Never too early to plan

Delays in exploration and production could be blessings

ECONOMICS & POLICY OIL & GAS 2014: ON HOLD October 2, 2014 by Matt Nash

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This article is part of Executive's special report on the oil and gas sector. Read more stories as they're published here, or pick up October's issue at newsstands in Lebanon.

There's a joke in the oil industry that goes: "The lead drilling engineer for an exploration well walks into his boss' office and says, 'Well, I've got good news and bad news.' 'What's the bad news', the boss asks. 'We didn't find oil,' the engineer replies. Curious, the boss asks, 'Ok, what's the good news?' 'We didn't find gas.'"

While natural gas is a lucrative resource — just ask Qatar — which was identified by the US Energy Information Administration (EIA) in 2013 as the world's fastest growing fossil fuel in terms of consumption, the joke's punch line comes in part from the fact that gas is difficult and often costly to transport. The two methods for moving natural gas from discovery source to refinery and then to market are pipelines and liquefied natural gas (LNG) terminals. LNG is the preferred method of shipment for long hauls, but the liquefaction plants cost billions of dollars to build and depend on sufficient quantities of natural gas to be worth constructing. This makes an export plan perhaps the most important consideration for any country with significant natural gas reserves.

As Lebanon has not yet started any offshore drilling, it is far too early to speak of reserves — which, by definition, are commercially exploitable quantities of a resource — but it is not too early to plan. In 2010 the US Geological Survey "estimated a mean of 1.7 billion barrels of recoverable oil and a mean of 122 trillion cubic feet (tcf) of recoverable gas in the Levant Basin Province," a subsea and coastal geological region shared by Lebanon, Cyprus, Palestine, Israel and Syria. Most of the discoveries made by Israel and Cyprus in the basin have been gas, and at conferences dedicated to Lebanon's hydrocarbon potentials over the past two years, experts and members of the Lebanese Petroleum Administration (LPA) have said the country is likely to have more gas than oil. But as the — often cautionary — experiences of nearby states show, having gas is only part of the equation: careful and deliberate planning is also essential, both for building an industry and successfully exporting natural gas.

Egypt's woes

Egypt is a good case study in making sure one has to have a good grasp of domestic demand. In the 1990s, the country made a series of large natural gas discoveries, with proven reserves jumping from 15 tcf in 1993 to 20.4 tcf in 1997 before reaching 31.5 tcf in early 1999, according to the EIA. This prompted the country to sign contracts to build two LNG plants, one at Damietta in 2000 and a second at Idku in 2001. At the time, the Damietta plant cost $1.3 billion and the Idku plant cost $1.2 billion. Damietta came online in 2004 and Idku followed in 2005. Bill Farren-Price, a former journalist and founder of the consultancy Petroleum Policy Intelligence, recently told a group of reporters in Beirut that Egypt initially planned to use one third of its gas for export, one third for domestic use and leave one third buried beneath the surface for future generations to produce. Those plans, however, began falling apart around 2009 as domestic demand proved far higher than expected, fueled in part by generous state subsidies. According to the EIA, Egypt has been diverting to the local market natural gas initially destined for export, resulting in a 30 percent annual average decline in exports between 2010 and 2013.

In early 2013, the LNG plant at Damietta stopped functioning for lack of supply. The country owes nearly $6 billion to the Spanish and Italian oil and gas companies that partnered with Egyptian state owned energy companies to build the plant because diverting gas for the domestic market means taking it away from companies that have already signed long term contracts to sell it abroad. Further,

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in early September 2014, Egypt Daily News reported that supplies to the Idku plant had also stopped. British Gas Group, a part owner of the plant, had no news of the stoppage on its website as Executive went to press, but in early 2014, the company informed investors that it issued ‘force majeure’ notices in Egypt, meaning the company will not be able to deliver the natural gas supplies it has signed contracts for because of events outside of its control — namely the government’s diversion of gas to the domestic market.

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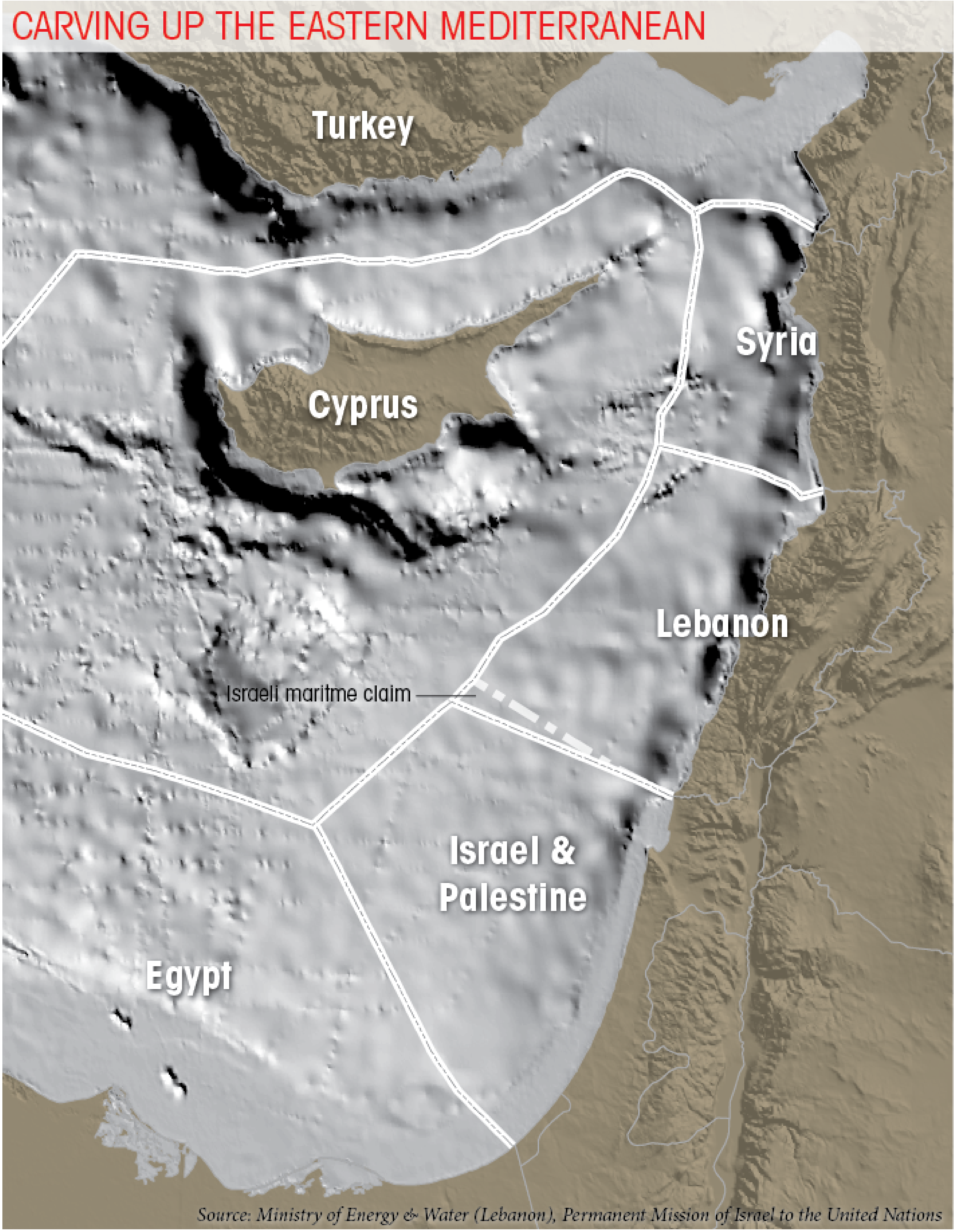

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Israel's opportunities

While this is bad news for Egypt, it could prove beneficial for Israel. US based Noble Energy — which, along with Israeli partners, has explored Israel's largest offshore natural gas fields — signed nonbinding agreements to supply gas to the Damietta LNG plant in May and to the Idku plant in June. In August, Bloomberg reported that Noble and its Israeli partners hope to sign a deal to export gas for liquefaction and re-export to markets further abroad by the end of 2014. Even if these plans fall apart, Israel has an abundance of gas to export and is exploring its options. Cyprus is trying to woo Tel Aviv into a partnership that would help Nicosia build an LNG plant on the island, but that plan is on hold after the Aphrodite field in Cypriot waters proved to be smaller than initially estimated. In early September, Noble also signed a nonbinding letter of intent with Jordan's National Electric Power Company to supply Israeli gas to the Hashemite Kingdom. Again, however, this is not yet a done deal. There have been talks between Tel Aviv and Ankara to build a subsea pipeline between the two countries to both supply Turkey and send Israeli gas along to the European market, although that project could fall through and is fraught with geopolitical complications. Wherever Israeli gas ends up and however it gets there, the amount being sent out is the result of a heated national debate that only ended in 2013. Ultimately Israel only decided to export 40 percent of its natural gas reserves, much to the chagrin of the companies producing that gas.

Cyprus' disappointment

Cyprus is a relative newcomer to offshore exploration. Like most frontier exploration areas, the country's offshore blocks are large. The country's exclusive economic zone is around 51,000 square meters and the 13 blocks it has been divided into range in size from 1,500 square meters to over 5,500 square meters. In 2007, Nicosia launched the island's first offshore licensing round, putting 11 blocks on offer. Only one contract was signed, with Noble. The US company announced in late 2011 that it had made a discovery — subsequently known as the Aphrodite field — and initially estimated it held between 5 to 8 tcf. After further appraisal drilling, however, the company revised that estimate down to between 3.6 and 6 tcf in 2013 — a cautionary tale about estimating the size of gas fields. The revision put Cyprus' plans for an LNG plant on hold as the new estimates are not sufficient to supply such a plant, which has an estimated price tag of $6 billion.

Cyprus held a second licensing round in 2012, and awarded five blocks following the round's close. Should more discoveries be made, Cyprus could move forward with its LNG plant plans or may opt for a pipeline to Greece, a technically complicated option the island has also been considering as a way into the European market, eager to diversify its natural gas supplies.

Lebanon's options

While Beirut launched its first offshore licensing round in May 2013, companies have not yet been able to bid because decrees delineating offshore blocks and a model exploration and production sharing agreement have not been approved by the government. The closing of the bid round was delayed on August 8 "to a maximum period of six months from the date of the adoption of the two decrees," according to the LPA's website. If and when natural gas production begins, the country will have options for where to send its gas, even if it is risking missing out on a few opportunities because of the delay.

The easiest option on the table would be to reverse the flow of the Arab Gas Pipeline, which was originally built to bring gas from Egypt to Jordan, Syria and Lebanon — with an eye toward eventually connecting Syria's Homs to Kilis, Turkey, and supplying Europe. The Homs–Aleppo–Kilis lines were never built, but could be possible in the future, especially given that the time between Lebanon signing a contract and start of production could be up to or slightly more than 10 years. Building an LNG plant could prove difficult given Lebanon's narrow and heavily built up coastline, but the country could use Egypt's facilities (provided Israel decides not to) or an LNG plant in Cyprus — if one ever comes to pass. If converting gas to liquid on land proves too difficult — either for political or space constraint reasons — a floating LNG plant would be another option. Beirut could also explore the option of a subsea pipeline to Turkey, but it is hard to predict what the regional and global market dynamics will look like if Lebanon does become an exporter. That said, the high cost and difficulties involved in gas export mean that any options would need to be carefully planned in advance.

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Not wasting time

While the country's politicians are noticeably silent on almost everything related to the oil and gas sector — except for the occasional call to speed up the process — other stakeholders are preparing for a sector that could, if managed by sound policy, provide a catalyst for important economic change and development. The Beirut Bar Association formed an energy and water committee this year and held a special session on oil and gas contracts in July. As Executive reported last year, local universities are also gearing up to produce more engineers specialized in the sector. Earlier this summer, Executive explored how local banks are also taking an interest and beginning to research how they can cash in on oil and gas. Even civil society groups are recognizing the important role they will need to play in the sector, although they are taking their time in taking concrete actions.

The LPA, for its part, is convening workshops with the Lebanese Center for Policy Studies and in mid-September, along with the UN Development Program, called for interested companies to submit bids to prepare a national oil spill contingency plan. Additionally, the LPA is focusing on increasing vocational training in Lebanon. In a written response to questions for this special report, the LPA said it had "initiated discussions with the Ministry of Education, Directorate of Technical Education to start planning for the integration of specialized training courses and diplomas in the public vocational training and technical education institutes," noting that the nascent sector will have need for "skilled and semiskilled workers who are technicians supporting the engineering and management staff." According to its mailed responses, the LPA is also working with international training and certification institutions to support their Lebanese counterparts. The Lebanese University, the LPA added, will also announce later this year a partnership with an unnamed European institution "to train technicians in several upstream trades and to deliver degrees and certificates internationally recognized by [the] oil and gas industry."

The LPA is looking to establish itself as a one stop shop for international companies once the sector gets on its feet. Several ministries will have authority over various aspects of oil and gas related activities, and the LPA has said at previous conferences that it wants to be the 'face' of these ministries to make things easier for oil companies. Such centralized interaction with government agencies is something real estate developers, for example, have been longing for as getting a construction permit is a long, confusing and cumbersome process that involves going from ministry to ministry. "It's a work in progress," writes the LPA to Executive. Most other ministries Executive requested interviews from for more on this topic did not respond. The Office of the Minister of State for Administrative Reform (OMSAR), however, tells Executive that so far the LPA has not begun setting up an e-government service so companies may later on use e-services from the LPA — applying for licensing, contracting, and e-reporting. "It is a demand-driven request that should be initiated by the LPA so there has to be a letter from LPA to establish [e-government services]," explains Ali Berro, an advisor to the minister of OMSAR.

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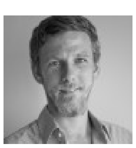
In its statement, the LPA also said it drafted an onshore exploration and production law — as the law passed in 2010 only covers offshore — and will shortly be submitting the law to parliament. In January, LPA president Nasser Hoteit tweeted that the LPA had also completed a tax law draft that would apply to oil and gas companies as they are often subject to higher tax rates than other companies working in a country as a way for the state to increase its revenues from resource sales. When these laws might be debated in a parliament that barely functions, however, is anybody's guess — as is whether Lebanon can truly learn from the mistakes of its neighbors.



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