 in 2005 to $8 in 2007.

Why does ExxonMobil have a different view of where the oil price is headed?

I don't have the vaguest idea why they could ever think we are going back to $25 oil other than their business model desperately needs that to happen to have their long-term strategy work. High oil prices are very bad news for big oil. The higher the price, the more proven reserves they've already booked they lose in these foreign concessions, because once their projects hit their payout targets, then the host government's share rises. I think the major oil companies are lost in the wilderness right now.

Thanks, Matt.

This article appeared in Barrons on January 2, 2006.
Posted at Japan Focus January 6, 2006.