

Filling the gap

Lebanese investors pony up \$7.8 million for an onshore survey

BUSINESS October 31, 2014 by Matt Nash



Ready for takeoff

When international oil companies refused to fund a new survey of Lebanon's onshore, private investors stepped in, to the tune of \$7.8 million. The survey, being conducted from the air with two specially tweaked planes, will cover 6,000 square kilometers and will offer insights into Lebanon's onshore oil and gas potential. Data acquisition is currently underway, with fully analyzed and interpreted results expected in the third quarter of 2015.

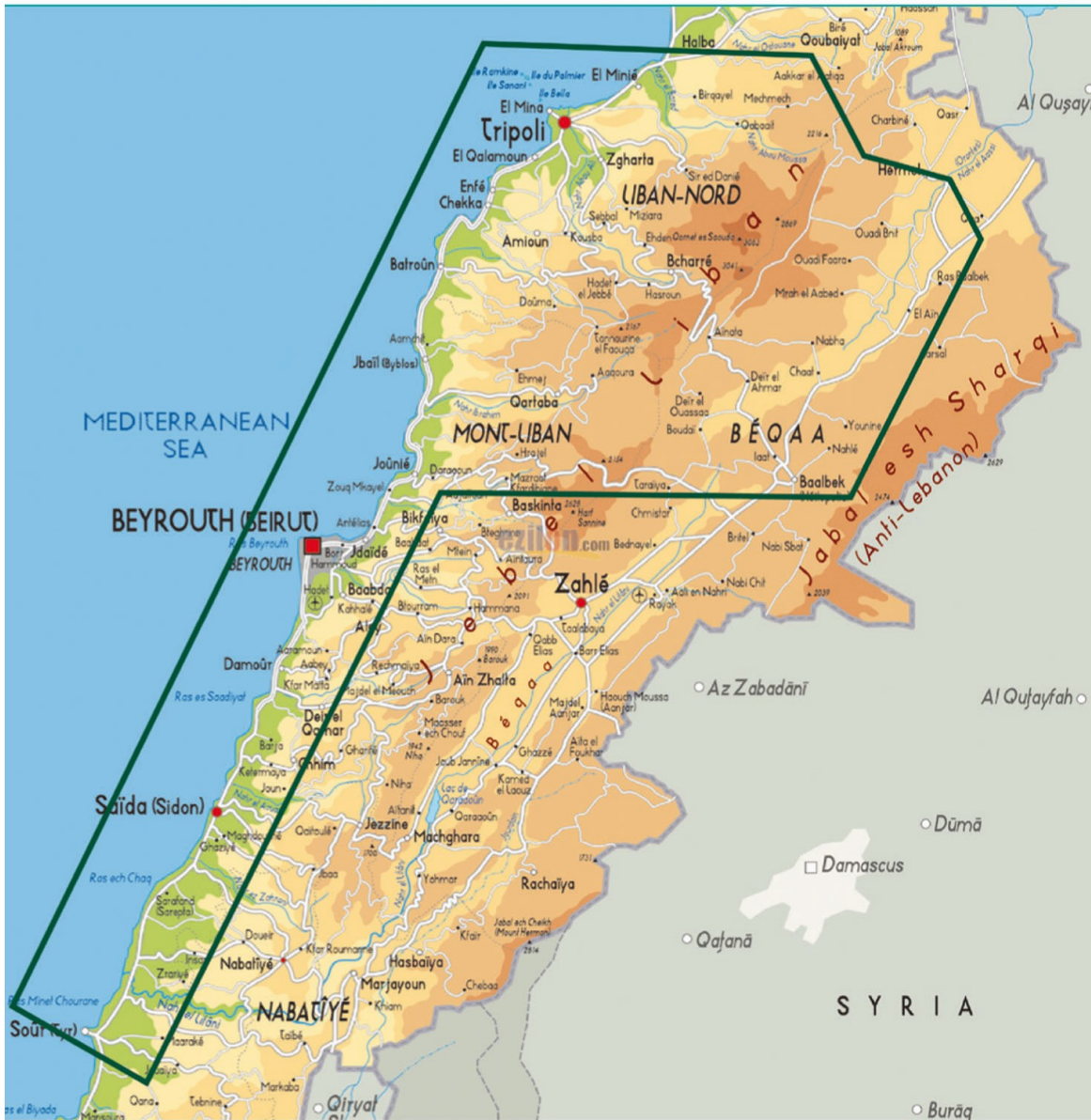
The point of the aerial survey is to collect data on Lebanon's as yet understudied subsurface. While a 2-dimensional seismic survey was supposed to be completed in 2014, the work that began in late 2013 is currently on hold. Instability on the Lebanese-Syrian border and the country's mountainous terrain both played roles in temporarily derailing the seismic survey, the Lebanese Petroleum Administration (LPA) told Executive in October. Border instability also influenced the area the aerial survey will cover, explains Ziad Abs, a founder of Petroserv, the local agent for US based NEOS

GeoSolutions, the company conducting the survey. Initially, NEOS planned to survey nearly all of Lebanon north of Beirut. The new plan, according to Abs and maps released by the company, is to avoid the borders but still fly over much of northern Lebanon. The company's maps indicate the onshore survey area will cover the area stretching from Jounieh in the south past Tripoli in the north. To the west, the planes will actually fly over the sea but will stop short of the border going east. In an effort to still cover 6,000 square kilometers but avoid the borders, NEOS will also be surveying most of Lebanon's coastal waters, known as a transition zone between offshore and onshore (see map below). The offshore seismic surveys conducted so far have not gathered data on the transition zone.

Cash problems

NEOS was unavailable for comment, but Petroserv's Abs explains that NEOS was among three companies speaking with the Lebanese government about doing an onshore survey in late 2013. Petroserv, which Abs helped found in 2012, was envisioned as a platform to bring Lebanese expatriates with oil and gas experience back to the country to service the country's nascent sector. In fact, Abs says, there is a Lebanese American working at NEOS, which is how the two companies were initially introduced and why Petroserv became their local agent. "When NEOS was shortlisted to do this project, the three shortlisted companies refused to do a multi-client agreement because they usually get paid for the project, and we were the agent, so we said, 'Fine, look, let's use this opportunity. We'll underwrite this project for you.'"

Survey area



NEOS GeoSolutions

The funding problem is something the LPA also faced in trying to do more offshore surveys, as Executive reported in September. One way to fund both onshore and offshore surveys is through a multi-client mechanism, meaning several entities — usually the state, along with international oil and gas companies keen on a first look at whatever data the survey will produce. With the onshore survey, however, NEOS and the other Minel companies were dealing with the Ministry of Energy and Water, not the LPA, because there is still no onshore exploration and production law in Lebanon — and the LPA’s remit is limited to offshore.

Petroserv created a special purpose vehicle called Geo Data World to raise the \$7.8 million needed to finance the project. Abs didn't go into the details of who exactly fronted the cash. According to a presentation about the Lebanon survey on NEOS' website, the data should be available for sale to interested oil and gas companies from March 31, 2015. Abs says the Geo Data World investors are not expecting huge returns, at least initially.

"There are no high expectations. The target is to recoup the investment. The higher expectations depend on a few things. There's no onshore law yet," he says. "All the investors know they will return their investment. We know from the offshore [experience] that a lot of companies bought the data for their own library, even some that didn't apply to prequalify to bid." Indeed, offshore data sales brought in at least \$33 million for the Lebanese government as of 2012 (Executive has not been able to get a more up-to-date figure for total revenues.) Abs opines that interest in onshore data may be minimal at first, but should an onshore law be passed — or if there is ever an onshore licensing round — international oil and gas companies may want this data.

A look beneath

While there have been seven onshore wells drilled between the 1940s and 1960s, information on Lebanon's onshore remains scant. A NEOS presentation about the Lebanon project notes that Syria has many onshore discoveries and that there could be similarities between the two countries' subsurface geology. Chris Friedemann, NEOS' chief commercial officer and executive vice president, explains in a presentation of the project that "additional questions [about Lebanon's onshore] of fundamental importance — including the location of faults, burial and thermal histories and basic basin architecture and morphology — all remain unanswered. In part, these questions remain unanswered, especially onshore, because of a lack of information and basin geological and geophysical data."

The NEOS planes will be gathering five different types of information: gravity, magnetics, electromagnetic, radiometric and hyperspectral. With this data, the company will create 3D models of the survey area and identify prospective locations for exploration drilling. As with any survey, it will either produce useful information for exploration purposes or indicate there is not much to drill for. However, nothing is certain until wells are actually drilled.

Cheaper onshore

Despite the hype surrounding Lebanon's offshore, onshore may prove to be even more attractive because of the difficulties offshore presents. Most of Lebanon's offshore exclusive economic zone — where any future drilling will commence — is largely composed of very deep waters, which makes drilling very expensive. Stephen Dow, a

lecturer in energy law at Scotland's University of Dundee, explains, "Onshore, and in shallow water, costs aren't too bad and the potential reward is significant. Deepwater costs tend to be astronomical and payback, even if you hit something, is not fast. The statistical hit rate for deepwater commercial finds is lower than the worldwide (including onshore) average of about one in nine." Dow was speaking of onshore versus offshore in general, not about Lebanon specifically.

Data gathering for the new survey began in October and is expected to last, weather permitting, until the end of December. Data processing is slated to finish at the end of March 2015, with fully interpreted data available by the end of September 2015. NEOS, according to the presentation, will incorporate data from the seven dry onshore wells drilled decades ago and will tie data on the transition zone to existing 2D and 3D offshore surveys.

When interest in Lebanon's onshore will really pick up, however, is anybody's guess at this stage. The LPA has drafted an onshore law, and told Executive in October it should be submitted to parliament "within a few days." When parliament will meet to discuss and eventually approve the law, however, remains unclear.



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