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RUSSIAN RESERVES AND OIL POTENTIAL

By

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There are two drivers in world oil supply today—Saudi Arabia and Russia. A third—Iraq—is waiting in the wings. Russia in January 2004 was the world leader in oil production, at 8.94 million barrels per day (b/d), with Saudi Arabia coming in second at 8.5 million b/d. With the Saudi performance somewhat constrained by the OPEC production quotas under which it operates. Or is supposed to operate.

At the same time, Russia certainly has not been a contributor to expanded oil consumption worldwide. Oil demand in Russia reportedly rose only fractionally last year, by just 0.1% to 0.3%. Meaning that virtually all the growth in supply became available for exports to buyers outside Russia.

Clearly, while Russia has been the engine pulling the supply train, it has been China that has soaked up much of the growth in that supply, with China now standing second only to the United States in terms of oil consumption.

Russia can look back on the year 2003 with considerable satisfaction, at least with regard to the oil sector, where production averaged a bit more than 8.4 million b/d, a gain of some 11 percent over the year 2002, but still 3 million b/d short of the oil production peak in 1988 of 11.4 million b/d.

Nonetheless, the 2003 increment of 800,000 b/d in turn was by far the largest single source of world growth in oil production last year. Not bad for an oil sector that was on the ropes during at least the first half of the 1990s.

We might divert a bit to ask, how did Kazakhstan and Azerbaijan fare in 2003? Kazakhstan is on its way to becoming a major player among suppliers to the market, while Azerbaijan of only passing importance today and likely will never match Kazakhstan. Azeri oil production and exports were flat in 2003, with no gain compared to 2002. I would not expect any growth this year and perhaps none until the latter part of 2005.

Kazakhstan conversely is gaining steadily in terms of production and exports. Like Russia, domestic oil requirements are minimal and most of the production gains can be added to exportable surpluses. Kazakhstan oil output averaged a bit more than 1 million b/d in 2003, with exports taking about 90% of supply, or 900,000 b/d. The country is heading toward a planned 3 million b/d by 2015, backed by the coming on stream in 2007 or 2008 of Kashagan, located offshore Kazakhstan in the Caspian Sea, and described as the largest oil discovery in the world over the past 25 years or so.

Interestingly, oil exports from Russia, Kazakhstan, and Azerbaijan taken together could well match if not exceed exports from Saudi Arabia this year. Does this mean that at last we can think about moving away from dependence on the Gulf? Not by any means.

OK, Russia in particular has helped dilute the importance of Gulf oil and has strengthened the diversity of supply that importers seek. But, as the saying goes, what are you going to do for me

in the future? Can the world oil market look forward to sustained annual growth in Russian oil in the coming years, or, like all good things, will this growth come to an end?

Two Possible Paths

We can agree that it will end, but we are uncertain as to when.

Two possible paths emerge for Russian oil: one, the oil sector is successful in maintaining its growth trend, albeit at reduced percentage rates as the base expands; or two, problems arise that bring this growth trend to an end.

The importance to the Russian economy of a continuing high oil price, in conjunction with steadily increasing exports, cannot be understated. Nor should we ignore the expanding use of trade in oil and natural gas to re-establish a dependency between most of the former Soviet republics and Russia, a dependency that contains future, if not current, political implications.

When the United States looks north we see Canada, our leading supplier of oil and natural gas. When China looks north it sees Russia as a source of oil and natural gas supplies to cover its growing gap between supply and demand. Should we foster that energy relationship, as a way of reducing the Chinese presence in the Gulf, and as a way of expanding world oil and gas supplies?

The oil and natural gas potential of Eastern Siberia will remain just that, a potential, unless and until these fuels can be moved by pipeline to markets in China and the Far East, particularly to serve markets in Japan. But, development, whenever it takes place, will be equally important to areas along the pipeline routes inside Russia

However, the reserve base in Eastern Siberia currently falls well short of supporting an oil pipeline to the Pacific Coast. An oil exploration and development program, if successful, might support such a pipeline by the middle of the coming decade. Oil coming out of West Siberia could support a line to China but that prospect is now on the back burner, in part because of the Khodorkovsky affair. In the interim, Russia will do what it can to maximize oil exports to China by rail, smaller volumes and higher costs than by pipeline, but it is important for Russia to demonstrate that it does value the Chinese market and is a supplier that can be counted on.

In contrast to oil, gas reserves in East Siberia are a known quantity, and plans have been formulated to develop the Kovykta gas field and pipeline this gas to markets in China, South Korea—bypassing North Korea—and Japan. But the president of TNK-BP has stated that a decision to move forward on the project must be made this year, lest the market be lost to LNG.

Close political linkages between China and Russia likely will follow close energy interdependencies, especially in natural gas sales. Would that be in our interests?

In the continuing U.S. search for oil supplies outside the Gulf, might some kind of arrangement be struck with Russia? President Putin, playing to the security concerns of the United States, has

said that Russia would like to secure 10% of the U.S. market. But we will not set aside that 10%. Russia will have to earn it, through the workings of the world oil market.

Will last year's absolute growth be repeated in 2004? The Energy Ministry has predicted a 6.6% growth in production for the first quarter of 2004.

There are constraints to consider: export pipeline limitations, taxation levels, and the impact of the Khodorkovsky affair. Nonetheless, I would judge that the growth anticipated for the first quarter can be extrapolated for the year as a whole, providing an increment of roughly 500,000 b/d, still very much worrisome for OPEC, in that again most of these incremental barrels will be available for export.

Pessimists at Work

As a pessimist, I can see a Russian oil industry with certain of the same characteristics today that caused the CIA to render its 1977 prediction of troubles ahead.

Is the sector sufficiently transparent to provide us with what we really need to know, if we are to be able to make reasoned judgments? Are the oilfields being pulled too hard to take advantage of high prices? Is sufficient new investment being made? Are the production gains just one-time gains deriving from the application of western technology and managerial know-how? Where are the new discoveries needed both to offset declines at the older fields and to provide for continued growth? What should we make of the statement by a LUKoil official that his company will cut investments in oil production this year by 15%?

Moreover, the Russian media has reported that virtually none of the oil companies were carrying out geological surveys or the drilling of new wells this year but were simply producing those fields discovered in Soviet times.

This past January, Russia's Natural Resources Ministry finished a comprehensive review of the oil and gas companies working in the country. Conclusions of the ministry's officials were disheartening, according to the Russian press. These officials stated that development of oil and gas fields was being inefficiently carried out and that a significant loss to the state had occurred.

The issue is this. In Russian terms it is called "selective production." Under this approach, a company developing an oil field selects the largest and most accessible oil-bearing formations and produces only them. Moreover, associated natural gas is flared off and low yield wells are simply shut down.

At the beginning of 2003, more than 34% of oil wells under Yukos control stood inactive; some 51% of Sibneft wells were inactive.

The over-arching Yukos corporate strategy has been that of maximizing income and that exploration in new areas will probably be not be a primary factor in the near term. The growth demonstrated by Yukos to date has been based largely on increasing efficiency in old fields. Yukos, the second leading Russian producer, behind LUKoil, points to benefits derived from horizontal drilling and water flooding, raising average well production rates across the board. All well and good, but does this translate into faster depletion rates? Quite probably.

Khodorkovsky, in explaining how his company, Yukos, had been able to achieve such high rates of growth, saw nothing wrong in maximizing oil field yields in the shortest possible time. He suggested that new technologies would appear in the future that would allow quick and cheap extraction of the remaining oil.

Optimists at Work

Now, to balance our story, we should put to work the crystal ball set aside for optimists. What do we find? Are there answers to the questions, can the growth in oil production be sustained beyond the near term? Could Russian oil be restored to its glory days of the 1980s?

A headline in the recent Russian press read as follows: “Russia Ready to Take on the Oil World.” The text noted that Russian oilmen have pledged to overtake Saudi Arabia and position Russia as the world’s leader within 5 years. By 2009, Russian crude output could reach 11 million b/d.

Is the Russian oil sector being realistic?

- The geologic potential is there, although much of this remaining potential is found in very inhospitable areas.
- Ray Leonard, a Yukos official, and an American geologist with good international credentials, following considerable investigation, has placed Russian proven reserves at between 97 to 119 billion barrels, roughly double that level generally accepted and matching those of Iraq.
- The answer is yes, if Russian oil companies, against the background of high oil prices, continue to maximize current yields, but at the expense of the future.
- The answer is yes, if Russia improves its investment climate, and that means “the rule of law” must be firmly in place.
- The answer is yes, if foreign oil investors respond, and that means the world oil market must be of sufficient attraction to offset the risks of doing business in Russia.

Two Guidelines

There are two guidelines we can draw upon in our attempts to judge future Russian oil production and export levels.

First, we can look to the recently approved national energy strategy that takes the country out to the year 2020. Two scenarios have been set out, an optimistic case and a moderate case. Looking at the optimistic case for 2010, we find that production hits about 9.8 million b/d, with exports coming in at under 5.6 million b/d. The moderate case for 2010 has production slightly

exceeding 8.9 million b/d, and exports just under 5 million b/d. Exports for both cases relate just to crude oil, and do not include petroleum products.

The optimistic case for the year 2020 shows minimal growth for both production and exports and does not return Russia to its peak of 11.4 million b/d in 1988.

The second guideline, and the one I prefer, comes from an internal study carried out by Yukos.

Yukos, in its study, also projected production out to the year 2020, and found that:

- Oil production will peak by the year 2010, somewhat exceeding 10 million b/d.
- Holding at that level out to the year 2015,
- Then a very slow decline sets in,
- Dropping production to just below 10 million b/d by the year 2020.

The two leading oil producing regions—West Siberia and the Urals-Volga—will both peak in 2010, as will Timan-Pechora.

Given that, where will new oil supplies come from to offset production declines at the older fields? Russia must embark on a major exploration effort, and soon, if new supply is to both offset production declines and provide for continued growth. But, I have yet to see any evidence of that.

- East Siberia, which produced just 40,000 b/d in 2001, is to expand to 1.34 million b/d by 2020. Beyond 2010, all the growth is to be provided by undiscovered fields.
- The Russian Shelf, also having produced just 40,000 b/d in 2001, is also presumed to be producing in excess of 1.3 million b/d by 2020. All of the growth beyond 2015 is to be provided by undiscovered fields.

But what does the future hold if exploration and development is delayed, or unsuccessful? If these two regions fail to come to the rescue, so to speak, then we might expect that Russian oil production would be around 7 million b/d by 2020.

Accepting either of these guidelines tells us that for Russia the current decade is presumed to be a decade of growth, but that the next decade will be part constancy, part decline. All of the decline will have to come out of exports, and that in turn will help reinforce the position of OPEC in the world oil market.

Concluding Observations

Earlier I had noted that Russia has now taken the lead from Saudi Arabia in terms of oil production. But the Saudi oil sector has something that Russia does not have, and likely never will.

And that is spare producing capacity, which comes in handy both as a political and oil market lever of power. Indeed, I am inclined to judge that the importance of Saudi oil is based as much on its spare producing capacity as it is on its position as an oil exporter. Even more so in times of supply disruptions, such as the military intervention in Iraq last year that took Iraqi oil off the market.

Saudi Arabia told the United States that its spare capacity would be put to work, to offset the loss of Iraqi oil, and therefore the United States need not tap into its Strategic Petroleum Reserve.

They did, and we didn't.

Who might ever rival Saudi Arabia, in terms of production, exports and most importantly, spare capacity? Russia might, but only in part, for it is unlikely ever to deliberately develop spare producing capacity.

But Iraq could replace Saudi Arabia, at least in the minds of the Iraqis I have met with. A broad and successful exploration and development program, plus raising the depletion rate, currently around 1%, to 4% to 5%, would do it, so they say, taking Iraqi oil to as much as 12 million b/d.

But when? Certainly not this decade, and not without foreign investment. More importantly, might Iraq ever financially justify the establishment of spare producing capacity? I find that outside the realm of reality.

So, it is back to the future, and that means Saudi Arabia, which has no substitute today nor tomorrow.