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## Gas Deposits Off Israel and Gaza Opening Vision of Joint Ventures

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Drilling deep below the seas off Israel and the Gaza Strip, foreign energy companies are discovering gas reserves that could lift the Palestinian economy and give Israel its first taste of energy independence.

Industry experts, including those on this giant platform, say the Palestinians and Israelis will both profit if they can work together in a high-stakes partnership. They need each other for the efficient development of these offshore reserves, since neither side alone can fully afford the billion-dollar investment in pipelines and pumping facilities that is being sketched out, the experts say.

The Palestinians and Israelis shy away from discussing a collaboration, and territorial issues and long-lasting hostilities could easily intrude. But both sides speak optimistically of the potential bonanza.

"This is important to the Palestinian economy because we will not be permanently dependent on foreign aid," said Nabil Shaath, the Palestinian planning minister, who expects gas deposits here to supply all local electricity needs within three years, with a lot left over for exports.

Yehezkeel Druckman, Israel's petroleum commissioner, who supervises the offshore explorations from a tiny two-room office in the Ministry of National Infrastructures, is also full of hope.

He recently calculated that Israel now has some three trillion to five trillion cubic feet of proven gas reserves. That is a tenth the size of Egypt's reserves, which are among the world's largest. But it is enough to supply Israel's current electricity network for 25 years, Mr. Druckman estimated. "And there may be more," he said this week.

Systematic exploration began this year, and Israeli officials are encouraged because large deposits have already been identified, though the ultimate quantity -- and quality -- cannot be known until the gas starts flowing, and many things can go awry before a profitable production.

But for Israel, a country that never had energy reserves of its own and that for political reasons has been forced to import almost all its fuel from far beyond the Middle East, the discoveries are stunning.

"Israelis used to joke about how Moses wandered in the desert for 40 years and ended up in the one place that had no energy," said Leonard Coburn, the top Middle East specialist at the Energy Department in Washington. "All of a sudden they have energy. It is an extraordinary change."

Now, just months after sinking its diamond-tipped bit into a gas find near the Israeli coast, this drilling platform has moved to anchor 19 miles off the Gaza Strip, in 1,900 feet of water, poised to complete the first exploration project in Palestinian waters.

Even before the Southern Cross bored into the seabed here, industry executives were confidently anticipating reserves larger than the Palestinians could profitably absorb -- but ones that could readily be sold to Israel to supplement its own newly discovered deposits. "What else are we going to do with commercial quantities of gas?" said Said Khoury, co-owner of Consolidated Contractors Company, the Palestinian minority partner in the enterprise.

Outside of narrow industry circles and the upper echelons of both governments, there is still little awareness of the scope of the exploration or the dimensions of the projected reserves.

The Israeli government, now working on a plan for a long-term conversion to gas, has yet to publish its estimates of its deposits and appears reluctant to advertise its collaboration with what could be a parallel bonanza for the Palestinians.

Prime Minister Ehud Barak's office declined to comment on the issue, though Defense Ministry officials said Mr. Barak had ordered the Israeli Navy not to interfere with the Gaza drilling. On the Palestinian side officials are also close-mouthed, declining even to reveal the terms of their exploration agreement.

Without recent advances in deep-water drilling and in sonogram-style geological scanning, it would not have been technically or financially feasible to pinpoint these deposits, say executives at the BG Group, the giant British energy company that has an exclusive 25-year concession in Gazan waters and licenses for 1,500 square miles off Israel.

The company says it has already spent \$25 million on the joint exploration effort and will spend "hundreds of millions" more in the next two years.

Peering through a microscope at the first core sample unearthed from Gaza Marine 1, the geologists on board the Southern Cross liked what they saw: distinct crystals packed just evenly and densely enough to trap natural gas. "Good porosity," pronounced Hugh Miller, an Alabamian who heads BG's operations in Israel and the Palestinian Authority.

Outside, burly roustabouts wrestled fresh lengths of pipe onto the mile-long drill, now just 600 feet away from its target reservoir of what BG believes are gas-saturated sands. "Just like a big Black & Decker," shouted Anthony Clark, the rig's chief drilling engineer, as the drill drove deeper into the ancient sediment.

Though the seas here are smooth and the weather benign, the BG Group -- the \$25 billion successor to the former British Gas, with energy ventures throughout the world -- says the politics of the operation are as daunting as any it has ever faced.

Last year, BG became the first big international energy company to bid for an exploration concession in Israel's history, effectively ending what Israelis had long denounced as a tacit boycott of their country by the oil and gas majors. But when Yassir Arafat, president of the Palestinian Authority, then signed a deal in London in November granting BG an exclusive 25-year concession to explore for oil and gas off Gaza, the company knew it was embarking on legally uncharted waters.

To begin with, it was not clear if there was such a thing as Palestinian territorial waters, given the Authority's nonsovereign status. The 1993 Oslo accords assigned the Palestinians a 20-by-20-mile swath of sea for limited "fishing, recreation, and economic activity," but said nothing about resources beneath the Mediterranean.

But by default, the Authority and BG reasoned, the area between Egypt's eastern maritime boundary and Israel's self-identified exploration zone was Palestinian. Though Israel could restrict shipping off Gaza for security reasons, it never claimed economic rights there.

With the quiet assent of Prime Minister Barak, BG negotiated an agreement with the Palestinians to spend up to \$500 million of its money on natural gas development off Gaza. Under still undisclosed terms, the Palestinian Authority will get a share of the production and can tax the business. (In Israel, the government collects 12.5 percent of any gas discovered and a 36 percent tax on profits.)

"We want to work this play as much as possible without boundaries, because the rocks don't have boundaries," Mr. Miller said. "The endgame here is to have Palestinian gas in the Israeli market, which has to be good for peace."

So far, the gas business seems in better shape than the peace effort. The Israelis and Palestinians are both respecting the unofficial division of coastal exploration rights, despite angry objections from Israeli rightists and some local energy companies, who are suing in Israeli courts to stop the Gaza drilling.

But in a warning that a different Israeli government could stop this venture cold, Danny Naveh, a leader of the opposition Likud Party, charged that Mr. Barak could not authorize Palestinian exploitation of what he termed Israeli territory without parliamentary approval.

Further complicating matters, gas has been located in at least two large structures straddling the fuzzily demarcated line between Israeli and Palestinian waters. The two sides must decide how to allocate those reserves, which could have a production life of 10 to 20 years.

To efficiently develop these reserves, Israel and the Palestinians would have to work together. Neither can afford entirely separate plants and pipelines for pumping the gas to their respective markets -- an investment that if undertaken jointly would still approach \$1 billion, Mr. Miller and other experts say.

But the crux of this partnership, say officials on both sides, should be a new Palestinian role as an energy supplier to Israel, where electricity demand is 10 times greater than the Palestinians' and growing by 7 percent yearly. In addition to Israel, said Mr. Shaath, the Palestinian planning minister, other potential markets for surplus Palestinian gas include Jordan and, in time, Turkish or European customers of a planned Egyptian pipeline.

Eventually, the discoveries could provide not just energy to Israelis and Palestinians but fresh water, too. Natural gas would make desalination plants an affordable adjunct to power plants serving the densely populated Gazan and Israeli seacoast, helping to resolve an acute potable water scarcity that is one of the region's most difficult diplomatic and environmental problems.

Even with offshore gas, though, Israelis and Palestinians will be importing oil for most of their transportation needs, experts predict.

But for the Palestinians, local gas would bring a welcome sense of energy independence from Israel, which now supplies all their electricity. The Palestinians already plan to use the offshore gas at three new power stations they are building.

For the economically robust Israelis, whose gas will start flowing first, the impact of this unexpected resource could be as much psychological as financial.

Because it had no choice, Israel has always relied on fuel from far outside the Arab world: it now ships in coal from Australia, Colombia and South Africa, and crude from Norway, Britain and Mexico. Its one brief experience as an energy producer was after the 1973 war in the occupied oil fields of the Sinai Desert, handed back to Egypt six years later.

Having its own gas reserves -- plus access to Palestinian deposits -- should make it easier for Israel to buy additional gas from Egypt, which is now building a gas pipeline to the Israeli border, analysts say. Israel's objection to Egyptian gas was fear of dependence on a single Arab supplier.

Yossi Meiman, an Israeli whose company proposed undersea piping of Egyptian gas to Israel's coastal power plants, expects Israel and the Palestinians to develop an integrated gas network. "If you want to live in a region where people are not throwing stones at one another," he said, "the best way of doing it is by creating mutual dependency."