REUTERS/NIR ELIAS

HOW NATURAL GAS COULD CHANGE THE HOLY LAND

The world's biggest gas discovery of 2009 came off the coast of Israel. The find could make the country self sufficient in energy. But there are pitfalls ahead

BY ARI RABINOVITCH
TEL AVIV, NOV 11

Using the Bible as its guide, Texas-based energy company Zion Oil and Gas has searched for oil in the Holy Land for a decade. The company uses a map of the 12 ancient tribes of Israel and the biblical assertion -- "the foot of Asher to be dipped in oil on the head of Joseph" -- as an unlikely guide to help it decide where to drill.

Sitting beneath an 18-storey rig in northern Israel, Zion's CEO Richard Rinberg translates that reference by pointing to an area on the map where the territory of Asher -- long and thin and shaped like a leg -- once pushed into the land that belonged to Joseph's sons.

"It's exactly where we are," said Rinberg, a good-humoured Orthodox Jew with a background in accounting and a belief that this biblical prophecy is backed by concrete scientific data.

Founded by John Brown, a Christian Zionist who believes the Bible prophesied

DRILL, BABY, DRILL: An oil rig belonging to Zion Oil & Gas in Karkur, northern Israel, October 17, 2010. The company uses the bible to help guide where it should drill. **REUTERS/NIR ELIAS**

the discovery of oil in Israel, Zion is just one of a pack of energy companies that has spent years, even decades, surveying and drilling around Israel and its territorial waters. Like many, Zion has yet to find commercial amounts of oil or gas.

But faith runs deep in this part of the world, and Zion and its fellow prospectors were emboldened by the discovery last year by Texas-based Noble Energy of trillions of cubic feet of natural gas in the offshore Tamar field. "There's little doubt that optimism in oil and gas exploration, both offshore and onshore, has increased," said Rinberg.

Tamar was the world's largest gas discovery of 2009. Together with a second find -- potentially twice as big -- in another offshore field called Leviathan, it is a potential game changer for the Jewish state, a country with few natural resources and many enemies. Already the Tamar find has triggered drilling fever and immense volatility in small-cap oil firm stocks on the Tel Aviv Stock Exchange. The government estimates that when the gas begins to flow in 2013 it will be worth tens of billions of dollars for Israel, boost the country's current account and help cut its dependence on energy imports.

But could the coming windfall prove an economic, or even political, curse as much as a blessing? Experts from the central bank governor down are worried that the billions in extra revenue will strengthen the Israeli currency to such an extent that the country's other exports -- from hi-tech hardware to avocadoes -- will no longer be competitive abroad.

Others complain that government plans to increase resource taxes will kill the gas sector at birth, or even lead Washington to sue its ally in the International Court of Justice. Last, but by no means least in this explosive part of the world, the gas discovery could fuel tensions with Israel's neighbours. Lebanon is racing to drill off its coast, fearful that Israel might deplete shared reserves in the Mediterranean ocean bed, while a deal Israel has with Egypt for gas supply could be hit.

"The development of (Israel's) gas sector still should not be taken for granted," Infrastructure Minister Uzi Landau said earlier this year, emphasising the need for further planning to achieve energy security. "We must not hinder it so we can fully enjoy the enormous potential."

"ISRAEL IS ENERGY INDEPENDENT!"

BY EARLY 2009, PROSPECTORS had spent 50 years and drilled more than 400 dry wells around Israel in search of oil or gas. Many had resigned themselves to the fact that there were no reserves to be found.

Then, in January of that year, a consortium led by Noble and Israel's Delek Energy said it had hit natural gas in the deep-sea Tamar gas field, some 90 km from the coastal city of Haifa. "The implications of this discovery to

Israel, Noble Energy, and our partners cannot be overstated," Charles Davidson, Noble's president, chairman and chief executive, said a few weeks after the announcement.

The discovery breathed new life into Israel's energy market; investors poured millions of dollars into any company hinting at the next jackpot. Shares in small, unproven energy companies doubled and tripled. The government divvied out even more territory, both on- and offshore. Excitement rose along with estimates of the reserves at Tamar.

In June this year, Yitzhak Tshuva, owner of Delek Energy's parent company, Delek Group, and one of the richest men in Israel, stood on a podium at a conference, put on a Jewish skullcap, recited the prayer that thanks God for reaching a special moment, and announced: "The state of Israel is energy independent!"

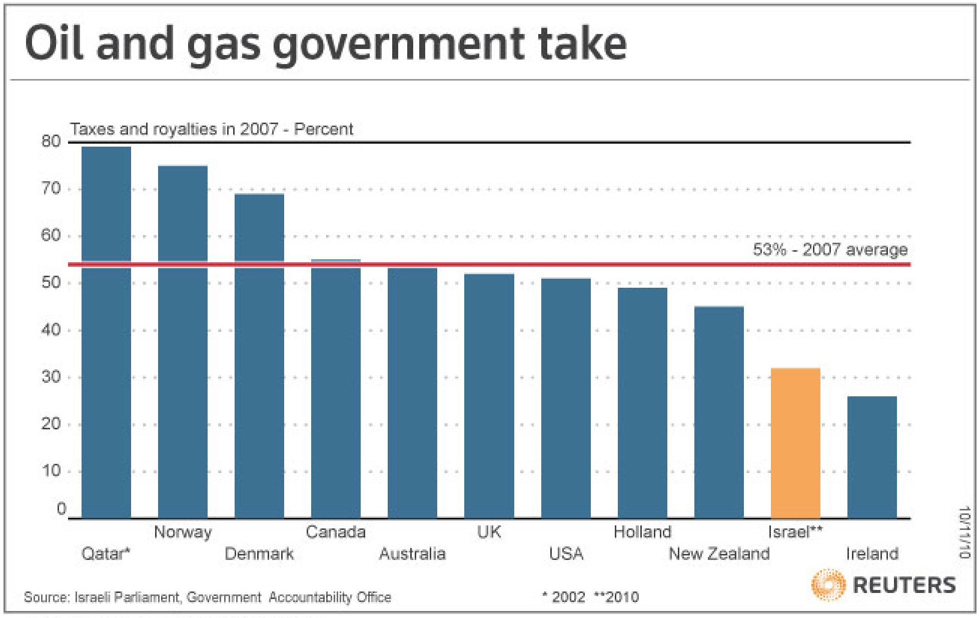
"THE IMPLICATIONS OF THIS DISCOVERY TO ISRAEL, NOBLE ENERGY, AND OUR PARTNERS CANNOT BE OVERSTATED . "

Tamar, he said, had an estimated 8.4 trillion cubic feet of gas, the equivalent of 1.5 billion barrels of oil. Even better, a second Noble-Delek group had discovered gas in the Leviathan field that could prove twice as big. Altogether, the gas finds will be enough to meet Israel's annual consumption of 80 million barrels of oil equivalent for decades and make the country, now dependent on coal and natural gas imports, an energy exporter. A Citigroup report in September said the discoveries could bring up to $4 billion in annual revenue for Israel.

Even as Israel tallied up the reasons to celebrate, though, debate began about just what the gas bonanza could mean for the country.

DUTCH DISEASE, NORWEGIAN CURE

FORMER ISRAELI PRIME MINISTER Golda Meir famously used to joke that Moses led the Jews through the desert for 40 years to the one place in the Middle East with no oil. In many ways, that's been a good thing. Much in the way of other small nations who have become rich on nous rather than natural resources -- think Singapore, Hong Kong -- Israel's lack of oil or gold or iron ore has helped build an economy rich in innovation and free enterprise.



Reuters graphic/Vincent Flasseur, Ari Rabinovitch

Those qualities can die pretty quickly when a country comes into huge piles of money, as the Netherlands found in the 1960s when it discovered natural gas deposits in the North Sea. As the Dutch currency strengthened it made non-oil exports less competitive. Manufacturing sectors declined and the economy soured. Could the syndrome, dubbed the "Dutch disease" or the resource curse, infect Israel as well?

Central Bank Governor Stanley Fischer has said as much over the past few months. Citigroup's emerging markets analyst David Lubin also thinks it's possible "that a form of 'Dutch Disease' ends up eroding some of the gains on Israel's current account, as a gas-induced exchange rate appreciation hurts other exports." And Finance Minister Yuval Steinitz is concerned enough that he recently met the Dutch finance minister "to learn from its experience and to avoid the same problem".

But Amit Mor, a top Israeli energy expert who often consults for the World Bank, said Israel was unlikely to go the same way as the Netherlands. The difference, he said, is that in the Netherlands and other countries that have suffered from Dutch disease, the new revenue accounted for 20 to 30 percent of Gross Domestic Product, sometimes even more. Revenue from Israel's gas finds is likely to rise to no more than two percent of GDP by 2020, he said. "The contribution of gas sales to the economy, although important, is not going to be as significant as the high-tech or other export sectors of Israel," Mor said.

And even if gas ends up contributing a higher proportion of Israel's GDP -- the "best case" scenario would be up to 10 percent, according to a source familiar with official deliberations who wished to remain anonymous due to the sensitivity of the issue -- meltdown in other parts of the economy is avoidable. Norway found oil in the North Sea shortly after the Netherlands struck gas, but has been much smarter about protecting its economy. At first it limited the amount of oil produced. Later, it created a government fund to manage and invest the country's petroleum wealth. The fund's assets are currently valued at about $500 billion.

Other countries, like Chile and Azerbaijan, have copied Norway's example, leading to speculation that Israel may set up its own sovereign wealth fund. The source familiar with official thinking told Reuters that the fund option had been talked about but would not be adopted in the immediate future. "The Norwegian fund was created because of the great impact they knew it would have on the economy. It was meant to deal with a problem that was much more threatening in scope than we expect here," the source said.

CHANGING THE RULES

THERE"S STILL A LOT to do. The Israeli government has yet to decide how much it will tax the companies that will produce the gas. The country's law on royalties dates to 1952: written to encourage exploration, it set the royalty level on gas and oil income at 12.5

THE WAY AHEAD?: Israel's Finance Minister Yuval Steinitz (L) and the Finance Ministry advisory committee's chairman, Hebrew University economist Eytan Sheshinski during a press conference in Jerusalem, November 10. The committee recommended raising the government's take on oil and gas revenues . **REUTERS/DANIEL BAR-ON**

percent. That's one of the lowest rates in the world. While company taxes lift Israel's total take from commodities companies to about 32 percent, many in Israel want the royalty rate increased.

In April, the Finance Ministry formed a committee led by economist Eytan Sheshinski, an expert in public finance, to study how much the government take should be. The committee is set to deliver an interim report on Nov. 15.

Unwilling to wait for the Sheshinski committee's views, a group of government and opposition legislators have drafted a bill to raise the gas and oil royalty level to 20 percent. "In the past decade, the average government take in countries (with similar fiscal policies) increased from 49 to 53 percent, while in Israel it went down from 39 to 32 percent due to a decrease in company tax," a report by the parliamentarians said, signalling room for a hike.

Along with an increase in royalties, or perhaps in its place, one option under discussion is a progressive corporate tax that increases with revenues generated. Any final decision will have to pass a parliamentary vote.

Predictably, energy companies are furious and argue that any new tax would violate existing agreements. "I am very worried, both by the process and its essence," Delek Energy Chief Executive Gideon Tadmor told Reuters. "We came and invested on the basis of a commitment, and agreement with the government along a specific fiscal regime. To come retrospectively after the discoveries were made and the drilling succeeded, is not moral, is illegal, and not wise."

The Noble-Delek consortium says its total investment could reach $3 billion, not including the Leviathan field. Tadmor said that sort of investment could disappear if Israel changes its current terms. Its waters are tough to explore, he said, due to the lack of infrastructure, an Arab boycott scaring away many foreign energy partners and the lack of government participation.

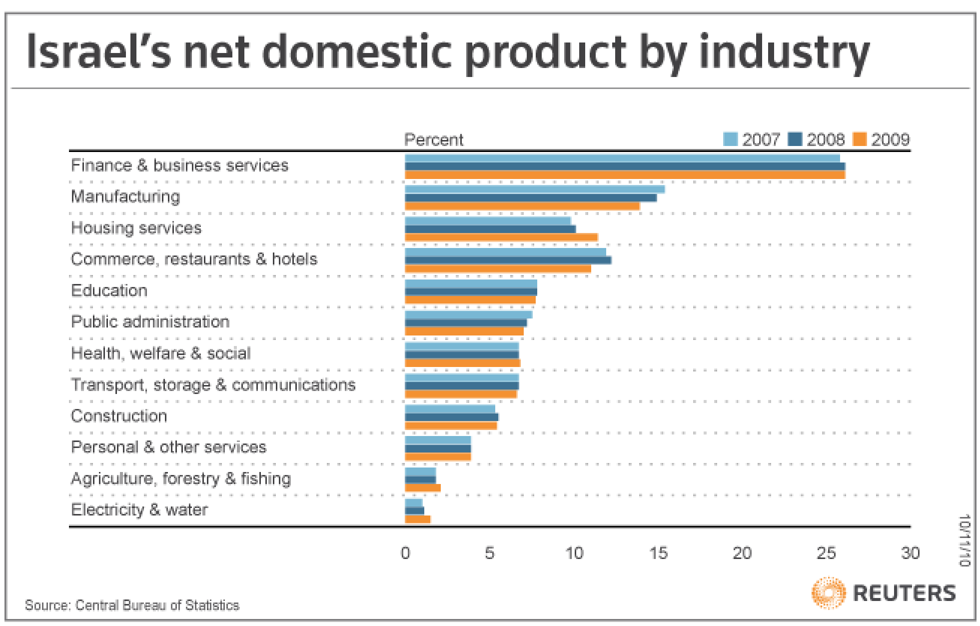
"You need to think 10 steps ahead," Tadmor said. "You need to think of further discoveries and of safeguarding the incentives so companies come drill."

An industry insider who would not be named because of the sensitivities of the issue said politicians were acting like "Robin Hood" by trying to shower the public with wealth at the companies' expense. It could backfire, he said, because an increase to even 20 percent in royalties is "tremendous".

Fields with big reserves, like Tamar, could tolerate the increase, but not smaller ones. Eventually there would be less drilling, less revenue and less wealth, he said.

Speaking for Noble at an Israeli parliamentary committee on Oct. 5, former U.S. judge Abraham Sofaer said the dispute could even be brought before the International Court of Justice. "The U.S. government will have to decide whether to act on behalf of Noble in order to receive full compensation for the damages caused to it," a committee spokesman quoted Sofaer as saying. "I don't need to tell you what a tragedy it will be if two allies like the U.S. and Israel will have to resolve disagreements in a European court."

Finance Minister Yuval Steinitz dismissed the idea last month, pointing out that countless countries have changed government policies on royalties in the past. Just three years ago, the Canadian province of Alberta hiked its royalty rate. The year before that, Alaska pushed up taxes on oil companies and China



Reuters graphic/Vincent Flasseur, Ari Rabinovitch adopted a windfall tax on oil.

"No court in Israel or in the world will say to the government of Israel that it can't do what was done in the United States or in Great Britain," he said.

"DRILLING IN BORDER AREAS AIMS TO TAKE ADVANTAGE OF COMMON FIELDS WHICH MAY INFRINGE ON LEBANON'S RIGHTS."

In a letter to Steinitz seen by Reuters, Marc Sievers, charge d'affaires at the U.S. embassy in Tel Aviv, said the possibility that the Sheshinski committee will recommend a retroactive change "undermines confidence in the stability of Israeli fiscal policy and creates barriers to international investment.

"I urge you to take these concerns into account and, at the very least, to limit - publicly and in writing - application of the committee's recommendation to future leases and licenses," Sievers wrote. A spokesman for the embassy would not comment on the letter, which did not mention any steps the United States might take.

Still, raising taxes on resource companies is popular with the Israeli public, and many lawmakers say they will not be swayed. One sponsor of the bill, Shelly Yacimovich, in an open letter to the media accused Delek owner Tshuva, Delek Energy Chief Executive Tadmor and lobbyists of blocking a similar law from being passed in 2001 and "aggressively and continuously" torpedoing efforts ever since.

At a forum in Tel Aviv last month, veteran geologist Yossi Langotsky, considered the father of Israeli gas exploration - the Tamar site is named after his granddaughter - declared that Israel needed to benefit more from the discoveries. Big companies had backed out of projects in the past, he said, pointing to UK -based BG Group's 2005 withdrawal from the region. Others would still come and operate in Israel, he assured the crowd.

REGIONAL EFFECT

RIPPLES FROM THE OFFSHORE discoveries have also reached the shores of Israel's neighbours. A U.S. Geological Survey study this year said the region could hold 122 trillion cubic feet (3.4 trillion cubic metres) of recoverable gas -- making it one of the world's richest deposits. It estimated there to be 1.7 billion barrels of oil, as well.

Lebanon, to Israel's north, says it has identified promising quantities of natural gas on its side of the two countries' undefined sea border. Worried that companies on the Israeli side will extract shared reserves before it has a chance to benefit, Lebanon in August rushed through approval of a law that sets out the process of surveying, exploration and production of gas, and calls for a sovereign wealth fund to manage and invest potential energy revenues.

"If we assume that Israel is drilling within the borders, then they could be digging in a common field," Lebanese lawmaker Ali Hassan Khalil told Reuters in July. "Drilling in border areas aims to take advantage of common fields, which may infringe on Lebanon's rights".

But even if everything runs smoothly in Lebanon, Beirut is likely to remain at least three or four years behind the Israelis. Lebanon still has to identify blocs, supply data to interested investors, select bidders and have companies start exploration work - all of which Israel has done.

Lebanon has said it would use all means to defend its rights if Israel is found drilling on

HARD SLOG: A worker stands besides drilling equipment in northern Israel. After decades of dry wells, the oil and gas industry gas new momentum
REUTERS/NIR ELIAS

its territory. Israeli Infrastructure Minister Uzi Landau returned fire, saying Israel will not hesitate to use force to defend its gas fields. Delek has said both the Tamar and Leviathan fields lie within Israeli waters.

"I see it becoming a source of considerable tension until the location and the scale of the reservoirs are better understood," Catherine Hunter, a Levantine energy analyst at IHS in London, told Reuters.

That's not the only problem. Gas heavyweight Egypt, one of two Arab countries officially at peace with Israel, signed a 20-year agreement in 2005 to supply the Jewish state with 1.7 billion cubic metres of gas annually via an underwater pipeline. Israeli officials have told Reuters that Israel is even now not importing the full amount. Energy firms in Israel argue that locally produced natural gas should have priority over the Egyptian supply.

One senior Israeli government energy official who declined to be identified said the agreement with Egypt would not be affected. "There will always be a need for another source of gas, for both economic and political reasons," he said. "Most of the licenses distributed have been to Noble Energy and Delek, so in principle, we need the Egyptian gas for competition."

STOCK EXCHANGE CHAOS

AT THE MOMENT, ISRAEL'S small-cap oil companies seem focused not on competition but on the stock market frenzy created by last year's Tamar discovery.

Take Givot Olam which drills at the Meged oil field 20 km (12 miles) outside of Tel Aviv. Years ago, the company's chief explorer Tovia Luskin wrote a letter to Lubovitcher Rabbi Menachem Schneerson, asking for his blessing. In the letter he said the Bible and Jewish commentary both contain "a poetic description of fundamental principles of modern petroleum geology". So far, Givot Olam has not produced any oil. But it has quadrupled in value on the Tel Aviv Stock Exchange since Tamar.

"THERE WILL ALWAYS BE A NEED FOR ANOTHER SOURCE OF GAS, FOR BOTH ECONOMIC AND POLITICAL REASONS."

Other small energy stocks have seen similar increases. Shares in Sefen Industries and Investments soared 290 percent in a single day in September after word spread that it was buying a small stake in an offshore license.

Analysts say a pattern has emerged, with companies publishing vague, often repetitive reports that offer no new information but propel their stock prices higher. Ester Levanon, managing director of the Tel Aviv Stock Exchange, recently told an Israeli radio station that many investors cannot tell if the reports companies make refer to actual discoveries or simply further exploration attempts. "I certainly think there is a problem that must be dealt with," Levanon said.

Israel's regulators say they are doing just that. The Infrastructure Ministry, which wants to make gas the main energy source in Israel, has promised to bring order to the exploration process and in September froze the transfer of licensing rights between companies.

The Israel Securities Authority (ISA), the country's version of the Securities and Exchange Commission, has begun writing new rules on how gas and oil companies report progress to the stock exchange. Ori Katzir, a spokesman for the ISA, says they will have to make more ordered, organised reports. "We hope to be finished by the end of the year," he told Reuters, without providing details.

On Sept. 19 the ISA halted trade in Givot Olam after the company presented an ambiguous engineering report on the status of its drilling site, saying the company needed to "fill-in and clarify its findings and their consequences". The company quickly called a meeting of its shareholders to reassure them. But the televised meeting ended up headlining Israel's evening news after it erupted into screaming matches and threats. Shareholders demanded answers as company geologist Luskin stood by his positive forecasts.

When trading resumed a week later, the company lost 25 percent of its market capitalisation, or 300 million shekels ($81 million), in a single day.

(Editing by Simon Robinson and Sara Ledwith)

COVER PHOTO: A muddy run-off splashes beside an oil rig belonging to Zion Oil & Gas in Karkur, northern Israel, October 17, 2010. **REUTERS/**NIR ELIAS

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